

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/26/2016

Reviewed on 01/26/2016

## 1 Identification

· **Product identifier**

· **Trade name:** BOUIN'S FLUID

· **Article number:** 15990-01, 15990-04, 15990-10, 15990-30, 15990-20

· **Application of the substance / the mixture** Laboratory chemicals

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: sgkcck@aol.com

www.emsdiasum.com

· **Information department:** Product safety department

· **Emergency telephone number:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

## 2 Hazard(s) identification

· **Classification of the substance or mixture**



GHS01 Exploding bomb

Expl. 1.1      H201 Explosive; mass explosion hazard.



GHS06 Skull and crossbones

Acute Tox. 3    H311 Toxic in contact with skin.

Acute Tox. 3    H331 Toxic if inhaled.



GHS08 Health hazard

Muta. 2      H341 Suspected of causing genetic defects.

Carc. 1B      H350 May cause cancer.



GHS05 Corrosion

Skin Corr. 1C H314 Causes severe skin burns and eye damage.

Eye Dam. 1    H318 Causes serious eye damage.



GHS07

Acute Tox. 4    H302 Harmful if swallowed.

Skin Sens. 1    H317 May cause an allergic skin reaction.

Flam. Liq. 4    H227 Combustible liquid.

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- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS01   GHS05   GHS06   GHS07   GHS08

- **Signal word** *Danger*

- **Hazard-determining components of labeling:**

*formaldehyde*  
*2,4,6-trinitrophenol*

- **Hazard statements**

*Explosive; mass explosion hazard.*  
*Combustible liquid.*  
*Harmful if swallowed.*  
*Toxic in contact with skin or if inhaled.*  
*Causes severe skin burns and eye damage.*  
*May cause an allergic skin reaction.*  
*Suspected of causing genetic defects.*  
*May cause cancer.*

- **Precautionary statements**

*Keep wetted.*  
*Do not subject to grinding/shock/friction.*  
*Do not breathe dusts or mists.*  
*Wear protective gloves / eye protection / face protection.*  
*Wear protective gloves / protective clothing.*  
*Ground/bond container and receiving equipment.*  
*Wash thoroughly after handling.*  
*Do not eat, drink or smoke when using this product.*  
*Use only outdoors or in a well-ventilated area.*  
*Contaminated work clothing must not be allowed out of the workplace.*  
*Obtain special instructions before use.*  
*Do not handle until all safety precautions have been read and understood.*  
*If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*  
*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*  
*Immediately call a POISON CENTER/doctor.*  
*Specific treatment (see on this label).*  
*DO NOT fight fire when fire reaches explosives.*  
*In case of fire: Evacuate area.*  
*IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.*  
*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*  
*Explosion risk in case of fire.*  
*IF exposed or concerned: Get medical advice/attention.*  
*If skin irritation or rash occurs: Get medical advice/attention.*  
*If swallowed: Rinse mouth. Do NOT induce vomiting.*  
*In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.*  
*Take off immediately all contaminated clothing and wash it before reuse.*  
*Store in accordance with local/regional/national/international regulations.*  
*Store locked up.*  
*Store in a well-ventilated place. Keep container tightly closed.*

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Store in a well-ventilated place. Keep cool.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

50-00-0	formaldehyde	2,5-10%
64-19-7	Acetic Acid Glacial	2,5-10%
88-89-1	2,4,6-trinitrophenol	≤ 2,5%

### 4 First-aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Immediately call a doctor.

Drink copious amounts of water and provide fresh air. Immediately call a doctor.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

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### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Remove persons from danger area.  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect from heat.  
Protect against electrostatic charges.  
Prevent impact and friction.  
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep receptacle tightly sealed.  
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

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## 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

### 50-00-0 formaldehyde

PEL	Short-term value: 2 ppm Long-term value: 0.75 ppm see 29 CFR 1910.1048(c)
REL	Long-term value: 0.016 ppm Ceiling limit value: 0.1* ppm *15-min; See Pocket Guide App. A
TLV	Ceiling limit value: 0.37 mg/m <sup>3</sup> , 0.3 ppm DSEN; RSEN

### 64-19-7 Acetic Acid Glacial

PEL	Long-term value: 25 mg/m <sup>3</sup> , 10 ppm
REL	Short-term value: 37 mg/m <sup>3</sup> , 15 ppm Long-term value: 25 mg/m <sup>3</sup> , 10 ppm
TLV	Short-term value: 37 mg/m <sup>3</sup> , 15 ppm Long-term value: 25 mg/m <sup>3</sup> , 10 ppm

### 88-89-1 2,4,6-trinitrophenol

PEL	Long-term value: 0.1 mg/m <sup>3</sup> Skin
REL	Short-term value: 0.3 mg/m <sup>3</sup> Long-term value: 0.1 mg/m <sup>3</sup> Skin
TLV	Long-term value: 0.1 mg/m <sup>3</sup>

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the eyes.
- Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**

Safety glasses



Tightly sealed goggles

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

<b>Form:</b>	Liquid
<b>Color:</b>	Light yellow
<b>Odor:</b>	Pungent
<b>Odor threshold:</b>	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	-21 °C (-6 °F)

- **Flash point:** 0 °C (32 °F)

- **Flammability (solid, gaseous):** Not flammable.

- **Ignition temperature:** 300 °C (572 °F)

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Risk of explosion by shock, friction, fire or other sources of ignition.

- **Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

- **Vapor pressure at 20 °C (68 °F):** 23 hPa (17 mm Hg)

- **Density at 20 °C (68 °F):** 0.99507 g/cm<sup>3</sup> (8.304 lbs/gal)

- **Relative density** Not determined.

- **Vapor density** Not determined.

- **Evaporation rate** Not determined.

- **Solubility in / Miscibility with**

**Water:** Not miscible or difficult to mix.

- **Partition coefficient (n-octanol/water):** Not determined.

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- |                            |  |
|----------------------------|--|
| <b>· Viscosity:</b>        |  |
| <b>Dynamic:</b>            | Not determined.                            |
| <b>Kinematic:</b>          | Not determined.                            |
| <b>· Solvent content:</b>  |  |
| <b>Organic solvents:</b>   | 18.0 %                                     |
| <b>Water:</b>              | 81.0 %                                     |
| <b>VOC content:</b>        | 18.0 %                                     |
|                            | 923.3 g/l / 7.71 lb/gal                    |
| <b>· Solids content:</b>   |  |
|                            | 1.0 %                                      |
| <b>· Other information</b> |  |
|                            | No further relevant information available. |

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

50-00-0 formaldehyde

Oral | LD50 | &gt;200 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:**  
Strong caustic effect.  
Strong irritant with the danger of severe eye injury.
- **Sensitization:** Sensitization possible through skin contact.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

Harmful

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

Carcinogenic.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

50-00-0 | formaldehyde

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· <b>NTP (National Toxicology Program)</b>	
50-00-0 formaldehyde	K
· <b>OSHA-Ca (Occupational Safety Health Administration)</b>	
50-00-0 formaldehyde	

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**  
*Water hazard class 2 (Self-assessment): hazardous for water  
 Do not allow product to reach ground water, water course or sewage system.  
 Must not reach bodies of water or drainage ditch undiluted or unneutralized.  
 Danger to drinking water if even small quantities leak into the ground.  
 Harmful to aquatic organisms*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
*Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- |  |                 |
|--|-----------------|
| · <b>Environmental hazards:</b>  | Not applicable. |
| · <b>Special precautions for user</b>  | Not applicable. |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>  | Void            |

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## 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

50-00-0	formaldehyde
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· **Section 313 (Specific toxic chemical listings):**

50-00-0	formaldehyde
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88-89-1	2,4,6-trinitrophenol
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· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

50-00-0	formaldehyde
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· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

50-00-0	formaldehyde	
---------	--------------	--

B1

· **TLV (Threshold Limit Value established by ACGIH)**

50-00-0	formaldehyde	
---------	--------------	--

A2

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

50-00-0	formaldehyde
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· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS01   GHS05   GHS06   GHS07   GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

formaldehyde

2,4,6-trinitrophenol

· **Hazard statements**

*Explosive; mass explosion hazard.*

*Combustible liquid.*

*Harmful if swallowed.*

*Toxic in contact with skin or if inhaled.*

*Causes severe skin burns and eye damage.*

*May cause an allergic skin reaction.*

*Suspected of causing genetic defects.*

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*May cause cancer.*

· **Precautionary statements**

*Keep wetted.*

*Do not subject to grinding/shock/friction.*

*Do not breathe dusts or mists.*

*Wear protective gloves / eye protection / face protection.*

*Wear protective gloves / protective clothing.*

*Ground/bond container and receiving equipment.*

*Wash thoroughly after handling.*

*Do not eat, drink or smoke when using this product.*

*Use only outdoors or in a well-ventilated area.*

*Contaminated work clothing must not be allowed out of the workplace.*

*Obtain special instructions before use.*

*Do not handle until all safety precautions have been read and understood.*

*If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*

*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*

*Continue rinsing.*

*Immediately call a POISON CENTER/doctor.*

*Specific treatment (see on this label).*

*DO NOT fight fire when fire reaches explosives.*

*In case of fire: Evacuate area.*

*IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.*

*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*

*Explosion risk in case of fire.*

*IF exposed or concerned: Get medical advice/attention.*

*If skin irritation or rash occurs: Get medical advice/attention.*

*If swallowed: Rinse mouth. Do NOT induce vomiting.*

*In case of fire: Use for extinction: CO2, powder or water spray.*

*Take off immediately all contaminated clothing and wash it before reuse.*

*Store in accordance with local/regional/national/international regulations.*

*Store locked up.*

*Store in a well-ventilated place. Keep container tightly closed.*

*Store in a well-ventilated place. Keep cool.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **National regulations:**

· **Information about limitation of use:**

*Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.*

*Exceptions can be made by the authorities in certain cases.*

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Date of preparation / last revision** 01/26/2016 / -

· **Abbreviations and acronyms:**

*ACGIH: American Conference of Governmental Industrial Hygienists*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*ELINCS: European List of Notified Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*VOC: Volatile Organic Compounds (USA, EU)*

*LC50: Lethal concentration, 50 percent*

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*LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**NIOSH: National Institute for Occupational Safety**OSHA: Occupational Safety **Health****TLV: Threshold Limit Value**PEL: Permissible Exposure Limit**REL: Recommended Exposure Limit**Expl. 1.1: Explosives, Division 1.1**Flam. Liq. 4: Flammable liquids, Hazard Category 4**Acute Tox. 4: Acute toxicity, Hazard Category 4**Acute Tox. 3: Acute toxicity, Hazard Category 3**Skin Corr. 1C: Skin corrosion/irritation, Hazard Category 1C**Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1**Skin Sens. 1: Sensitisation - Skin, Hazard Category 1**Muta. 2: Germ cell mutagenicity, Hazard Category 2**Carc. 1B: Carcinogenicity, Hazard Category 1B*

US

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 26.01.2016

Revision: 26.01.2016

## 1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** BOUIN'S FLUID
- **Article number:** 15990-01, 15990-04, 15990-10, 15990-30, 15990-20
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- ProSciTech Pty Ltd  
11 Carlton Street, Kirwan QLD 4817 Australia  
Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)  
Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
- Emgrid Australia Pty. Ltd.  
P.O. Box 118  
The Patch VIC 3792  
Australia  
Tel: 03 9752 1785  
Fax: 03 9752 1784  
Website: www.emgrid.com.au
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## 2 Hazards identification

- **Classification of the substance or mixture**



GHS01 exploding bomb

Expl. 1.1      H201 Explosive; mass explosion hazard.



GHS06 skull and crossbones

Acute Tox. 3      H311 Toxic in contact with skin.

Acute Tox. 3      H331 Toxic if inhaled.



GHS08 health hazard

Muta. 2      H341 Suspected of causing genetic defects.

Carc. 1B      H350 May cause cancer.

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AU

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 26.01.2016

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**Trade name: BOUIN'S FLUID**

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GHS05 corrosion

Skin Corr. 1C H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Flam. Liq. 4 H227 Combustible liquid.

---

· **Label elements**

· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**



GHS01



GHS05



GHS06



GHS07



GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**

formaldehyde

2,4,6-trinitrophenol

· **Hazard statements**

Explosive; mass explosion hazard.

Combustible liquid.

Harmful if swallowed.

Toxic in contact with skin or if inhaled.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

· **Precautionary statements**

Keep wetted.

Do not subject to grinding/shock/friction.

Do not breathe dusts or mists.

Wear protective gloves / eye protection / face protection.

Wear protective gloves / protective clothing.

Ground/bond container and receiving equipment.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

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# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 26.01.2016

Revision: 26.01.2016

**Trade name: BOUIN'S FLUID**

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Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label).

DO NOT fight fire when fire reaches explosives.

In case of fire: Evacuate area.

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Explosion risk in case of fire.

IF exposed or concerned: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.

Take off immediately all contaminated clothing and wash it before reuse.

Store in accordance with local/regional/national/international regulations.

Store locked up.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterisation: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

50-00-0	formaldehyde	2,5-10%
64-19-7	Acetic Acid Glacial	2,5-10%
88-89-1	2,4,6-trinitrophenol	≤ 2,5%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

### 4 First aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Remove breathing equipment only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Call for a doctor immediately.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

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**Safety data sheet**  
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- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**5 Firefighting measures**

- **Extinguishing media**
- **Suitable extinguishing agents:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures**  
Remove persons from danger area.  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralising agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

**7 Handling and storage**

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect from heat.  
Protect against electrostatic charges.  
Prevent impact and friction.  
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Protect from heat and direct sunlight.

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· **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

### 50-00-0 formaldehyde

NES	Short-term value: 2.5 mg/m <sup>3</sup> , 2 ppm Long-term value: 1.2 mg/m <sup>3</sup> , 1 ppm Sen
-----	--

### 64-19-7 Acetic Acid Glacial

NES	Short-term value: 37 mg/m <sup>3</sup> , 15 ppm Long-term value: 25 mg/m <sup>3</sup> , 10 ppm
-----	---

### 88-89-1 2,4,6-trinitrophenol

NES	Long-term value: 0.1 mg/m <sup>3</sup>
-----	--

· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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- **Eye protection:**  
Safety glasses



Tightly sealed goggles

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Liquid
Colour:	Light yellow
· Odour:	Pungent
· Odour threshold:	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	-21 °C

- **Flash point:** 0 °C

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** 300 °C

- **Decomposition temperature:** Not determined.

- **Self-igniting:** Product is not selfigniting.

- **Danger of explosion:** Risk of explosion by shock, friction, fire or other sources of ignition.

- **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

- **Vapour pressure at 20 °C:** 23 hPa

- **Density at 20 °C:** 0.99507 g/cm<sup>3</sup>

- **Relative density:** Not determined.

- **Vapour density:** Not determined.

- **Evaporation rate:** Not determined.

- **Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**

Dynamic:	Not determined.
Kinematic:	Not determined.

- **Solvent content:**

Organic solvents:	18.0 %
Water:	81.0 %
VOC (EC)	18.00 %

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- |                          |  |
|--------------------------|--|
| <b>Solids content:</b>   | 1.0 %                                      |
| <b>Other information</b> | No further relevant information available. |

**10 Stability and reactivity**

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

**11 Toxicological information**

- **Information on toxicological effects**
- **Acute toxicity**

- **LD/LC50 values relevant for classification:**

**50-00-0 formaldehyde**

Oral | LD50 | &gt;200 mg/kg (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Strong caustic effect on skin and mucous membranes.
- **Serious eye damage/irritation**  
Strong caustic effect.  
Strong irritant with the danger of severe eye injury.
- **Respiratory or skin sensitisation** Sensitisation possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Toxic  
Harmful  
Corrosive  
Irritant  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.  
Carcinogenic.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**  
Muta. 2, Carc. 1B

**12 Ecological information**

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish

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**Trade name: BOUIN'S FLUID**

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- **Additional ecological information:**
- **General notes:**  
*Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
 Do not allow product to reach ground water, water course or sewage system.  
 Must not reach sewage water or drainage ditch undiluted or unneutralised.  
 Danger to drinking water if even small quantities leak into the ground.  
 Harmful to aquatic organisms*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**  
*Must not be disposed together with household garbage. Do not allow product to reach sewage system.*
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- |   |                 |
|---|-----------------|
| <b>Environmental hazards:</b>   | Not applicable. |
| <b>Special precautions for user</b>                                       | Not applicable. |
| <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b> | Not applicable. |
| <b>UN "Model Regulation":</b>   | Void            |

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**

- **Australian Inventory of Chemical Substances**

All ingredients are listed.

- **Standard for the Uniform Scheduling of Medicines and Poisons**

50-00-0	formaldehyde	S2, S6, S10
64-19-7	Acetic Acid Glacial	S2, S5, S6
88-89-1	2,4,6-trinitrophenol	S4, S6

- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

- **Hazard pictograms**



GHS01   GHS05   GHS06   GHS07   GHS08

- **Signal word** *Danger*

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**Trade name: BOUIN'S FLUID**

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- **Hazard-determining components of labelling:**

formaldehyde  
2,4,6-trinitrophenol

- **Hazard statements**

Explosive; mass explosion hazard.  
Combustible liquid.  
Harmful if swallowed.  
Toxic in contact with skin or if inhaled.  
Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.  
Suspected of causing genetic defects.  
May cause cancer.

- **Precautionary statements**

Keep wetted.  
Do not subject to grinding/shock/friction.  
Do not breathe dusts or mists.  
Wear protective gloves / eye protection / face protection.  
Wear protective gloves / protective clothing.  
Ground/bond container and receiving equipment.  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing should not be allowed out of the workplace.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
**IF ON SKIN (or hair):** Take off immediately all contaminated clothing. Rinse skin with water/shower.  
**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a POISON CENTER/doctor.  
Specific treatment (see on this label).  
**DO NOT** fight fire when fire reaches explosives.  
In case of fire: Evacuate area.  
**IF SWALLOWED:** Call a POISON CENTER/doctor if you feel unwell.  
**IF INHALED:** Remove person to fresh air and keep comfortable for breathing.  
Explosion risk in case of fire.  
**IF exposed or concerned:** Get medical advice/attention.  
**If skin irritation or rash occurs:** Get medical advice/attention.  
**IF SWALLOWED:** rinse mouth. Do NOT induce vomiting.  
In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.  
Take off immediately all contaminated clothing and wash it before reuse.  
Store in accordance with local/regional/national/international regulations.  
Store locked up.  
Store in a well-ventilated place. Keep container tightly closed.  
Store in a well-ventilated place. Keep cool.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Directive 2012/18/EU**

- **Named dangerous substances - ANNEX I formaldehyde**

- **Seveso category**

P1a EXPLOSIVES  
H2 ACUTE TOXIC

- **Qualifying quantity (tonnes) for the application of lower-tier requirements 10 t**

- **Qualifying quantity (tonnes) for the application of upper-tier requirements 50 t**

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**Trade name: BOUIN'S FLUID**

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- **National regulations:**
- **Information about limitation of use:**  
*Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.*
- **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

**16 Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Abbreviations and acronyms:**  
*EINECS: European Inventory of Existing Commercial Chemical Substances*  
*ELINCS: European List of Notified Chemical Substances*  
*CAS: Chemical Abstracts Service (division of the American Chemical Society)*  
*VOC: Volatile Organic Compounds (USA, EU)*  
*LC50: Lethal concentration, 50 percent*  
*LD50: Lethal dose, 50 percent*  
*PBT: Persistent, Bioaccumulative and Toxic*  
*vPvB: very Persistent and very Bioaccumulative*  
*Expl. 1.1: Explosives, Division 1.1*  
*Flam. Liq. 4: Flammable liquids, Hazard Category 4*  
*Acute Tox. 4: Acute toxicity, Hazard Category 4*  
*Acute Tox. 3: Acute toxicity, Hazard Category 3*  
*Skin Corr. 1C: Skin corrosion/irritation, Hazard Category 1C*  
*Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1*  
*Skin Sens. 1: Sensitisation - Skin, Hazard Category 1*  
*Muta. 2: Germ cell mutagenicity, Hazard Category 2*  
*Carc. 1B: Carcinogenicity, Hazard Category 1B*

AU

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/26/2016

Reviewed on 01/26/2016

## 1 Identification

- **Product identifier**
- **Trade name:** BOUIN'S FLUID
- **Article number:** 15990-01, 15990-04, 15990-10, 15990-30, 15990-20
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Toxicity (Dermal) – Category 3 H311 Toxic in contact with skin.

Acute Toxicity (Inhalation) - Category 3 H331 Toxic if inhaled.



GHS08 Health hazard

Germ Cell Mutagenicity - Category 2 H341 Suspected of causing genetic defects.

Carcinogenicity - Category 1B H350 May cause cancer.



GHS05 Corrosion

Skin Corrosion - Category 1C H314 Causes severe skin burns and eye damage.

Serious Eye Damage - Category 1 H318 Causes serious eye damage.



GHS07

Acute Toxicity (Oral) - Category 4 H302 Harmful if swallowed.

Skin Sensitizer - Category 1 H317 May cause an allergic skin reaction.

Flammable Liquids - Category 4 H227 Combustible liquid.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

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Trade name: **BOUIN'S FLUID**

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· **Hazard pictograms**

GHS05   GHS06   GHS07   GHS08

· **Signal word** *Danger*· **Hazard-determining components of labeling:***formaldehyde**2,4,6-trinitrophenol*· **Hazard statements***Combustible liquid.**Harmful if swallowed.**Toxic in contact with skin or if inhaled.**Causes severe skin burns and eye damage.**May cause an allergic skin reaction.**Suspected of causing genetic defects.**May cause cancer.*· **Precautionary statements***Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.**Do not breathe dust/fume/gas/mist/vapours/spray.**Wear protective gloves/protective clothing/eye protection/face protection.**Wash thoroughly after handling.**Do not eat, drink or smoke when using this product.**Use only outdoors or in a well-ventilated area.**Contaminated work clothing should not be allowed out of the workplace.**Obtain special instructions before use.**Do not handle until all safety precautions have been read and understood.**IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**Immediately call a POISON CENTER/doctor.**Specific measures (see on this label).**IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.**IF INHALED: Remove person to fresh air and keep comfortable for breathing.**Wash contaminated clothing before reuse.**IF exposed or concerned: Get medical advice/attention.**If skin irritation or rash occurs: Get medical advice/attention.**IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.**In case of fire: Use for extinction: CO2, powder or water spray.**Take off contaminated clothing and wash it before reuse.**Store locked up.**Store in a well-ventilated place. Keep container tightly closed.**Dispose of contents/container in accordance with local/regional/national/international regulations.*· **Hazard description:**· **WHMIS-symbols:***B2 - Flammable liquid**D1A - Very toxic material causing immediate and serious toxic effects**D2A - Very toxic material causing other toxic effects**E - Corrosive material*

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Trade name: **BOUIN'S FLUID**

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F - Dangerously reactive material



- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

50-00-0	formaldehyde	5-10% w/w
64-19-7	Acetic Acid Glacial	5-10% w/w
88-89-1	2,4,6-trinitrophenol	≤ 1% w/w

### 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Immediately remove any clothing soiled by the product.  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.  
Remove breathing apparatus only after contaminated clothing have been completely removed.  
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**  
Supply fresh air or oxygen; call for doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**  
Immediately call a doctor.  
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

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**Trade name: BOUIN'S FLUID**

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- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Remove persons from danger area.  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect from heat.  
Protect against electrostatic charges.  
Prevent impact and friction.  
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep receptacle tightly sealed.  
Protect from heat and direct sunlight.

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Trade name: **BOUIN'S FLUID**

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· **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.· **Control parameters**· **Components with limit values that require monitoring at the workplace:**

### 50-00-0 formaldehyde

EL	Long-term value: 0.3 ppm Ceiling limit value: 1 ppm ACGIH A2; IARC 1; S
----	---

EV Ceiling limit value	Short-term value: 1.0 ppm 1.5 ppm
---------------------------	--------------------------------------

### 64-19-7 Acetic Acid Glacial

EL	Short-term value: 15 ppm Long-term value: 10 ppm
EV	Short-term value: 37 mg/m <sup>3</sup> , 15 ppm Long-term value: 25 mg/m <sup>3</sup> , 10 ppm

### 88-89-1 2,4,6-trinitrophenol

EL	Long-term value: 0.1 mg/m <sup>3</sup> S
EV	Short-term value: 0.3 mg/m <sup>3</sup> Long-term value: 0.1 mg/m <sup>3</sup> Skin

· **Additional information:** The lists that were valid during the creation were used as basis.· **Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.  
Avoid contact with the eyes.  
Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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Trade name: **BOUIN'S FLUID**

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- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**

Safety glasses



Tightly sealed goggles

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

<b>Form:</b>	Liquid
<b>Color:</b>	Light yellow
<b>Odor:</b>	Pungent
<b>Odor threshold:</b>	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	-21 °C

- **Flash point:** 0 °C

- **Flammability (solid, gaseous):** Not flammable.

- **Ignition temperature:** 300 °C

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Risk of explosion by shock, friction, fire or other sources of ignition.

- **Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

- **Vapor pressure at 20 °C:** 23 hPa

<b>Density at 20 °C:</b>	0.99507 g/cm <sup>3</sup>
<b>Relative density</b>	Not determined.
<b>Vapor density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.

- **Solubility in / Miscibility with**

**Water:** Not miscible or difficult to mix.

- **Partition coefficient (n-octanol/water):** Not determined.

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- |                            |  |
|----------------------------|--|
| <b>· Viscosity:</b>        |  |
| <b>Dynamic:</b>            | Not determined.                            |
| <b>Kinematic:</b>          | Not determined.                            |
| <b>· Solvent content:</b>  |  |
| <b>Organic solvents:</b>   | 18.0 %                                     |
| <b>Water:</b>              | 81.0 %                                     |
| <b>· Solids content:</b>   | 1.0 %                                      |
| <b>· Other information</b> | No further relevant information available. |

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

50-00-0 formaldehyde

Oral LD50 &gt;200 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:**  
Strong caustic effect.  
Strong irritant with the danger of severe eye injury.
- **Sensitization:** Sensitization possible through skin contact.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

Harmful

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

Carcinogenic.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

50-00-0 formaldehyde

I

- **NTP (National Toxicology Program)**

50-00-0 formaldehyde

K

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- |  |
|--|
| · <b>OSHA-Ca (Occupational Safety Health Administration)</b> |
| 50-00-0 formaldehyde   |

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**  
*Water hazard class 2 (Self-assessment): hazardous for water  
 Do not allow product to reach ground water, water course or sewage system.  
 Must not reach bodies of water or drainage ditch undiluted or unneutralized.  
 Danger to drinking water if even small quantities leak into the ground.  
 Harmful to aquatic organisms*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
*Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- |  |                 |
|--|-----------------|
| · <b>Environmental hazards:</b>  | Not applicable. |
| · <b>Special precautions for user</b>  | Not applicable. |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>  | Void            |

CA  
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## 15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture

· Sara

· Section 355 (extremely hazardous substances):

50-00-0	formaldehyde
---------	--------------

· Section 313 (Specific toxic chemical listings):

50-00-0	formaldehyde
---------	--------------

88-89-1	2,4,6-trinitrophenol
---------	----------------------

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

50-00-0	formaldehyde
---------	--------------

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

50-00-0	formaldehyde	B1
---------	--------------	----

· TLV (Threshold Limit Value established by ACGIH)

50-00-0	formaldehyde	A2
---------	--------------	----

· NIOSH-Ca (National Institute for Occupational Safety and Health)

50-00-0	formaldehyde
---------	--------------

· Canadian substance listings:

· Canadian Domestic Substances List (DSL)

All ingredients are listed.

· Canadian Ingredient Disclosure list (limit 0.1%)

50-00-0	formaldehyde
---------	--------------

· Canadian Ingredient Disclosure list (limit 1%)

64-19-7	Acetic Acid Glacial
---------	---------------------

88-89-1	2,4,6-trinitrophenol
---------	----------------------

· GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms



GHS05   GHS06   GHS07   GHS08

· Signal word *Danger*

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· **Hazard-determining components of labeling:**

formaldehyde  
2,4,6-trinitrophenol

· **Hazard statements**

Combustible liquid.  
Harmful if swallowed.  
Toxic in contact with skin or if inhaled.  
Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.  
Suspected of causing genetic defects.  
May cause cancer.

· **Precautionary statements**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing should not be allowed out of the workplace.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
**IF ON SKIN (or hair):** Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a POISON CENTER/doctor.  
Specific measures (see on this label).  
**IF SWALLOWED:** Call a POISON CENTER/doctor if you feel unwell.  
**IF INHALED:** Remove person to fresh air and keep comfortable for breathing.  
Wash contaminated clothing before reuse.  
**IF exposed or concerned:** Get medical advice/attention.  
**If skin irritation or rash occurs:** Get medical advice/attention.  
**IF SWALLOWED:** Rinse mouth. Do NOT induce vomiting.  
**In case of fire:** Use for extinction: CO<sub>2</sub>, powder or water spray.  
Take off contaminated clothing and wash it before reuse.  
Store locked up.  
Store in a well-ventilated place. Keep container tightly closed.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.  
Exceptions can be made by the authorities in certain cases.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of preparation / last revision** 01/26/2016 / -

· **Abbreviations and acronyms:**

ACGIH: American Conference of Governmental Industrial Hygienists  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)

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*NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)**WHMIS: Workplace Hazardous Materials Information System (Canada)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**NIOSH: National Institute for Occupational Safety**OSHA: Occupational Safety **Health*****Flammable Liquids - Category 4: Flammable liquids, Hazard Category 4****Acute Toxicity (Oral) - Category 4: Acute toxicity, Hazard Category 4****Acute Toxicity (Dermal) - Category 3: Acute toxicity, Hazard Category 3****Skin Corrosion - Category 1C: Skin corrosion/irritation, Hazard Category 1C****Serious Eye Damage - Category 1: Serious eye damage/eye irritation, Hazard Category 1****Skin Sensitizer - Category 1: Sensitisation - Skin, Hazard Category 1****Germ Cell Mutagenicity - Category 2: Germ cell mutagenicity, Hazard Category 2****Carcinogenicity - Category 1B: Carcinogenicity, Hazard Category 1B**

CA



**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 26.01.2016

Revision: 26.01.2016

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** BOUIN'S FLUID
- **Article number:** 15990-01, 15990-04, 15990-10, 15990-30, 15990-20
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS01 exploding bomb

Expl. 1.1 H201 Explosive; mass explosion hazard.



GHS06 skull and crossbones

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 health hazard

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 1B H350 May cause cancer.



GHS05 corrosion

Skin Corr. 1C H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

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*Skin Sens. 1 H317 May cause an allergic skin reaction.*

*Flam. Liq. 3 H226 Flammable liquid and vapour.*

### · 2.2 Label elements

#### · Labelling according to Regulation (EC) No 1272/2008

*The product is classified and labelled according to the CLP regulation.*

#### · Hazard pictograms GHS01

#### · Signal word Danger

#### · Hazard-determining components of labelling:

*formaldehyde*

*2,4,6-trinitrophenol*

#### · Hazard statements

*H201 Explosive; mass explosion hazard.*

#### · Precautionary statements

*P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.*

*P230 Keep wetted.*

*P250 Do not subject to grinding/shock/friction.*

*P373 DO NOT fight fire when fire reaches explosives.*

*P401 Store in accordance with local/regional/national/international regulations.*

*P501 Dispose of contents/container in accordance with local/regional/national/international regulations.*

### · 2.3 Other hazards

#### · Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

### · 3.2 Chemical characterisation: Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

#### · Dangerous components:

CAS: 50-00-0 EINECS: 200-001-8	formaldehyde ⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ⚠ Muta. 2, H341; Carc. 1B, H350; ⚠ Skin Corr. 1B, H314; ⚠ Skin Sens. 1, H317	2,5-10%
CAS: 64-19-7 EINECS: 200-580-7	Acetic Acid Glacial ⚠ Flam. Liq. 3, H226; ⚠ Skin Corr. 1A, H314	2,5-10%
CAS: 88-89-1 EINECS: 201-865-9	2,4,6-trinitrophenol ⚠ Expl. 1.1, H201; ⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331	≤ 2,5%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

## SECTION 4: First aid measures

### · 4.1 Description of first aid measures

#### · General information:

*Immediately remove any clothing soiled by the product.*

*Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.*

*Remove breathing equipment only after contaminated clothing have been completely removed.*

*In case of irregular breathing or respiratory arrest provide artificial respiration.*

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- **After inhalation:**  
Supply fresh air or oxygen; call for doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**  
Call for a doctor immediately.  
Drink plenty of water and provide fresh air. Call for a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Remove persons from danger area.  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralising agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect from heat.  
Protect against electrostatic charges.  
Prevent impact and friction.

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Keep respiratory protective device available.

- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
  - Keep container tightly sealed.
  - Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

#### · 8.1 Control parameters

- **Ingredients with limit values that require monitoring at the workplace:**

##### **50-00-0 formaldehyde**

WEL	Short-term value: 2.5 mg/m <sup>3</sup> , 2 ppm
	Long-term value: 2.5 mg/m <sup>3</sup> , 2 ppm

##### **88-89-1 2,4,6-trinitrophenol**

WEL	Short-term value: 0.3 mg/m <sup>3</sup>
	Long-term value: 0.1 mg/m <sup>3</sup>

- **Additional information:** The lists valid during the making were used as basis.

#### · 8.2 Exposure controls

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
 Immediately remove all soiled and contaminated clothing  
 Wash hands before breaks and at the end of work.  
 Store protective clothing separately.  
 Avoid contact with the eyes.  
 Avoid contact with the eyes and skin.

- **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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- **Eye protection:**  
Safety glasses



Tightly sealed goggles

### SECTION 9: Physical and chemical properties

#### · 9.1 Information on basic physical and chemical properties

##### · General Information

##### · Appearance:

Form:	Liquid
Colour:	Light yellow
· Odour:	Pungent
· Odour threshold:	Not determined.

· **pH-value:** Not determined.

##### · Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	-21 °C

· **Flash point:** 0 °C

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 300 °C

· **Decomposition temperature:** Not determined.

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Risk of explosion by shock, friction, fire or other sources of ignition.

##### · Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· **Vapour pressure at 20 °C:** 23 hPa

· **Density at 20 °C:** 0.99507 g/cm<sup>3</sup>

· **Relative density:** Not determined.

· **Vapour density:** Not determined.

· **Evaporation rate:** Not determined.

· **Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not determined.

##### · Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

##### · Solvent content:

Organic solvents:	18.0 %
Water:	81.0 %
VOC (EC)	18.00 %

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- |                              |  |
|------------------------------|--|
| <b>Solids content:</b>       | 1.0 %                                      |
| <b>9.2 Other information</b> | No further relevant information available. |

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

- **LD/LC50 values relevant for classification:**

50-00-0 formaldehyde

Oral	LD50	>200 mg/kg (rat)
------	------	------------------

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Must not reach sewage water or drainage ditch undiluted or unneutralised.  
Danger to drinking water if even small quantities leak into the ground.  
Harmful to aquatic organisms

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- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### SECTION 14: Transport information

- |  |                 |
|--|-----------------|
| · <b>14.5 Environmental hazards:</b>   | Not applicable. |
| · <b>14.6 Special precautions for user</b>                                       | Not applicable. |
| · <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>  | Void            |

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I formaldehyde**
- **Seveso category**  
P1a EXPLOSIVES  
H2 ACUTE TOXIC
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 10 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50 t
- **National regulations:**
- **Information about limitation of use:**  
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**  
H201 Explosive; mass explosion hazard.  
H226 Flammable liquid and vapour.  
H301 Toxic if swallowed.  
H311 Toxic in contact with skin.

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*H314 Causes severe skin burns and eye damage.**H317 May cause an allergic skin reaction.**H331 Toxic if inhaled.**H341 Suspected of causing genetic defects.**H350 May cause cancer.***· Abbreviations and acronyms:***GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Expl. 1.1: Explosives, Division 1.1**Flam. Liq. 3: Flammable liquids, Hazard Category 3**Acute Tox. 3: Acute toxicity, Hazard Category 3**Acute Tox. 4: Acute toxicity, Hazard Category 4**Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A**Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B**Skin Corr. 1C: Skin corrosion/irritation, Hazard Category 1C**Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1**Skin Sens. 1: Sensitisation - Skin, Hazard Category 1**Muta. 2: Germ cell mutagenicity, Hazard Category 2**Carc. 1B: Carcinogenicity, Hazard Category 1B*

GB



# Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 26.01.2016

Herziening van: 26.01.2016

## RUBRIEK 1: Identificatie van de stof of het mengsel en van de vennootschap/onderneming

### · 1.1 Productidentificatie

· Handelsnaam: **BOUIN'S FLUID**

· Artikelnummer: 15990-01, 15990-04, 15990-10, 15990-30, 15990-20

### · 1.2 Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik

Geen verdere relevante informatie verkrijgbaar.

· Toepassing van de stof / van de bereiding Laboratoriumchemicaliën

### · 1.3 Details betreffende de verstrekker van het veiligheidsinformatieblad

#### · Fabrikant/leverancier:

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: sgkcck@aol.com

www.emsdiasum.com

Aurion

Binnenhaven 5

6709 PD Wageningen

The Netherlands

Tel: 31 317 415094

Fax: 31 317 415955

email: info@aurion.nl

· Inlichtingengevende sector: Product safety department

### · 1.4 Telefoonnummer voor noodgevallen:

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

## RUBRIEK 2: Identificatie van de gevaren

### · 2.1 Indeling van de stof of het mengsel

· Indeling overeenkomstig Verordening (EG) nr. 1272/2008



GHS01 ontploffende bom

Expl. 1.1 H201 Ontploffbare stof; gevaar voor massa-explosie.



GHS06 doodshoofd met gekruiste beenderen

Acute Tox. 3 H311 Giftig bij contact met de huid.

Acute Tox. 3 H331 Giftig bij inademing.



GHS08 gezondheidsgevaar

Muta. 2 H341 Verdacht van het veroorzaken van genetische schade.

Carc. 1B H350 Kan kanker veroorzaken.



GHS05 corrosie

(Vervolg op blz. 2)

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Skin Corr. 1C H314 Veroorzaakt ernstige brandwonden en oogletsel.

Eye Dam. 1 H318 Veroorzaakt ernstig oogletsel.



GHS07

Acute Tox. 4 H302 Schadelijk bij inslikken.

Skin Sens. 1 H317 Kan een allergische huidreactie veroorzaken.

Flam. Liq. 3 H226 Ontvlambare vloeistof en damp.

## · 2.2 Etiketteringselementen

### · Etikettering overeenkomstig Verordening (EG) nr. 1272/2008

Het product is geclassificeerd en geëtiketteerd volgens de CLP-verordening.

### · Gevarenpictogrammen GHS01

### · Signaalwoord Gevaar

### · Gevaaraanduidende componenten voor de etikettering:

formaldehyde

2,4,6-trinitrofenol

### · Gevarenaanduidingen

H201 Ontpofbare stof; gevaar voor massa-explosie.

### · Veiligheidsaanbevelingen

P210 Verwijderd houden van warmte, hete oppervlakken, vonken, open vuur en andere ontstekingsbronnen. Niet roken.

P230 Vochtig houden.

P250 Malen/schokken/wrijving vermijden.

P373 NIET blussen wanneer het vuur de ontpofbare stoffen bereikt.

P401 Opslaan volgens de plaatselijke/regionale/nationale/internationale voorschriften.

P501 De inhoud en de verpakking verwerken volgens de plaatselijke/regionale/nationale/internationale voorschriften.

### · 2.3 Andere gevaren

### · Resultaten van PBT- en zPzB-beoordeling

· PBT: Niet bruikbaar.

· zPzB: Niet bruikbaar.

## RUBRIEK 3: Samenstelling en informatie over de bestanddelen

### · 3.2 Chemische karakterisering: Mengsels

· Beschrijving: Mengsel van na elkaar aangevoerde stoffen met onveerbarelijke bijmengingen.

### · Gevaarlijke inhoudstoffen:

CAS: 50-00-0 EINECS: 200-001-8	formaldehyde ⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ⚠ Muta. 2, H341; Carc. 1B, H350; ⚠ Skin Corr. 1B, H314; ⚠ Skin Sens. 1, H317	2,5-10%
CAS: 64-19-7 EINECS: 200-580-7	azijnzuur ⚠ Flam. Liq. 3, H226; ⚠ Skin Corr. 1A, H314	2,5-10%
CAS: 88-89-1 EINECS: 201-865-9	2,4,6-trinitrofenol ⚠ Expl. 1.1, H201; ⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331	≤ 2,5%

(Vervolg op blz. 3)

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**· Aanvullende gegevens:**

De woordelijke inhoud van de opgegeven aanwijzingen inzake de mogelijke gevaren is te vinden in hoofdstuk 16.

### RUBRIEK 4: Eerstehulpmaatregelen

**· 4.1 Beschrijving van de eerstehulpmaatregelen****· Algemene informatie:**

Verontreinigde kleding onmiddellijk uittrekken.

Het is mogelijk dat vergiftigingssymptomen pas na vele uren optreden. Om deze reden is medische controle gedurende minstens 48 uur na een ongeval noodzakelijk.

Ademhalingstoestel pas afnemen nadat de verontreinigde kleding verwijderd is.

Bij onregelmatige ademhaling of ademstilstand kunstmatige ademhaling toepassen.

**· Na het inademen:**

Verse lucht of zuurstof toedienen; deskundige medische hulp inroepen.

Bij bewusteloosheid ligging en vervoer in stabiele zijligging.

**· Na huidcontact: Onmiddellijk met water en zeep afwassen en goed naspoelen.****· Na oogcontact: Ogen met open ooglid een aantal minuten onder stromend water afspoelen en dokter raadplegen.****· Na inslikken:**

Onmiddellijk arts raadplegen.

Drink zeer veel water en voer verse lucht aan. Onmiddellijk een dokter waarschuwen.

**· 4.2 Belangrijkste acute en uitgestelde symptomen en effecten** Geen verdere relevante informatie verkrijgbaar.**· 4.3 Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling**

Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 5: Brandbestrijdingsmaatregelen

**· 5.1 Blusmiddelen**

**· Geschikte blusmiddelen:** CO<sub>2</sub>, zand, bluspoeder. Geen water gebruiken.

**· Blusmiddelen die uit veiligheidsoogpunt niet geschikt zijn:** Water

**· 5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt**

Geen verdere relevante informatie verkrijgbaar.

**· 5.3 Advies voor brandweerlieden**

**· Speciale beschermende kleding:** Ademhalingstoestel aantrekken.

### RUBRIEK 6: Maatregelen bij het accidenteel vrijkomen van de stof of het mengsel

**· 6.1 Persoonlijke voorzorgsmaatregelen, beschermde uitrusting en noodprocedures**

Personen in veiligheid brengen.

Beschermende kleding aantrekken. Niet beschermde personen op afstand houden.

**· 6.2 Milieuvoorzorgsmaatregelen:**

Bij indringen in afvalwater of riolering moet de bevoegde instantie gewaarschuwd worden.

Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.

**· 6.3 InsluTINGS- en reinigingsmethoden en -materiaal:**

Met vloeistofbindend materiaal (zand, bergmeel, zuurbinder, universele binder, zaagmeel) opnemen.

Neutralisatiemiddel gebruiken.

Besmet materiaal zoals afval volgens punt 13 verwijderen.

Voor voldoende ventilatie zorgen.

Niet met water of waterachtige reinigingsmiddelen wegspoelen.

**· 6.4 Verwijzing naar andere rubrieken**

Informatie inzake veilig gebruik - zie hoofdstuk 7.

Informatie inzake persoonlijke beschermingsuitrusting - zie hoofdstuk 8.

(Vervolg op blz. 4)

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Informatie inzake berging - zie hoofdstuk 13.

### RUBRIEK 7: Hantering en opslag

- **7.1 Voorzorgsmaatregelen voor het veilig hanteren van de stof of het mengsel**  
 Voor goede ventilatie/afzuiging op de werkplaatsen zorgen.  
 Tanks voorzichtig openen en behandelen.  
 Aërosolvorming vermijden.
- **Informatie m.b.t. brand- en ontploffingsgevaar:**  
 Onststekingsbronnen op afstand houden - niet roken.  
 Beschermen tegen hitte.  
 Maatregelen treffen tegen ontlading van statische elektriciteit.  
 Stoten en schuren vermijden.  
 Ademhalingsstoestellen gereedhouden.
- **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:** Geen bijzondere eisen.
- **Informatie m.b.t. gezamenlijke opslag:** Niet noodzakelijk.
- **Verdere inlichtingen over eisen m.b.t. de opslag:**  
 Tanks ondoordringbaar gesloten houden.  
 Tegen hitte en directe zonnestralen beschermen.
- **7.3 Specifiek eindgebruik** Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 8: Maatregelen ter beheersing van blootstelling/persoonlijke bescherming

- **Aanvullende gegevens m.b.t. de inrichting van technische installaties:** Geen aanvullende gegevens. Zie 7.

#### 8.1 Controleparameters

- **Bestanddelen met grenswaarden die m.b.t. de werkruimte in acht genomen moeten worden:**

##### 50-00-0 formaldehyde

WGW	Korte termijn waarde: 0,5 mg/m <sup>3</sup> , 0,4 ppm
	Lange termijn waarde: 0,15 mg/m <sup>3</sup> , 0,1 ppm

##### 64-19-7 azijnzuur

WGW	Lange termijn waarde: 25 mg/m <sup>3</sup> , 10 ppm
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##### 88-89-1 2,4,6-trinitrofenol

WGW	Lange termijn waarde: 0,1 mg/m <sup>3</sup>
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- **Aanvullende gegevens:** Als basis dienden lijsten die bij opstelling geldig waren.

#### 8.2 Maatregelen ter beheersing van blootstelling

- **Persoonlijke beschermingsvoorzieningen:**

##### Algemene beschermings- en gezondheidsmaatregelen:

- Verwijderd houden van eet- en drinkwaren.
- Verontreinigde kleding onmiddellijk uittrekken.
- Vóór de pauze en aan het einde van werktijd handen wassen.
- Beschermende kleding afzonderlijk bewaren.
- Aanraking met de ogen vermijden.
- Aanraking met de ogen en de huid vermijden.

##### Ademhalingsbescherming:

- Bij korte of geringe belasting ademfiltertoestel; bij intensieve resp. langdurige expositie een van de omringende lucht onafhankelijk ademhalingsstoestel gebruiken.

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(Vervolg van blz. 4)

**· Handbescherming:**

Veiligheidshandschoenen

Het handschoenmateriaal moet ondoorlatend en bestand zijn tegen het product / de stof / de bereiding.  
Op grond van falende testen kan geen aanbeveling voor handschoenmateriaal voor het product / de bereiding / het chemicaliënmengsel afgegeven worden.

Kies handschoenmateriaal rekening houdend met de penetratietijden, de permeatiegraden en de degradatie.

**· Handschoenmateriaal**

De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant. Aangezien het product uit meerdere stoffen is samengesteld, is de duurzaamheid van de handschoenmaterialen niet vooraf berekenbaar en moet derhalve vóór het gebruik worden getest.

**· Doordringingstijd van het handschoenmateriaal**

De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.

**· Oogbescherming:**

Veiligheidsbril



Nauw aansluitende veiligheidsbril

### RUBRIEK 9: Fysische en chemische eigenschappen

**· 9.1 Informatie over fysische en chemische basiseigenschappen****· Algemene gegevens****· Voorkomen:**

<b>Vorm:</b>	Vloeistof
<b>Kleur:</b>	Lichtgeel
<b>Reuk:</b>	Stekend
<b>Geurdrempelwaarde:</b>	Niet bepaald.

**· pH-waarde:** Niet bepaald.

**· Toestandsverandering**

<b>Smeltpunt/smeltbereik:</b>	Niet bepaald.
<b>Kookpunt/kookpuntbereik:</b>	-21 °C

**· Vlampunt:** 0 °C

**· Ontvlambaarheid (vast, gasvormig):** Niet bruikbaar.

**· Ontstekingstemperatuur:** 300 °C

**· Ontbindingstemperatuur:** Niet bepaald.

**· Zelfontsteking:** Het produkt ontbrandt niet uit zichzelf.

**· Ontploffingsgevaar:** Ontploffingsgevaar door schok, wrijving, vuur of andere ontstekingsoorzaken.

**· Ontploffingsgrenzen:**

<b>Onderste:</b>	Niet bepaald.
<b>Bovenste:</b>	Niet bepaald.

(Vervolg op blz. 6)

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· <b>Dampspanning bij 20 °C:</b>	23 hPa
· <b>Dichtheid bij 20 °C:</b>	0.99507 g/cm <sup>3</sup>
· <b>Relatieve dichtheid</b>	Niet bepaald.
· <b>Dampdichtheid</b>	Niet bepaald.
· <b>Verdampingssnelheid</b>	Niet bepaald.
· <b>Oplosbaarheid in/mengbaarheid met Water:</b>	Niet resp. gering mengbaar.
· <b>Verdelingscoëfficiënt (n-octanol/water):</b>	Niet bepaald.
· <b>Viscositeit</b>	
<b>Dynamisch:</b>	Niet bepaald.
<b>Kinematisch:</b>	Niet bepaald.
· <b>Oplosmiddelgehalte:</b>	
<b>Organisch oplosmiddel:</b>	18.0 %
<b>Water:</b>	81.0 %
<b>VOC (EG)</b>	18,00 %
· <b>Gehalte aan vaste bestanddelen:</b>	1.0 %
· <b>9.2 Overige informatie</b>	Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 10: Stabiliteit en reactiviteit

- **10.1 Reactiviteit** Geen verdere relevante informatie verkrijgbaar.
- **10.2 Chemische stabiliteit**
- **Thermische afbraak / te vermijden omstandigheden:** Geen afbraak bij gebruik volgens voorschrift.
- **10.3 Mogelijke gevaarlijke reacties** Geen gevaarlijke reacties bekend.
- **10.4 Te vermijden omstandigheden** Geen verdere relevante informatie verkrijgbaar.
- **10.5 Chemisch op elkaar inwerkende materialen:** Geen verdere relevante informatie verkrijgbaar.
- **10.6 Gevaarlijke ontledingsproducten:** Geen gevaarlijke ontbindingsproducten bekend.

### RUBRIEK 11: Toxicologische informatie

- **11.1 Informatie over toxicologische effecten**
- **Acute toxiciteit** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

#### Indelingsrelevantie LD/LC50-waarden:

##### 50-00-0 formaldehyde

Oraal	LD50	>200 mg/kg (rat)
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- **Primaire aandoening:**
- **Huidcorrosie/-irritatie** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Ernstig oogletsel/oogirritatie** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Sensibilisatie van de luchtwegen/de huid**  
Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)**
- **Mutageniteit in geslachtscellen** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Kankerverwekkendheid** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Giftigheid voor de voortplanting** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **STOT bij eenmalige blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **STOT bij herhaalde blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

(Vervolg op blz. 7)

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- **Gevaar bij inademing** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

## RUBRIEK 12: Ecologische informatie

- **12.1 Toxiciteit**
- **Aquatische toxiciteit:** Geen verdere relevante informatie verkrijgbaar.
- **12.2 Persistentie en afbreekbaarheid** Geen verdere relevante informatie verkrijgbaar.
- **12.3 Bioaccumulatie** Geen verdere relevante informatie verkrijgbaar.
- **12.4 Mobiliteit in de bodem** Geen verdere relevante informatie verkrijgbaar.
- **Ecotoxische effecten:**
- **Opmerking:** Schadelijk voor vissen.
- **Verdere ecologische informatie:**
- **Algemene informatie:**  
Waterbezwaarlijkheid (NL) 3: Kan kanker veroorzaken.  
Gevaar voor water klasse 2 (D) (Zelfclassificatie): gevaar voor water  
Niet lozen in grondwater, in oppervlaktewater of in riolering.  
Mag niet onverdund of niet geneutraliseerd in oppervlaktewater of in afwateringskanaal geloosd worden.  
Gevaar voor drinkwater zelfs bij uitlopen van geringe hoeveelheden in de ondergrond.  
schadelijk voor in het water levende organismen
- **12.5 Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.
- **12.6 Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

## RUBRIEK 13: Instructies voor verwijdering

- **13.1 Afvalverwerkingsmethoden**
- **Aanbeveling:** Mag niet tesamen met huisvuil gestort worden of in de riolering terechtkomen.
- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.

## RUBRIEK 14: Informatie met betrekking tot het vervoer

- |   |                     |
|---|---------------------|
| · <b>14.5 Milieugevaren:</b>  | Niet bruikbaar.     |
| · <b>14.6 Bijzondere voorzorgen voor de gebruiker</b>                             | Niet bruikbaar.     |
| · <b>14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code</b> | Niet bruikbaar.     |
| · <b>VN "Model Regulation":</b>   | Niet van toepassing |

## RUBRIEK 15: Regelgeving

- **15.1 Specifieke veiligheids-, gezondheids- en milieureglementen en -wetgeving voor de stof of het mengsel**
- **SZW-lijst van kankerverwekkende stoffen**  
50-00-0 formaldehyde
- **SZW-lijst van mutagene stoffen**  
geen der bestanddelen staat op de lijst.

(Vervolg op blz. 8)



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· <b>NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid</b>
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geen der bestanddelen staat op de lijst.
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· <b>NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling</b>
--

geen der bestanddelen staat op de lijst.
--

· <b>NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Borstvoeding</b>
--

geen der bestanddelen staat op de lijst.
--

- **Richtlijn 2012/18/EU**

- **Gevaarlijke stoffen die met naam genoemd worden - BIJLAGE I formaldehyde**

- **Seveso-categorie**

- P1a ONTPLOFBARE STOFFEN

- H2 ACUUT TOXISCH

- **Drempelwaarde (ton) voor toepassing van voorschriften voor lagedrempelinrichtingen 10 t**

- **Drempelwaarde (ton) voor toepassing van voorschriften voor hogedrempelinrichtingen 50 t**

- **Nationale voorschriften:**

- **Aanwijzingen m.b.t. tewerkstellingsbeperking:**

Werknemers mogen aan de kankerverwekkende gevaarlijke stoffen van deze toebereiding niet blootgesteld worden. In uitzonderingsgevallen kan de overheid speciale vergunningen afgeven.

- **Gevaarklasse v. water:** Waterbezwaarlijkheid (NL) 3: Saneringsinspanning A

- **15.2 Chemischeveiligheidsbeoordeling:** Een chemische veiligheidsbeoordeling is niet uitgevoerd.

### RUBRIEK 16: Overige informatie

Deze gegevens zijn gebaseerd op de huidige stand van onze kennis. Zij beschrijven echter geen garantie van produkteigenschappen en vestigen geen contractuele rechtsbetrekking.

- **Relevante zinnen**

- H201 Ontploffbare stof; gevaar voor massa-explosie.

- H226 Ontvlambare vloeistof en damp.

- H301 Giftig bij inslikken.

- H311 Giftig bij contact met de huid.

- H314 Veroorzaakt ernstige brandwonden en oogletsel.

- H317 Kan een allergische huidreactie veroorzaken.

- H331 Giftig bij inademing.

- H341 Verdacht van het veroorzaken van genetische schade.

- H350 Kan kanker veroorzaken.

- **Afkortingen en acroniemen:**

- GHS: Globally Harmonised System of Classification and Labelling of Chemicals

- EINECS: European Inventory of Existing Commercial Chemical Substances

- ELINCS: European List of Notified Chemical Substances

- CAS: Chemical Abstracts Service (division of the American Chemical Society)

- VOC: Volatile Organic Compounds (USA, EU)

- LC50: Lethal concentration, 50 percent

- LD50: Lethal dose, 50 percent

- PBT: Persistent, Bioaccumulative and Toxic

- vPvB: very Persistent and very Bioaccumulative

- Expl. 1.1: Explosives, Division 1.1

- Flam. Liq. 3: Flammable liquids, Hazard Category 3

- Acute Tox. 3: Acute toxicity, Hazard Category 3

- Acute Tox. 4: Acute toxicity, Hazard Category 4

- Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

- Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

- Skin Corr. 1C: Skin corrosion/irritation, Hazard Category 1C

- Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

- Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

(Vervolg op blz. 9)



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**Handelsnaam: BOUIN'S FLUID**

*Muta. 2: Germ cell mutagenicity, Hazard Category 2*  
*Carc. 1B: Carcinogenicity, Hazard Category 1B*

(Vervolg van blz. 8)

NL

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 26.01.2016

Révision: 26.01.2016

### RUBRIQUE 1: Identification de la substance/du mélange et de la société/l'entreprise

- **1.1 Identificateur de produit**
- **Nom du produit:** BOUIN'S FLUID
- **Code du produit:** 15990-01, 15990-04, 15990-10, 15990-30, 15990-20
- **1.2 Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées**  
Pas d'autres informations importantes disponibles.
- **Emploi de la substance / de la préparation** Produits chimiques pour laboratoires
- **1.3 Renseignements concernant le fournisseur de la fiche de données de sécurité**
- **Producteur/fournisseur:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- **Service chargé des renseignements:** Product safety department
- **1.4 Numéro d'appel d'urgence:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### RUBRIQUE 2: Identification des dangers

- **2.1 Classification de la substance ou du mélange**
- **Classification selon le règlement (CE) n° 1272/2008**



GHS01 bombe explosant

Expl. 1.1 H201 Explosif; danger d'explosion en masse.



GHS06 tête de mort sur deux tibias

Acute Tox. 3 H311 Toxique par contact cutané.

Acute Tox. 3 H331 Toxique par inhalation.



GHS08 danger pour la santé

Muta. 2 H341 Susceptible d'induire des anomalies génétiques.

Carc. 1B H350 Peut provoquer le cancer.



GHS05 corrosion

Skin Corr. 1C H314 Provoque des brûlures de la peau et des lésions oculaires graves.

Eye Dam. 1 H318 Provoque des lésions oculaires graves.



GHS07

Acute Tox. 4 H302 Nocif en cas d'ingestion.

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# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

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**Nom du produit: BOUIN'S FLUID**

(suite de la page 1)

*Skin Sens. 1 H317 Peut provoquer une allergie cutanée.*

*Flam. Liq. 3 H226 Liquide et vapeurs inflammables.*

### 2.2 Éléments d'étiquetage

- **Étiquetage selon le règlement (CE) n° 1272/2008** Le produit est classifié et étiqueté selon le règlement CLP.
- **Pictogrammes de danger GHS01**
- **Mention d'avertissement Danger**

### Composants dangereux déterminants pour l'étiquetage:

Formaldéhyde

2,4,6-trinitrophénol

### Mentions de danger

H201 Explosif; danger d'explosion en masse.

### Conseils de prudence

P210 Tenir à l'écart de la chaleur, des surfaces chaudes, des étincelles, des flammes nues et de toute autre source d'inflammation. Ne pas fumer.

P230 Maintenir humidifié.

P250 Éviter les abrasions/les chocs/les frottements.

P373 NE PAS combattre l'incendie lorsque le feu atteint les explosifs.

P401 Stocker conformément à la réglementation locale/régionale/nationale/internationale.

P501 Éliminer le contenu/réceptif conformément à la réglementation locale/régionale/nationale/internationale.

### 2.3 Autres dangers

#### Résultats des évaluations PBT et vPvB

· **PBT:** Non applicable.

· **vPvB:** Non applicable.

## RUBRIQUE 3: Composition/informations sur les composants

### 3.2 Caractérisation chimique: Mélanges

· **Description:** Mélange des substances mentionnées à la suite avec des additifs non dangereux.

#### Composants dangereux:

CAS: 50-00-0 EINECS: 200-001-8	Formaldéhyde ☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ☠ Muta. 2, H341; Carc. 1B, H350; ☠ Skin Corr. 1B, H314; ☠ Skin Sens. 1, H317	2,5-10%
CAS: 64-19-7 EINECS: 200-580-7	acide acétique ☠ Flam. Liq. 3, H226; ☠ Skin Corr. 1A, H314	2,5-10%
CAS: 88-89-1 EINECS: 201-865-9	2,4,6-trinitrophénol ☠ Expl. 1.1, H201; ☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331	≤ 2,5%

· **Indications complémentaires:** Pour le libellé des phrases de risque citées, se référer au chapitre 16.

## RUBRIQUE 4: Premiers secours

### 4.1 Description des premiers secours

#### Remarques générales:

Enlever immédiatement les vêtements contaminés par le produit.

Les symptômes d'intoxication peuvent apparaître après de nombreuses heures seulement; une surveillance médicale est donc nécessaire au moins 48 heures après un accident.

Ne retirer la protection respiratoire qu'après avoir retiré les vêtements contaminés.

Respiration artificielle dans le cas d'une respiration irrégulière ou d'un arrêt respiratoire.

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- **Après inhalation:**  
Donner de l'air frais ou de l'oxygène; demander d'urgence une assistance médicale.  
En cas d'inconscience, coucher et transporter la personne en position latérale stable.
- **Après contact avec la peau:** Laver immédiatement à l'eau et au savon et bien rincer.
- **Après contact avec les yeux:**  
Rincer les yeux, pendant plusieurs minutes, sous l'eau courante en écartant bien les paupières et consulter un médecin.
- **Après ingestion:**  
Consulter immédiatement un médecin.  
Boire de l'eau en abondance et donner de l'air frais. Consulter immédiatement un médecin.
- **4.2 Principaux symptômes et effets, aigus et différés** Pas d'autres informations importantes disponibles.
- **4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires**  
Pas d'autres informations importantes disponibles.

### RUBRIQUE 5: Mesures de lutte contre l'incendie

- **5.1 Moyens d'extinction**
- **Moyens d'extinction:** CO<sub>2</sub>, sable, poudre d'extinction. Ne pas utiliser d'eau.
- **Produits extincteurs déconseillés pour des raisons de sécurité:** Eau
- **5.2 Dangers particuliers résultant de la substance ou du mélange**  
Pas d'autres informations importantes disponibles.
- **5.3 Conseils aux pompiers**
- **Équipement spécial de sécurité:** Porter un appareil de protection respiratoire.

### RUBRIQUE 6: Mesures à prendre en cas de dispersion accidentelle

- **6.1 Précautions individuelles, équipement de protection et procédures d'urgence**  
Mettre les personnes en sécurité.  
Porter un équipement de sécurité. Eloigner les personnes non protégées.
- **6.2 Précautions pour la protection de l'environnement:**  
En cas de pénétration dans les eaux ou les égouts, avvertir les autorités compétentes.  
Ne pas rejeter dans les canalisations, dans les eaux de surface et dans les nappes d'eau souterraines.
- **6.3 Méthodes et matériel de confinement et de nettoyage:**  
Recueillir les liquides à l'aide d'un produit absorbant (sable, kieselguhr, neutralisant d'acide, liant universel, sciure).  
Utiliser un neutralisant.  
Evacuer les matériaux contaminés en tant que déchets conformément au point 13.  
Assurer une aération suffisante.  
Ne pas rincer à l'eau ou aux produits nettoyants aqueux.
- **6.4 Référence à d'autres rubriques**  
Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.  
Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.  
Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.

### RUBRIQUE 7: Manipulation et stockage

- **7.1 Précautions à prendre pour une manipulation sans danger**  
Veiller à une bonne ventilation/aspiration du poste de travail.  
Ouvrir et manipuler les récipients avec précaution.  
Eviter la formation d'aérosols.

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- **Préventions des incendies et des explosions:**
  - Tenir à l'abri des sources d'inflammation - ne pas fumer.
  - Tenir à l'abri de la chaleur.
  - Prendre des mesures contre les charges électrostatiques.
  - Eviter les chocs et les frictions.
  - Tenir des appareils de protection respiratoire prêts.
- **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**
- **Stockage:**
  - **Exigences concernant les lieux et conteneurs de stockage:** Aucune exigence particulière.
  - **Indications concernant le stockage commun:** Pas nécessaire.
  - **Autres indications sur les conditions de stockage:**
    - Tenir les emballages hermétiquement fermés.
    - Protéger de la forte chaleur et du rayonnement direct du soleil.
- **7.3 Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

### RUBRIQUE 8: Contrôles de l'exposition/protection individuelle

- **Indications complémentaires pour l'agencement des installations techniques:**
  - Sans autre indication, voir point 7.

#### · 8.1 Paramètres de contrôle

- **Composants présentant des valeurs-seuil à surveiller par poste de travail:**

#### 50-00-0 Formaldéhyde

VME	Valeur momentanée: 1 ppm Valeur à long terme: 0,5 ppm C2
-----	--

#### 64-19-7 acide acétique

VME	Valeur momentanée: 25 mg/m <sup>3</sup> , 10 ppm
-----	--

#### 88-89-1 2,4,6-trinitrophénol

VME	Valeur à long terme: 0,1 mg/m <sup>3</sup> Risque de pénétration percutanée
-----	--

- **Remarques supplémentaires:**
  - Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.
- **8.2 Contrôles de l'exposition**
- **Equipement de protection individuel:**
- **Mesures générales de protection et d'hygiène:**
  - Tenir à l'écart des produits alimentaires, des boissons et de la nourriture pour animaux.
  - Retirer immédiatement les vêtements souillés ou humectés.
  - Se laver les mains avant les pauses et en fin de travail.
  - Conserver à part les vêtements de protection.
  - Eviter tout contact avec les yeux.
  - Eviter tout contact avec les yeux et avec la peau.
- **Protection respiratoire:**
  - En cas d'exposition faible ou de courte durée, utiliser un filtre respiratoire; en cas d'exposition intense ou durable, utiliser un appareil de respiration indépendant de l'air ambiant.
- **Protection des mains:**



Gants de protection

(suite page 5)

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Le matériau des gants doit être imperméable et résistant au produit / à la substance / à la préparation.  
À cause du manque de tests, aucune recommandation pour un matériau de gants pour le produit / la préparation / le mélange de produits chimiques ne peut être donnée.

Choix du matériau des gants en fonction des temps de pénétration, du taux de perméabilité et de la dégradation.

· **Matériau des gants**

Le choix de gants appropriés dépend non seulement du matériau, mais aussi d'autres critères de qualité qui peuvent varier d'un fabricant à l'autre. Puisque le produit représente une préparation composée de plusieurs substances, la résistance des matériaux des gants ne peut pas être calculée à l'avance et doit, alors, être contrôlée avant l'utilisation.

· **Temps de pénétration du matériau des gants**

Le temps de pénétration exact est à déterminer par le fabricant des gants de protection et à respecter.

· **Protection des yeux:**

Lunettes de protection



Lunettes de protection hermétiques

### RUBRIQUE 9: Propriétés physiques et chimiques

· **9.1 Informations sur les propriétés physiques et chimiques essentielles**

· **Indications générales**

· **Aspect:**

<b>Forme:</b>	Liquide
<b>Couleur:</b>	Jaune clair
<b>Odeur:</b>	Piquante
<b>Seuil olfactif:</b>	Non déterminé.

· **valeur du pH:** Non déterminé.

· **Changement d'état**

<b>Point de fusion:</b>	Non déterminé.
<b>Point d'ébullition:</b>	-21 °C

· **Point d'éclair** 0 °C

· **Inflammabilité (solide, gazeux):** Non applicable.

· **Température d'inflammation:** 300 °C

· **Température de décomposition:** Non déterminé.

· **Auto-inflammation:** Le produit ne s'enflamme pas spontanément.

· **Danger d'explosion:** Risque d'explosion par le choc, la friction, le feu ou d'autres sources d'ignition.

· **Limites d'explosion:**

<b>Inférieure:</b>	Non déterminé.
<b>Supérieure:</b>	Non déterminé.

· **Pression de vapeur à 20 °C:** 23 hPa

<b>Densité à 20 °C:</b>	0.99507 g/cm <sup>3</sup>
<b>Densité relative</b>	Non déterminé.
<b>Densité de vapeur.</b>	Non déterminé.
<b>Vitesse d'évaporation</b>	Non déterminé.

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Nom du produit: **BOUIN'S FLUID**

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- |  |  |
|--|--|
| <b>· Solubilité dans/miscibilité avec l'eau:</b> | Pas ou peu miscible                                |
| <b>· Coefficient de partage (n-octanol/eau):</b> | Non déterminé.                                     |
| <b>· Viscosité:</b>                              |  |
| <b>Dynamique:</b>                                | Non déterminé.                                     |
| <b>Cinématique:</b>                              | Non déterminé.                                     |
| <b>· Teneur en solvants:</b>                     |  |
| <b>Solvants organiques:</b>                      | 18,0 %   |
| <b>Eau:</b>                                      | 81,0 %   |
| <b>VOC (CE)</b>                                  | 18,00 %  |
| <b>· Teneur en substances solides:</b>           | 1,0 %  |
| <b>· 9.2 Autres informations</b>                 | Pas d'autres informations importantes disponibles. |

### RUBRIQUE 10: Stabilité et réactivité

- **10.1 Réactivité** Pas d'autres informations importantes disponibles.
- **10.2 Stabilité chimique**
- **Décomposition thermique/conditions à éviter:** Pas de décomposition en cas d'usage conforme.
- **10.3 Possibilité de réactions dangereuses** Aucune réaction dangereuse connue.
- **10.4 Conditions à éviter** Pas d'autres informations importantes disponibles.
- **10.5 Matières incompatibles:** Pas d'autres informations importantes disponibles.
- **10.6 Produits de décomposition dangereux:** Pas de produits de décomposition dangereux connus

### RUBRIQUE 11: Informations toxicologiques

- **11.1 Informations sur les effets toxicologiques**
- **Toxicité aiguë** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

<b>· Valeurs LD/LC50 déterminantes pour la classification:</b>		
<b>50-00-0 Formaldéhyde</b>		
Oral	LD50	>200 mg/kg (rat)

- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Lésions oculaires graves/irritation oculaire**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Sensibilisation respiratoire ou cutanée**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
- **Mutagénicité sur les cellules germinales**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Cancérogénicité** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité pour la reproduction**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité spécifique pour certains organes cibles - exposition unique**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité spécifique pour certains organes cibles - exposition répétée**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

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· **Danger par aspiration** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

### RUBRIQUE 12: Informations écologiques

- **12.1 Toxicité**
- **Toxicité aquatique:** Pas d'autres informations importantes disponibles.
- **12.2 Persistance et dégradabilité** Pas d'autres informations importantes disponibles.
- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.
- **Effets écotoxiques:**
- **Remarque:** Nocif pour les poissons.
- **Autres indications écologiques:**
- **Indications générales:**  
 Catégorie de pollution des eaux 2 (D) (Classification propre): polluant  
 Ne pas laisser pénétrer dans la nappe phréatique, les eaux ou les canalisations.  
 Ne doit pas pénétrer à l'état non dilué ou non neutralisé dans les eaux usées ou le collecteur.  
 Danger pour l'eau potable dès fuite d'une petite quantité dans le sous-sol.  
 Nocif pour les organismes aquatiques.
- **12.5 Résultats des évaluations PBT et VPVB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.
- **12.6 Autres effets néfastes** Pas d'autres informations importantes disponibles.

### RUBRIQUE 13: Considérations relatives à l'élimination

- **13.1 Méthodes de traitement des déchets**
- **Recommandation:** Ne doit pas être évacué avec les ordures ménagères. Ne pas laisser pénétrer dans les égouts.
- **Emballages non nettoyés:**
- **Recommandation:** Evacuation conformément aux prescriptions légales.

### RUBRIQUE 14: Informations relatives au transport

- |  |                 |
|--|-----------------|
| · <b>14.5 Dangers pour l'environnement:</b>  | Non applicable. |
| · <b>14.6 Précautions particulières à prendre par l'utilisateur</b>                                  | Non applicable. |
| · <b>14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC</b> | Non applicable. |
| · <b>"Règlement type" de l'ONU:</b>  | néant           |

### RUBRIQUE 15: Informations relatives à la réglementation

- **15.1 Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement**
- **Directive 2012/18/UE**
- **Substances dangereuses désignées - ANNEXE I** Formaldéhyde

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**Nom du produit: BOUIN'S FLUID**

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- **Catégorie SEVESO**  
*P1a EXPLOSIBLES*  
*H2 TOXICITÉ AIGUË*
- **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil bas 10 t**
- **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil haut 50 t**
- **Prescriptions nationales:**
- **Indications sur les restrictions de travail:**  
*Le personnel ne doit pas être exposé aux substances dangereuses cancérigènes contenues dans cette préparation.*  
*Les autorités peuvent autoriser des exceptions dans des cas particuliers.*
- **15.2 Évaluation de la sécurité chimique:** *Une évaluation de la sécurité chimique n'a pas été réalisée.*

### RUBRIQUE 16: Autres informations

*Ces indications sont fondées sur l'état actuel de nos connaissances, mais ne constituent pas une garantie quant aux propriétés du produit et ne donnent pas lieu à un rapport juridique contractuel.*

- **Phrases importantes**  
*H201 Explosif; danger d'explosion en masse.*  
*H226 Liquide et vapeurs inflammables.*  
*H301 Toxique en cas d'ingestion.*  
*H311 Toxique par contact cutané.*  
*H314 Provoque des brûlures de la peau et des lésions oculaires graves.*  
*H317 Peut provoquer une allergie cutanée.*  
*H331 Toxique par inhalation.*  
*H341 Susceptible d'induire des anomalies génétiques.*  
*H350 Peut provoquer le cancer.*
- **Acronymes et abréviations:**  
*GHS: Globally Harmonised System of Classification and Labelling of Chemicals*  
*EINECS: European Inventory of Existing Commercial Chemical Substances*  
*ELINCS: European List of Notified Chemical Substances*  
*CAS: Chemical Abstracts Service (division of the American Chemical Society)*  
*VOC: Volatile Organic Compounds (USA, EU)*  
*LC50: Lethal concentration, 50 percent*  
*LD50: Lethal dose, 50 percent*  
*PBT: Persistent, Bioaccumulative and Toxic*  
*vPvB: very Persistent and very Bioaccumulative*  
*Expl. 1.1: Explosives, Division 1.1*  
*Flam. Liq. 3: Flammable liquids, Hazard Category 3*  
*Acute Tox. 3: Acute toxicity, Hazard Category 3*  
*Acute Tox. 4: Acute toxicity, Hazard Category 4*  
*Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A*  
*Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B*  
*Skin Corr. 1C: Skin corrosion/irritation, Hazard Category 1C*  
*Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1*  
*Skin Sens. 1: Sensitisation - Skin, Hazard Category 1*  
*Muta. 2: Germ cell mutagenicity, Hazard Category 2*  
*Carc. 1B: Carcinogenicity, Hazard Category 1B*

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 26.01.2016

überarbeitet am: 26.01.2016

### ABSCHNITT 1: Bezeichnung des Stoffs beziehungsweise des Gemischs und des Unternehmens

- **1.1 Produktidentifikator**
- **Handelsname: BOUIN'S FLUID**
- **Artikelnummer: 15990-01, 15990-04, 15990-10, 15990-30, 15990-20**
- **1.2 Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**  
Keine weiteren relevanten Informationen verfügbar.
- **Verwendung des Stoffes / des Gemisches Laborchemikalien**
- **1.3 Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**
- **Hersteller/Lieferant:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com  
  
Science Services GmbH  
Unterhachinger Str. 75  
81737 München Germany  
Tel: +49(0)89 18 93 668-0  
safety@scienceservices.de  
  
24h Giftnotruf Munchen: +49 (0)89 19240  
Toxikologische Abteilung der II. Medizinischen Klinik  
rechts der Isar, Munchen. - www.toxinfo.org
- **Auskunftgebender Bereich: Product safety department**
- **1.4 Notrufnummer:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### ABSCHNITT 2: Mögliche Gefahren

- **2.1 Einstufung des Stoffs oder Gemischs**
- **Einstufung gemäß Verordnung (EG) Nr. 1272/2008**



GHS01 explodierende Bombe

Expl. 1.1 H201 Explosiv, Gefahr der Massenexplosion.



GHS06 Totenkopf mit gekreuzten Knochen

Acute Tox. 3 H311 Giftig bei Hautkontakt.

Acute Tox. 3 H331 Giftig bei Einatmen.



GHS08 Gesundheitsgefahr

Muta. 2 H341 Kann vermutlich genetische Defekte verursachen.

Carc. 1B H350 Kann Krebs erzeugen.

(Fortsetzung auf Seite 2)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 26.01.2016

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**Handelsname: BOUIN'S FLUID**

(Fortsetzung von Seite 1)



GHS05 Ätzwirkung

Skin Corr. 1C H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

Eye Dam. 1 H318 Verursacht schwere Augenschäden.



GHS07

Acute Tox. 4 H302 Gesundheitsschädlich bei Verschlucken.

Skin Sens. 1 H317 Kann allergische Hautreaktionen verursachen.

Flam. Liq. 3 H226 Flüssigkeit und Dampf entzündbar.

### · 2.2 Kennzeichnungselemente

#### · Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008

Das Produkt ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.

#### · Gefahrenpiktogramme GHS01

#### · Signalwort Gefahr

#### · Gefahrbestimmende Komponenten zur Etikettierung:

Formaldehyd

2,4,6-Trinitrophenol

#### · Gefahrenhinweise

H201 Explosiv, Gefahr der Massenexplosion.

#### · Sicherheitshinweise

P210 Von Hitze, heißen Oberflächen, Funken, offenen Flammen und anderen Zündquellen fernhalten. Nicht rauchen.

P230 Feucht halten.

P250 Nicht schleifen/stoßen/reiben.

P373 KEINE Brandbekämpfung, wenn das Feuer explosive Stoffe/Gemische/Erzeugnisse erreicht.

P401 Gemäß örtlicher/regionaler/nationaler/internationaler Vorschrift lagern.

P501 Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen / internationalen Vorschriften.

### · 2.3 Sonstige Gefahren

#### · Ergebnisse der PBT- und vPvB-Beurteilung

· PBT: Nicht anwendbar.

· vPvB: Nicht anwendbar.

## ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

### · 3.2 Chemische Charakterisierung: Gemische

· Beschreibung: Gemisch aus nachfolgend angeführten Stoffen mit ungefährlichen Beimengungen.

#### · Gefährliche Inhaltsstoffe:

CAS: 50-00-0 EINECS: 200-001-8	Formaldehyd ⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ⚠ Muta. 2, H341; Carc. 1B, H350; ⚠ Skin Corr. 1B, H314; ⚠ Skin Sens. 1, H317	2,5-10%
CAS: 64-19-7 EINECS: 200-580-7	Essigsäure ⚠ Flam. Liq. 3, H226; ⚠ Skin Corr. 1A, H314	2,5-10%

(Fortsetzung auf Seite 3)

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CAS: 88-89-1  
EINECS: 201-865-92,4,6-Trinitrophenol  
Explosionslos Expl. 1.1, H201; Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331

≤ 2,5%

· **Zusätzliche Hinweise:** Der Wortlaut der angeführten Gefahrenhinweise ist dem Abschnitt 16 zu entnehmen.

### ABSCHNITT 4: Erste-Hilfe-Maßnahmen

#### · 4.1 Beschreibung der Erste-Hilfe-Maßnahmen

##### · Allgemeine Hinweise:

Mit Produkt verunreinigte Kleidungsstücke unverzüglich entfernen.

Vergiftungssymptome können erst nach vielen Stunden auftreten, deshalb ärztliche Überwachung mindestens 48 Stunden nach einem Unfall.

Atemschutz erst nach Entfernen verunreinigter Kleidungsstücke abnehmen.

Bei unregelmäßiger Atmung oder Atemstillstand künstliche Beatmung.

##### · Nach Einatmen:

Frischluf- oder Sauerstoffzufuhr; ärztliche Hilfe in Anspruch nehmen.

Bei Bewußtlosigkeit Lagerung und Transport in stabiler Seitenlage.

##### · Nach Hautkontakt: Sofort mit Wasser und Seife abwaschen und gut nachspülen.

##### · Nach Augenkontakt:

Augen bei geöffnetem Lidspalt mehrere Minuten unter fließendem Wasser abspülen und Arzt konsultieren.

##### · Nach Verschlucken:

Sofort Arzt aufsuchen.

Reichlich Wasser nachtrinken und Frischluftzufuhr. Unverzüglich Arzt hinzuziehen.

#### · 4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen

Keine weiteren relevanten Informationen verfügbar.

#### · 4.3 Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung

Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

#### · 5.1 Löschmittel

· **Geeignete Löschmittel:** CO<sub>2</sub>, Sand, Löschpulver. Kein Wasser verwenden.

· **Aus Sicherheitsgründen ungeeignete Löschmittel:** Wasser

#### · 5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren

Keine weiteren relevanten Informationen verfügbar.

#### · 5.3 Hinweise für die Brandbekämpfung

· **Besondere Schutzausrüstung:** Atemschutzgerät anlegen.

### ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

#### · 6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren

Personen in Sicherheit bringen.

Schutzausrüstung tragen. Ungeschützte Personen fernhalten.

#### · 6.2 Umweltschutzmaßnahmen:

Bei Eindringen in Gewässer oder Kanalisation zuständige Behörden benachrichtigen.

Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.

#### · 6.3 Methoden und Material für Rückhaltung und Reinigung:

Mit flüssigkeitsbindendem Material (Sand, Kieselgur, Säurebinder, Universalbinder, Sägemehl) aufnehmen.

Neutralisationsmittel anwenden.

Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.

Für ausreichende Lüftung sorgen.

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Nicht mit Wasser oder wäßrigen Reinigungsmitteln wegspülen.

· **6.4 Verweis auf andere Abschnitte**

Informationen zur sicheren Handhabung siehe Abschnitt 7.

Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.

Informationen zur Entsorgung siehe Abschnitt 13.

### ABSCHNITT 7: Handhabung und Lagerung

· **7.1 Schutzmaßnahmen zur sicheren Handhabung**

Für gute Belüftung/Absaugung am Arbeitsplatz sorgen.

Behälter mit Vorsicht öffnen und handhaben.

Aerosolbildung vermeiden.

· **Hinweise zum Brand- und Explosionsschutz:**

Zündquellen fernhalten - nicht rauchen.

Vor Hitze schützen.

Maßnahmen gegen elektrostatische Aufladung treffen.

Schlag und Reibung vermeiden.

Atemschutzgeräte bereithalten.

· **7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**

· **Lagerung:**

· **Anforderung an Lagerräume und Behälter:** Keine besonderen Anforderungen.

· **Zusammenlagerungshinweise:** Nicht erforderlich.

· **Weitere Angaben zu den Lagerbedingungen:**

Behälter dicht geschlossen halten.

Vor Hitze und direkter Sonnenbestrahlung schützen.

· **Lagerklasse:**

· **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):** Entzündbare Flüssigkeiten

· **7.3 Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

· **Zusätzliche Hinweise zur Gestaltung technischer Anlagen:** Keine weiteren Angaben, siehe Abschnitt 7.

· **8.1 Zu überwachende Parameter**

· **Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:**

**50-00-0 Formaldehyd**

AGW	Langzeitwert: 0,37 mg/m <sup>3</sup> , 0,3 ml/m <sup>3</sup>
	2(I);X, Y, Sh, AGS

**64-19-7 Essigsäure**

AGW	Langzeitwert: 25 mg/m <sup>3</sup> , 10 ml/m <sup>3</sup>
	2(I);DFG, EU, Y

**88-89-1 2,4,6-Trinitrophenol**

AGW	Langzeitwert: 0,1 E mg/m <sup>3</sup>
	1(I);H, EU, 13

· **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.

· **8.2 Begrenzung und Überwachung der Exposition**

· **Persönliche Schutzausrüstung:**

· **Allgemeine Schutz- und Hygienemaßnahmen:**

Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.

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Beschmutzte, getränkte Kleidung sofort ausziehen.  
 Vor den Pausen und bei Arbeitsende Hände waschen.  
 Getrennte Aufbewahrung der Schutzkleidung.  
 Berührung mit den Augen vermeiden.  
 Berührung mit den Augen und der Haut vermeiden.

· **Atemschutz:**

Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition unluftunabhängiges Atemschutzgerät verwenden.

· **Handschutz:**



Schutzhandschuhe

Das Handschuhmaterial muss undurchlässig und beständig gegen das Produkt / den Stoff / die Zubereitung sein. Aufgrund fehlender Tests kann keine Empfehlung zum Handschuhmaterial für das Produkt / die Zubereitung / das Chemikaliengemisch abgegeben werden.

Auswahl des Handschuhmaterials unter Beachtung der Durchbruchzeiten, Permeationsraten und der Degradation.

· **Handschuhmaterial**

Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich. Da das Produkt eine Zubereitung aus mehreren Stoffen darstellt, ist die Beständigkeit von Handschuhmaterialien nicht vorausberechenbar und muß deshalb vor dem Einsatz überprüft werden.

· **Durchdringungszeit des Handschuhmaterials**

Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

· **Augenschutz:**

Schutzbrille



Dichtschließende Schutzbrille

### ABSCHNITT 9: Physikalische und chemische Eigenschaften

· **9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften**

· **Allgemeine Angaben**

· **Aussehen:**

Form: Flüssigkeit

Farbe: Hellgelb

· Geruch: Stechend

· Geruchsschwelle: Nicht bestimmt.

· pH-Wert: Nicht bestimmt.

· **Zustandsänderung**

Schmelzpunkt/Schmelzbereich: Nicht bestimmt.

Siedepunkt/Siedebereich: -21 °C

· Flammpunkt: 0 °C

· Entzündlichkeit (fest, gasförmig): Nicht anwendbar.

· Zündtemperatur: 300 °C

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· <b>Zersetzungstemperatur:</b>	Nicht bestimmt.
· <b>Selbstentzündlichkeit:</b>	Das Produkt ist nicht selbstentzündlich.
· <b>Explosionsgefahr:</b>	Durch Schlag, Reibung, Feuer oder andere Zündquellen explosionsgefährlich.
· <b>Explosionsgrenzen:</b> <b>Untere:</b> <b>Obere:</b>	Nicht bestimmt. Nicht bestimmt.
· <b>Dampfdruck bei 20 °C:</b>	23 hPa
· <b>Dichte bei 20 °C:</b>	0,99507 g/cm <sup>3</sup>
· <b>Relative Dichte</b>	Nicht bestimmt.
· <b>Dampfdichte</b>	Nicht bestimmt.
· <b>Verdampfungsgeschwindigkeit</b>	Nicht bestimmt.
· <b>Löslichkeit in / Mischbarkeit mit Wasser:</b>	Nicht bzw. wenig mischbar.
· <b>Verteilungskoeffizient (n-Octanol/Wasser):</b>	Nicht bestimmt.
· <b>Viskosität:</b> <b>Dynamisch:</b> <b>Kinematisch:</b>	Nicht bestimmt. Nicht bestimmt.
· <b>Lösemittelgehalt:</b> <b>Organische Lösemittel:</b> <b>Wasser:</b> <b>VOC (EU)</b>	18,0 % 81,0 % 18,00 %
· <b>Festkörpergehalt:</b>	1,0 %
· <b>9.2 Sonstige Angaben</b>	Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 10: Stabilität und Reaktivität

- **10.1 Reaktivität** Keine weiteren relevanten Informationen verfügbar.
- **10.2 Chemische Stabilität**
- **Thermische Zersetzung / zu vermeidende Bedingungen:**  
Keine Zersetzung bei bestimmungsgemäßer Verwendung.
- **10.3 Möglichkeit gefährlicher Reaktionen** Keine gefährlichen Reaktionen bekannt.
- **10.4 Zu vermeidende Bedingungen** Keine weiteren relevanten Informationen verfügbar.
- **10.5 Unverträgliche Materialien:** Keine weiteren relevanten Informationen verfügbar.
- **10.6 Gefährliche Zersetzungsprodukte:** Keine gefährlichen Zersetzungsprodukte bekannt.

### ABSCHNITT 11: Toxikologische Angaben

- **11.1 Angaben zu toxikologischen Wirkungen**
- **Akute Toxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

· <b>Einstufungsrelevante LD/LC50-Werte:</b>
--

<b>50-00-0 Formaldehyd</b>
----------------------------

Oral	LD50	>200 mg/kg (rat)
------	------	------------------

- **Primäre Reizwirkung:**
- **Ätz-/Reizwirkung auf die Haut** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

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- **Schwere Augenschädigung/-reizung** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Sensibilisierung der Atemwege/Haut** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**
- **Keimzell-Mutagenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Karzinogenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Reproduktionstoxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**  
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Spezifische Zielorgan-Toxizität bei wiederholter Exposition**  
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Aspirationsgefahr** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

### ABSCHNITT 12: Umweltbezogene Angaben

- **12.1 Toxizität**
- **Aquatische Toxizität:** Keine weiteren relevanten Informationen verfügbar.
- **12.2 Persistenz und Abbaubarkeit** Keine weiteren relevanten Informationen verfügbar.
- **12.3 Bioakkumulationspotenzial** Keine weiteren relevanten Informationen verfügbar.
- **12.4 Mobilität im Boden** Keine weiteren relevanten Informationen verfügbar.
- **Ökotoxische Wirkungen:**
- **Bemerkung:** Schädlich für Fische.
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:**  
Wassergefährdungsklasse 2 (Selbsteinstufung): wassergefährdend  
Nicht in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.  
Darf nicht unverdünnt bzw. unneutralisiert ins Abwasser bzw. in den Vorfluter gelangen.  
Trinkwassergefährdung bereits beim Auslaufen geringer Mengen in den Untergrund.  
schädlich für Wasserorganismen
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.
- **12.6 Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 13: Hinweise zur Entsorgung

- **13.1 Verfahren der Abfallbehandlung**
- **Empfehlung:** Darf nicht zusammen mit Hausmüll entsorgt werden. Nicht in die Kanalisation gelangen lassen.
- **Ungereinigte Verpackungen:**
- **Empfehlung:** Entsorgung gemäß den behördlichen Vorschriften.

### ABSCHNITT 14: Angaben zum Transport

- |  |                  |
|--|------------------|
| · <b>14.5 Umweltgefahren:</b>  | Nicht anwendbar. |
| · <b>14.6 Besondere Vorsichtsmaßnahmen für den Verwender</b>   | Nicht anwendbar. |
| · <b>14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code</b> Nicht anwendbar. |                  |

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· UN "Model Regulation": entfällt

### ABSCHNITT 15: Rechtsvorschriften

- **15.1 Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch**
- Richtlinie 2012/18/EU
- Namentlich aufgeführte gefährliche Stoffe - ANHANG I Formaldehyd
- Seveso-Kategorie  
P1a EXPLOSIVE STOFFE  
H2 AKUT TOXISCH
- Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der unteren Klasse 10 t
- Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der oberen Klasse 50 t
- Nationale Vorschriften:
- **Hinweise zur Beschäftigungsbeschränkung:**  
Arbeitnehmer dürfen den in dieser Zubereitung enthaltenen krebserzeugenden Gefahrstoffen nicht ausgesetzt sein. Im Einzelfall kann die Behörde Ausnahmen zulassen.

- **Technische Anleitung Luft:**

Klasse	Anteil in %
Wasser	81,0
I	10,0
II	9,0

- **Wassergefährdungsklasse:** WGK 2 (Selbsteinstufung): wassergefährdend.
- **15.2 Stoffsicherheitsbeurteilung:** Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.

### ABSCHNITT 16: Sonstige Angaben

Die Angaben stützen sich auf den heutigen Stand unserer Kenntnisse, sie stellen jedoch keine Zusicherung von Produkteigenschaften dar und begründen kein vertragliches Rechtsverhältnis.

- **Relevante Sätze**  
H201 Explosiv, Gefahr der Massenexplosion.  
H226 Flüssigkeit und Dampf entzündbar.  
H301 Giftig bei Verschlucken.  
H311 Giftig bei Hautkontakt.  
H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.  
H317 Kann allergische Hautreaktionen verursachen.  
H331 Giftig bei Einatmen.  
H341 Kann vermutlich genetische Defekte verursachen.  
H350 Kann Krebs erzeugen.
- **Abkürzungen und Akronyme:**  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
VOC: Volatile Organic Compounds (USA, EU)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Expl. 1.1: Explosives, Division 1.1

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*Flam. Liq. 3: Flammable liquids, Hazard Category 3**Acute Tox. 3: Acute toxicity, Hazard Category 3**Acute Tox. 4: Acute toxicity, Hazard Category 4**Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A**Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B**Skin Corr. 1C: Skin corrosion/irritation, Hazard Category 1C**Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1**Skin Sens. 1: Sensitisation - Skin, Hazard Category 1**Muta. 2: Germ cell mutagenicity, Hazard Category 2**Carc. 1B: Carcinogenicity, Hazard Category 1B*

DE

**Scheda di dati di sicurezza**  
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 26.01.2016

Revisione: 26.01.2016

### SEZIONE 1: Identificazione della sostanza o della miscela e della società/impresa

· **1.1 Identificatore del prodotto**

· **Denominazione commerciale:** BOUIN'S FLUID

· **Articolo numero:** 15990-01, 15990-04, 15990-10, 15990-30, 15990-20

· **1.2 Usi identificati pertinenti della sostanza o della miscela e usi sconsigliati**  
Non sono disponibili altre informazioni.

· **Utilizzazione della Sostanza / del Preparato** Prodotti chimici per laboratorio

· **1.3 Informazioni sul fornitore della scheda di dati di sicurezza**

· **Produttore/fornitore:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: sgkcck@aol.com

www.emsdiasum.com

Societa Italiana Chimici

Via Rio Nell Ellba 140

00138 Rome, Italy

Tel: 39 06 8800211

Fax: 39 30 06 8815313

Web: www.sichim.com

· **Informazioni fornite da:** Product safety department

· **1.4 Numero telefonico di emergenza:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

### SEZIONE 2: Identificazione dei pericoli

· **2.1 Classificazione della sostanza o della miscela**

· **Classificazione secondo il regolamento (CE) n. 1272/2008**



GHS01 bomba che esplose

Expl. 1.1 H201 Esplosivo; pericolo di esplosione di massa.



GHS06 teschio e tibie incrociate

Acute Tox. 3 H311 Tossico per contatto con la pelle.

Acute Tox. 3 H331 Tossico se inalato.



GHS08 pericolo per la salute

Muta. 2 H341 Sospettato di provocare alterazioni genetiche.

Carc. 1B H350 Può provocare il cancro.



GHS05 corrosione

Skin Corr. 1C H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.

Eye Dam. 1 H318 Provoca gravi lesioni oculari.

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GHS07

Acute Tox. 4 H302 Nocivo se ingerito.

Skin Sens. 1 H317 Può provocare una reazione allergica cutanea.

Flam. Liq. 3 H226 Liquido e vapori infiammabili.

**2.2 Elementi dell'etichetta****Etichettatura secondo il regolamento (CE) n. 1272/2008**

Il prodotto è classificato ed etichettato conformemente al regolamento CLP.

**Pittogrammi di pericolo GHS01****Avvertenza Pericolo****Componenti pericolosi che ne determinano l'etichettatura:**

formaldeide

2,4,6-trinitrofenolo

**Indicazioni di pericolo**

H201 Esplosivo; pericolo di esplosione di massa.

**Consigli di prudenza**

P210 Tenere lontano da fonti di calore, superfici riscaldate, scintille, fiamme e altre fonti di innesco. Vietato fumare.

P230 Mantenere umido.

P250 Evitare le abrasioni/gli urti/gli attriti.

P373 NON utilizzare mezzi estinguenti se l'incendio raggiunge materiali esplosivi.

P401 Conservare secondo i regolamenti locali/regionali/nazionali/internazionali.

P501 Smaltire il prodotto/recipiente in conformità con le disposizioni locali / regionali / nazionali / internazionali.

**2.3 Altri pericoli****Risultati della valutazione PBT e vPvB****PBT:** Non applicabile.**vPvB:** Non applicabile.**SEZIONE 3: Composizione/informazioni sugli ingredienti****3.2 Caratteristiche chimiche: Miscela****Descrizione:** Miscela delle seguenti sostanze con additivi non pericolosi.**Sostanze pericolose:**

CAS: 50-00-0 EINECS: 200-001-8	formaldeide ⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ⚠ Muta. 2, H341; Carc. 1B, H350; ⚠ Skin Corr. 1B, H314; ⚠ Skin Sens. 1, H317	2,5-10%
CAS: 64-19-7 EINECS: 200-580-7	acido acetico ⚠ Flam. Liq. 3, H226; ⚠ Skin Corr. 1A, H314	2,5-10%
CAS: 88-89-1 EINECS: 201-865-9	2,4,6-trinitrofenolo ⚠ Expl. 1.1, H201; ⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331	≤ 2,5%

**Ulteriori indicazioni:** Il testo dell'avvertenza dei pericoli citati può essere appreso dal capitolo 16

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#### **SEZIONE 4: Misure di primo soccorso**

· **4.1 Descrizione delle misure di primo soccorso**

· **Indicazioni generali:**

Allontanare immediatamente gli abiti contaminati dal prodotto.

I sintomi di avvelenamento possono comparire dopo molte ore, per tale motivo è necessaria la sorveglianza di un medico nelle 48 ore successive all'incidente.

Levarsi la maschera protettiva solamente dopo aver tolto gli abiti contaminati.

In caso di respirazione irregolare o di blocco respiratorio praticare la respirazione artificiale.

· **Inalazione:**

Portare il soggetto in zona ben areata o somministrare ossigeno; chiedere l'intervento di un medico.

Se il soggetto è svenuto provvedere a tenerlo durante il trasporto in posizione stabile su un fianco.

· **Contatto con la pelle:** Lavare immediatamente con acqua e sapone sciacquando accuratamente.

· **Contatto con gli occhi:**

Lavare con acqua corrente per diversi minuti tenendo le palpebre ben aperte e consultare il medico.

· **Ingestione:**

Chiamare subito il medico.

Bere abbondante acqua e sostare in zona ben areata. Richiedere immediatamente l'intervento del medico.

· **4.2 Principali sintomi ed effetti, sia acuti che ritardati** Non sono disponibili altre informazioni.

· **4.3 Indicazione dell'eventuale necessità di consultare immediatamente un medico e di trattamenti speciali**

Non sono disponibili altre informazioni.

#### **SEZIONE 5: Misure antincendio**

· **5.1 Mezzi di estinzione**

· **Mezzi di estinzione idonei:** CO<sub>2</sub>, sabbia, polvere. Non usare acqua.

· **Mezzi di estinzione inadatti per motivi di sicurezza:** Acqua

· **5.2 Pericoli speciali derivanti dalla sostanza o dalla miscela** Non sono disponibili altre informazioni.

· **5.3 Raccomandazioni per gli addetti all'estinzione degli incendi**

· **Mezzi protettivi specifici:** Indossare il respiratore.

#### **SEZIONE 6: Misure in caso di rilascio accidentale**

· **6.1 Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza**

Portare le persone in luogo sicuro.

Indossare equipaggiamento protettivo. Allontanare le persone non equipaggiate.

· **6.2 Precauzioni ambientali:**

In caso di infiltrazione nei corpi d'acqua o nelle fognature avvertire le autorità competenti.

Impedire infiltrazioni nella fognatura/nelle acque superficiali/nelle acque freatiche.

· **6.3 Metodi e materiali per il contenimento e per la bonifica:**

Raccogliere il liquido con materiale assorbente (sabbia, tripoli, legante di acidi, legante universale, segatura).

Utilizzare mezzi di neutralizzazione.

Smaltimento del materiale contaminato conformemente al punto 13.

Provvedere ad una sufficiente areazione.

Non dilavare con acqua o detergenti liquidi.

· **6.4 Riferimento ad altre sezioni**

Per informazioni relative ad un manipolazione sicura, vedere capitolo 7.

Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.

Per informazioni relative allo smaltimento vedere Capitolo 13.

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### SEZIONE 7: Manipolazione e immagazzinamento

- **7.1 Precauzioni per la manipolazione sicura**  
Accurata ventilazione/aspirazione nei luoghi di lavoro.  
Aprire e manipolare i recipienti con cautela.  
Evitare la formazione di aerosol.
- **Indicazioni in caso di incendio ed esplosione:**  
Tenere lontano da fonti di calore, non fumare.  
Proteggere dal calore.  
Adottare provvedimenti contro cariche elettrostatiche.  
Evitare gli urti e sfregamenti.  
Tener pronto il respiratore.
- **7.2 Condizioni per lo stoccaggio sicuro, comprese eventuali incompatibilità**
- **Stoccaggio:**
- **Requisiti dei magazzini e dei recipienti:** Non sono richiesti requisiti particolari.
- **Indicazioni sullo stoccaggio misto:** Non necessario.
- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:**  
Mantenere i recipienti ermeticamente chiusi.  
Proteggere dal calore e dai raggi diretti del sole.
- **7.3 Usi finali particolari** Non sono disponibili altre informazioni.

### SEZIONE 8: Controllo dell'esposizione/protezione individuale

- **Ulteriori indicazioni sulla struttura di impianti tecnici:** Nessun dato ulteriore, vedere punto 7.

- **8.1 Parametri di controllo**

- **Componenti i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro:**

**50-00-0 formaldeide**

TWA	Limite Ceiling: 0,37 mg/m <sup>3</sup> , 0,3 ppm sen, A2
-----	---

**64-19-7 acido acetico**

TWA	Valore a breve termine: 37 mg/m <sup>3</sup> , 15 ppm Valore a lungo termine: 25 mg/m <sup>3</sup> , 10 ppm
-----	--

**88-89-1 2,4,6-trinitrofenolo**

TWA	Valore a lungo termine: 0,1 mg/m <sup>3</sup>
-----	---

- **Ulteriori indicazioni:** Le liste valide alla data di compilazione sono state usate come base.

- **8.2 Controlli dell'esposizione**

- **Mezzi protettivi individuali:**

- **Norme generali protettive e di igiene del lavoro:**

- Tenere lontano da cibo, bevande e foraggi.
- Togliere immediatamente gli abiti contaminati.
- Lavarsi le mani prima dell'intervallo o a lavoro terminato.
- Custodire separatamente l'equipaggiamento protettivo.
- Evitare il contatto con gli occhi.
- Evitare il contatto con gli occhi e la pelle.

- **Maschera protettiva:**

- Nelle esposizioni brevi e minime utilizzare la maschera; nelle esposizioni più intense e durature indossare l'autorespiratore.

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**· Guanti protettivi:**

Guanti protettivi

*Il materiale dei guanti deve essere impermeabile e stabile contro il prodotto/ la sostanza/ la formulazione.*

*A causa della mancanza di tests non può essere consigliato alcun tipo di materiale per i guanti con cui manipolare il prodotto / la formulazione / la miscela di sostanze chimiche.*

*Scelta del materiale dei guanti in considerazione dei tempi di passaggio, dei tassi di permeazione e della degradazione.*

**· Materiale dei guanti**

*La scelta dei guanti adatti non dipende soltanto dal materiale bensì anche da altre caratteristiche di qualità variabili da un produttore a un altro. Poiché il prodotto rappresenta una formulazione di più sostanze, la stabilità dei materiali dei guanti non è calcolabile in anticipo e deve essere testata prima dell'impiego*

**· Tempo di permeazione del materiale dei guanti**

*Richiedere dal fornitore dei guanti il tempo di passaggio preciso il quale deve essere rispettato.*

**· Occhiali protettivi:**

Occhiali protettivi



Occhiali protettivi a tenuta

## SEZIONE 9: Proprietà fisiche e chimiche

**· 9.1 Informazioni sulle proprietà fisiche e chimiche fondamentali****· Indicazioni generali****· Aspetto:**

<b>Forma:</b>	Liquido
<b>Colore:</b>	Giallo chiaro
<b>Odore:</b>	Pungente
<b>Soglia olfattiva:</b>	Non definito.

**· valori di pH:** Non definito.

**· Cambiamento di stato**

<b>Temperatura di fusione/ambito di fusione:</b>	Non definito.
<b>Temperatura di ebollizione/ambito di ebollizione:</b>	-21 °C

**· Punto di infiammabilità:** 0 °C

**· Infiammabilità (solido, gassoso):** Non applicabile.

**· Temperatura di accensione:** 300 °C

**· Temperatura di decomposizione:** Non definito.

**· Autoaccensione:** Prodotto non autoinfiammabile.

**· Pericolo di esplosione:** Rischio di esplosione per urto, sfregamento, fuoco o altre sorgenti d'ignizione.

**· Limiti di infiammabilità:**

<b>Inferiore:</b>	Non definito.
<b>Superiore:</b>	Non definito.

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· <b>Tensione di vapore a 20 °C:</b>	23 hPa
· <b>Densità a 20 °C:</b>	0.99507 g/cm <sup>3</sup>
· <b>Densità relativa</b>	Non definito.
· <b>Densità del vapore</b>	Non definito.
· <b>Velocità di evaporazione</b>	Non definito.
· <b>Solubilità in/Miscibilità con acqua:</b>	Poco e/o non miscibile.
· <b>Coefficiente di distribuzione (n-Octanol/acqua):</b>	Non definito.
· <b>Viscosità:</b>	
<b>Dinamica:</b>	Non definito.
<b>Cinematica:</b>	Non definito.
· <b>Tenore del solvente:</b>	
<b>Solventi organici:</b>	18.0 %
<b>Acqua:</b>	81.0 %
<b>VOC (CE)</b>	18,00 %
· <b>Contenuto solido:</b>	1.0 %
· <b>9.2 Altre informazioni</b>	Non sono disponibili altre informazioni.

### SEZIONE 10: Stabilità e reattività

- **10.1 Reattività** Non sono disponibili altre informazioni.
- **10.2 Stabilità chimica**
- **Decomposizione termica/ condizioni da evitare:** Il prodotto non si decompone se utilizzato secondo le norme.
- **10.3 Possibilità di reazioni pericolose** Non sono note reazioni pericolose.
- **10.4 Condizioni da evitare** Non sono disponibili altre informazioni.
- **10.5 Materiali incompatibili:** Non sono disponibili altre informazioni.
- **10.6 Prodotti di decomposizione pericolosi:** Non sono noti prodotti di decomposizione pericolosi.

### SEZIONE 11: Informazioni tossicologiche

- **11.1 Informazioni sugli effetti tossicologici**
- **Tossicità acuta** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

· <b>Valori LD/LC50 rilevanti per la classificazione:</b>		
<b>50-00-0 formaldeide</b>		
Orale	LD50	>200 mg/kg (rat)

- **Irritabilità primaria:**
- **Corrosione/irritazione cutanea** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Lesioni oculari gravi/irritazioni oculari gravi**  
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Sensibilizzazione respiratoria o cutanea**  
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Effetti CMR (cancerogenicità, mutagenicità e tossicità per la riproduzione)**
- **Mutagenicità delle cellule germinali**  
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Cancerogenicità** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità per la riproduzione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

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- **Tossicità specifica per organi bersaglio (STOT) - esposizione singola**  
*Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.*
- **Tossicità specifica per organi bersaglio (STOT) - esposizione ripetuta**  
*Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.*
- **Pericolo in caso di aspirazione** *Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.*

### **SEZIONE 12: Informazioni ecologiche**

- **12.1 Tossicità**
- **Tossicità acquatica:** *Non sono disponibili altre informazioni.*
- **12.2 Persistenza e degradabilità** *Non sono disponibili altre informazioni.*
- **12.3 Potenziale di bioaccumulo** *Non sono disponibili altre informazioni.*
- **12.4 Mobilità nel suolo** *Non sono disponibili altre informazioni.*
- **Effetti tossici per l'ambiente:**
- **Osservazioni:** *Nocivo per i pesci.*
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**  
*Pericolosità per le acque classe 2 (D) (Autoclassificazione): pericoloso  
 Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature.  
 Non immettere il prodotto non diluito o non neutralizzato nelle acque di scarico e nei canali di raccolta.  
 Pericolo per le acque potabili anche in caso di perdite nel sottosuolo di piccole quantità di prodotto.  
 nocivo per gli organismi acquatici*
- **12.5 Risultati della valutazione PBT e vPvB**
- **PBT:** *Non applicabile.*
- **vPvB:** *Non applicabile.*
- **12.6 Altri effetti avversi** *Non sono disponibili altre informazioni.*

### **SEZIONE 13: Considerazioni sullo smaltimento**

- **13.1 Metodi di trattamento dei rifiuti**
- **Consigli:** *Non smaltire il prodotto insieme ai rifiuti domestici Non immettere nelle fognature.*
- **Imballaggi non puliti:**
- **Consigli:** *Smaltimento in conformità con le disposizioni amministrative.*

### **SEZIONE 14: Informazioni sul trasporto**

- |   |                         |
|---|-------------------------|
| · <b>14.5 Pericoli per l'ambiente:</b>  | <i>Non applicabile.</i> |
| · <b>14.6 Precauzioni speciali per gli utilizzatori</b>                             | <i>Non applicabile.</i> |
| · <b>14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC</b> | <i>Non applicabile.</i> |
| · <b>UN "Model Regulation":</b>   | <i>non applicabile</i>  |

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### SEZIONE 15: Informazioni sulla regolamentazione

· **15.1 Disposizioni legislative e regolamentari su salute, sicurezza e ambiente specifiche per la sostanza o la miscela**

- **Direttiva 2012/18/UE**
- **Sostanze pericolose specificate - ALLEGATO I formaldeide**
- **Categoria Seveso**  
P1a ESPLOSIVI  
H2 TOSSICITÀ ACUTA
- **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia inferiore 10 t**
- **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia superiore 50 t**

· **Disposizioni nazionali:**

· **Indicazioni relative alla limitazione delle attività lavorative:**

*Il personale non deve essere esposto alle sostanze cancerogene contenute in questo preparato L'autorità può ammettere nei singoli casi delle eccezioni.*

· **Istruzione tecnica aria:**

Classe	quota in %
NC	18,0

- **15.2 Valutazione della sicurezza chimica:** Una valutazione della sicurezza chimica non è stata effettuata.

### SEZIONE 16: Altre informazioni

*I dati sono riportati sulla base delle nostre conoscenze attuali, non rappresentano tuttavia alcuna garanzia delle caratteristiche del prodotto e non motivano alcun rapporto giuridico contrattuale.*

· **Frasei rilevanti**

- H201 Esplosivo; pericolo di esplosione di massa.
- H226 Liquido e vapori infiammabili.
- H301 Tossico se ingerito.
- H311 Tossico per contatto con la pelle.
- H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.
- H317 Può provocare una reazione allergica cutanea.
- H331 Tossico se inalato.
- H341 Sospettato di provocare alterazioni genetiche.
- H350 Può provocare il cancro.

· **Abbreviazioni e acronimi:**

- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Expl. 1.1: Explosives, Division 1.1
- Flam. Liq. 3: Flammable liquids, Hazard Category 3
- Acute Tox. 3: Acute toxicity, Hazard Category 3
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
- Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
- Skin Corr. 1C: Skin corrosion/irritation, Hazard Category 1C
- Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
- Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
- Muta. 2: Germ cell mutagenicity, Hazard Category 2
- Carc. 1B: Carcinogenicity, Hazard Category 1B

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압점: 2016.01.26

개정: 2016.01.26

### 1 화학제품과 회사에 관한 정보

- **제품 식별자**
- **제품명: BOUIN'S FLUID**
- **상품번호:** 15990-01, 15990-04, 15990-10, 15990-30, 15990-20
- **해당 순물질이나 혼합물의 관련 하위용도 및 사용금지용도** 추가적인 정보가 존재하지 않습니다.
- **제품의 권고 용도와 사용상의 제한:** 실험실 화학품
- **안전데이터표(Safety Data Sheet)내 공급업체 관련 상세 정보**
- **제조자/수입자/유통업자 정보:**  
 Electron Microscopy Sciences  
 1560 Industry Road  
 USA-Hatfield, PA 19440  
 Tel: 215-412-8400 Fax: 215-412-8450  
 email: sgkcck@aol.com  
 www.emsdiasum.com
- **Samchang Commercial Co., Ltd.**  
 Yeo Eui Do  
 PO Box 1110  
 Seoul, Korea  
 Tel: 82 2 703 3040  
 Fax: 82 2 717 3298
- **추가적인 정보 획득 가능:** Product safety department
- **비상연락 전화번호:**  
 ChemTrec 1-800-424-9300 Contract CCN7661  
 1-703-527-3887

### 2 유해성.위험성

- **순물질 또는 혼합물의 분류**



**폭발**

화약류 등급1.1                      H201 폭발성: 대폭발 위험



**두개골과 대퇴골**

급성 독성(경피)    구분3            H311 피부와 접촉하면 유독함  
 급성 독성(흡입)    구분3            H331 흡입하면 유독함



**건강에 위험**

생식세포 변이원성    구분2            H341 유전적인 결함을 일으킬 것으로 의심됨  
 발암성    구분1B                      H350 암을 일으킬 수 있음



**부식**

피부 부식성/자극성    구분1            H314 피부에 심한 화상과 눈에 손상을 일으킴  
 심한 눈 손상/자극성    구분1            H318 눈에 심한 손상을 일으킴

(2 쪽에 계속)

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**제품명: BOUIN'S FLUID**

(1 쪽부터계속)



급성 독성(경구) 구분4 H302 삼키면 유해함  
 피부과민성 구분1 H317 알레르기성 피부 반응을 일으킬 수 있음

- 라벨표기 요소
  - GHS 라벨 요소
  - 그림문자
- 본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.



GHS01 GHS05 GHS06 GHS08

- 신호어 위험
- 상표상에명확히위험성이표시된성분:  
formaldehyde  
2,4,6-trinitrophenol
- 유해.위험 문구  
폭발성: 대폭발 위험  
삼키면 유해함  
피부에 접촉하거나 흡입하면 유독함.  
피부에 심한 화상과 눈에 손상을 일으킴  
알레르기성 피부 반응을 일으킬 수 있음  
유전적인 결함을 일으킬 것으로 의심됨  
암을 일으킬 수 있음
- 예방조치 문구  
피부(모발)에 접촉 시: 모든 오염된 옷을 즉시 벗으시오 피부를 물/샤워로 행구시오.  
눈에 들으면 몇 분간 물로 조심해서 씻으시오. 가능하면콘택트렌즈를 제거하시오. 계속 씻으시오.  
즉시 독성물질센터/병원 연락 필요.  
(라벨 참조) 처치를 하시오.  
화염이 폭발성 물질에 도달하면 불을 끄려 하지 마시오.  
현지/지역/국가/국제 규정에 따라서 보관 하기  
잠금장치가 있는 저장장소에 저장하시오.  
현지/지역/국가/국제 규정에 따라서 내용물/용기 노출
- 기타 유해성
- PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과
- PBT(잔류성, 생물농축성, 독성 물질): 해당사항 없음.
- vPvB(고 잔류성, 고 생물농축성 물질): 해당사항 없음.

### 3 구성성분의 명칭 및 함유량

- 화학적 특성: 혼합물
- 설명: 무해한 첨가물 이 함유된 아래에 열거된 물질로 만들어진 혼합물.
- 위험 요소:

(3 쪽에계속)

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50-00-0	formaldehyde ⚠ 급성 독성(경구) 구분3, H301; 급성 독성(경피) 구분3, H311; 급성 독성(흡입) 구분3, H331; ⚠ 생식세포 변이원성 구분2, H341; 발암성 구분1B, H350; ⚠ 피부 부식성/자극성 구분1, H314; ⚠ 피부과민성 구분1, H317	2,5-10%
64-19-7	Acetic Acid Glacial ⚠ 인화성 액체 구분3, H226; ⚠ 피부 부식성/자극성 구분1, H314	2,5-10%
88-89-1	2,4,6-trinitrophenol ⚠ 화약류 등급1.1, H201; ⚠ 급성 독성(경구) 구분3, H301; 급성 독성(경피) 구분3, H311; 급성 독성(흡입) 구분3, H331	≤ 2,5%

### 4 응급조치 요령

**· 응급조치요령 내용**

**· 일반적 정보:**

이제품에 의해 오염된 의상은 즉시 제거한다.  
 중독 증상은 몇 시간 이 지난 뒤에 발생할 수 있다. 따라서 사고가 발생한 후에 적어도 48 시간 동안은 의료진의 관찰을 받아야 한다.  
 반드시 오염된 의상을 완전히 제거한 후에 호흡 보호기를 떼어낸다.  
 불규칙적인 호흡이나 호흡 정지 상태에서는 인공 호흡을 실시한다.

**· 흡입했을 때:**

신선한 공기나 산소를 공급받고, 의료진의 도움을 구한다.  
 환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 운반한다.

**· 피부에 접촉했을 때:** 즉시 물과 비누로 씻고 잘 행군다.

**· 눈에 들어갔을 때:** 흐르는 물에 눈을 몇 분 동안 씻어내고 나서, 의사와 상담한다

**· 먹었을 때:**

즉시 의사의 도움을 구한다.  
 물을 충분히 마시고 신선한 공기를 쐬다. 즉시 의사의 도움을 구한다.

**· 기타 의사의 주의사항:**

- 가장 중요한 급·만성 증상 및 영향 추가적인 정보가 존재하지 않습니다.
- 즉각적인 의료 처치 및 특별 치료가 필요함을 시사하는 징후 추가적인 정보가 존재하지 않습니다.

### 5 폭발·화재시 대처방법

**· 소화제**

- 적절한 소화제: 이산화탄소, 모래, 석회 가루를 사용하고, 물을 사용하지 않는다.
- 부적절한 소화제: 물
- 본 화학물질이나 혼합물에서 발생하는 특별 유해성 추가적인 정보가 존재하지 않습니다.
- 소방관에 대한 권고사항
- 화재 진압 시 착용할 보호구 및 예방조치: 호흡보호장비 설치.

### 6 누출 사고 시 대처방법

**· 개인적 예방조치, 보호장비 및 응급처치 절차**

위험 지역으로부터 사람들을 안전하게 이동시킨다.  
 안전장비 착용하고, 무방비 사람은 격리시킨다.

**· 환경 관련 예방조치:**

하천이나 하수로 유입되었을 경우 해당 관청에 보고한다.  
 하수도망/해수면 위 의물/지하수로 도달하지 않게 한다.

**· 밀폐 및 정화 방법과 소재:**

액체가 혼합된 물질(모래, 규조토, 산성 결합물, 일반 결합물, 톱밥)에 흡입되도록 한다.

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중성제를사용한다.  
 항목 13에 따라 오염된 물질을 쓰레기로 처분한다.  
 충분한 환기가 되도록 한다.  
 물이나 묽은 세척제로 씻어 내지 마십시오

- **타 섹션 참조**  
 안전 관리에 대한 정보는 제7 장 을 참고하십시오.  
 개인 보호 장비에 대한 정보는 제8 장 을 참고하십시오.  
 쓰레기 처리에 대한 정보는 제13 장 을 참고하십시오.

### 7 취급 및 저장방법

- **취급:**
- **안전 취급을 위한 예방조치**  
 작업장에서는 통풍이 잘 되고/습기 제거가 잘 되게 주의한다.  
 조심스럽게 용기를 개봉하거나 취급한다.  
 연무질이 형성되는 것을 피한다.
- **화재 및 폭발 사고 예방대책에 관한 정보:**  
 발화 요소는 멀리 둔다. 금연.  
 열로부터 보호한다.  
 정전기의 충전으로부터 보호한다.  
 타격과 마찰을 피한다.  
 호흡 보호 장비를 항상 비치한다.

- **혼합 위험성 등 안전 저장 조건**
- **보관:**
- **안전한 저장 방법:** 특별한 요구 사항이 없음.
- **하나의 공동 보관 시설에 대한 보관 관련 정보:** 필요 없음
- **보관 조건에 관한 추가적인 정보:**  
 용기를 새지 않게 밀폐한 채 보관한다.  
 열이나 직사광선으로부터 보호한다.
- **구체적 최종 사용자** 추가적인 정보가 존재하지 않습니다.

### 8 노출방지 및 개인보호구

- **첨단시설 디자인에 대한 추가정보:** 더 이상 의 자료는 없음. 항목 7 을 참고하십시오.
- **통제 변수**

· **화학물질의 노출기준, 생물학적 노출기준 등:**

**50-00-0 formaldehyde**

TLV (KR)	단기간의 값: 1.5 mg/m <sup>3</sup> , 1 ppm 장기간의 값: 0.75 mg/m <sup>3</sup> , 0.5 ppm
PEL (US)	단기간의 값: 2 ppm 장기간의 값: 0.75 ppm see 29 CFR 1910.1048(c)
REL (US)	장기간의 값: 0.016 ppm 최고 노출 기준: 0.1* ppm *15-min; See Pocket Guide App. A
TLV (US)	최고 노출 기준: 0.37 mg/m <sup>3</sup> , 0.3 ppm DSEN; RSEN

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**64-19-7 Acetic Acid Glacial**

TLV (KR)	단기간의값: 37 mg/m <sup>3</sup> , 15 ppm 장기간의값: 25 mg/m <sup>3</sup> , 10 ppm
IOELV (EU)	장기간의값: 25 mg/m <sup>3</sup> , 10 ppm
PEL (US)	장기간의값: 25 mg/m <sup>3</sup> , 10 ppm
REL (US)	단기간의값: 37 mg/m <sup>3</sup> , 15 ppm 장기간의값: 25 mg/m <sup>3</sup> , 10 ppm
TLV (US)	단기간의값: 37 mg/m <sup>3</sup> , 15 ppm 장기간의값: 25 mg/m <sup>3</sup> , 10 ppm

**88-89-1 2,4,6-trinitrophenol**

TLV (KR)	단기간의값: 0.3 mg/m <sup>3</sup> 장기간의값: 0,1 mg/m <sup>3</sup> Skin
IOELV (EU)	장기간의값: 0.1 mg/m <sup>3</sup>
PEL (US)	장기간의값: 0.1 mg/m <sup>3</sup> Skin
REL (US)	단기간의값: 0.3 mg/m <sup>3</sup> 장기간의값: 0.1 mg/m <sup>3</sup> Skin
TLV (US)	장기간의값: 0.1 mg/m <sup>3</sup>

· **추가 정보:** 제 조 할 당 시 에 유 효 한 목 록 을 기 초 로 사 용 했 다.

· **노출 통제**

· **개인 보호구**

· **일반적보호조치및위생조치:**

· 식료품, 음료수와 사료로부터 멀리 떨어져 두어 놓는다.

· 더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.

· 휴식 전이나 작업이 끝날때마다 손을 씻는다.

· 방호복은 따로 보관한다.

· 눈과의 접촉을 피한다.

· 눈과 피부와의 접촉은 피한다.

· **호흡기 보호:**

· 단 시간 또는 경미한 오염의 경우에는 호흡 여과기를 사용한다. 심각한 또는 장기간 노출시에는

· 호흡보호장비를 사용한다.

· **손 보호:**



보호용 장갑

· 장갑재질은제품 / 원료 / 조제를투과시키지않아야하고, 내구성이있어야한다.

· 테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합물에 적합한 장갑재질에 대한 추천이 없다.

· 투과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

· **장갑 의 재료**

· 적합한 장갑의 선정은 재질 차이뿐 아니라 품질 기준의 차이도 고려하여 이루어져야 하고 제조업종에 따라서도 다르게 선정되어야 한다. 제품은 다양한 재료로부터의 조제로 이루어지는 것이기 때문에, 장갑재질의 안정성은 사전에 예측되어질 수 있는 것이 아니고, 반드시 사용 전에 (그 안전성이) 체크 되어져야 한다.

· **장갑 재료의 투과 시간** 정확한 관통 시간은 보호장갑 제조자에 의 하여 인 지 되고, 준수 되어야 한다.

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· **눈 보호:**  
보호안경

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팍조이는보안경

### 9 물리화학적 특성

· **기본 물리 및 화학적 특성에 대한 정보**

· **일반정보**

· **외형**

· 물리적 상태:	액체
· 색:	연한 노 랑
· 냄새:	찌르는듯한
· 후각역치	알맞지않다.

· pH: 알맞지않다.

· **상태변화**

· 녹는점/어는점:	맞지않는
· 초기 끓는점과 끓는점 범위:	-21 °C

· 인화점: 0 °C

· 인화성(고체, 기체): 해당사항 없음.

· 점화온도: 300 °C

· 분해 온도: 알맞지않다.

· 자기점화: 이제품은자연발화성이없다.

· 폭발위험: 타격, 마찰, 화염또는다른발화원인을통하여폭발위험성이있는

· **인화 또는 폭발 범위의 상한/하한**

· 아래로:	알맞지않다.
· 위로:	알맞지않다.

· 증기압 의경우 20 °C: 23 hPa

· 밀도 의경우 20 °C: 0.99507 g/cm<sup>3</sup>

· 비중: 알맞지않다.

· 증기밀도: 알맞지않다.

· 증발 속도: 알맞지않다.

· **용해도:**

· 물: 각각의경우에따라서는거의혼합할수없는

· n 옥탄올/물 분배계수: 알맞지않다.

· **점도:**

· 역학성: 알맞지않다.

· 동점성: 알맞지않다.

· **용매내용물**

· 유기용매: 18.0 %

· 물: 81.0 %

· VOC (EU) 18.00 %

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- **고체의 함량:** 1.0 %
- **기타 정보** 추가적인 정보가 존재하지 않습니다.

### 10 안정성 및 반응성

- **반응성** 추가적인 정보가 존재하지 않습니다.
- **화학적 안정성**
- **화학적 안정성 및 유해 반응의 가능성 / 피해야 할 조건:** 규정에따라사용할경우해체는없다
- **유해반응** 가능성 위험한반응으로는알려지지않았다.
- **피해야 할 조건** 추가적인 정보가 존재하지 않습니다.
- **혼합 금지 물질:** 추가적인 정보가 존재하지 않습니다.
- **유해분해물질:** 위험성있는분해물질은알려지지않았다.

### 11 독성에 관한 정보

- **독성학적 영향에 대한 정보**
- **급성 독성:**
- **LD/LC50-수치에 따른 분류:**

<b>50-00-0 formaldehyde</b>	
구강의	LD50 >200 mg/kg (rat)

- **일차적 자극 효과:**
- **피부 부식성 또는 자극성:** 피부와점막에강한부식작용.
- **심한 눈 손상 또는 자극성:**  
강한부식작용  
심각한안구상처의위험이있는강한자극
- **감각화:** 피부접촉을통하여감각화가능성이있다.
- **추 가 적 인 독성 에 관 한 정 보:**  
이제품은유럽공동체의공동분류원칙의합법적인절차에근거하여최근에발효된원고에서아래위험들의사전준비에대하여제시하고있다.  
독성의  
건강에해로운  
부식작용의  
자극적인  
삼킬경우식도나위등의내장기관벽에상처를주는위험과마찬가지로입주변이나구강에강한부식작용을한다  
암을유발하는
- **다음 종류의 잠재적인 효과에 대한 정보**
- **CMR-효과 (암 유발, 돌연변이성 그리고 생식 독성)**  
생식세포 변이원성 구분2, 발암성 구분1B

### 12 환경에 미치는 영향

- **독성**
- **수생독성:** 추가적인 정보가 존재하지 않습니다.
- **지속성 및 분해성** 추가적인 정보가 존재하지 않습니다.
- **환경 시스템에서의 행동:**
- **생물농축 잠재성** 추가적인 정보가 존재하지 않습니다.
- **토양내 이동성** 추가적인 정보가 존재하지 않습니다.
- **생태독성:**
- **의견:** 어류 에 해 로움

(8 쪽에계속)

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압점: 2016.01.26

개정: 2016.01.26

**제품명: BOUIN'S FLUID**

(7 쪽부터계속)

- **추가적인 생태학 정보:**
- **일반 특징:**  
 수질오염등급 2 (자체등급분류): 수질오염이된 지하수나, 하천으로또는 하수도망에도달하지않게한다.  
 희석시키지않은채또는증화시키지않은채 하수도나배수로에도달하지않게해야한다.  
 지하수로경미한양이유입되었을경우엔이미식수오염상태이다  
 물속의유기체에해가되는것
- **PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과**
- **PBT(잔류성, 생물농축성, 독성 물질):** 해당사항 없음.
- **vPvB(고 잔류성, 고 생물농축성 물질):** 해당사항 없음.
- **기타 부작용** 추가적인 정보가 존재하지 않습니다.

### 13 폐기시 주의사항

- **폐기물 처리 방법**
- **권고:** 생활쓰레기와함께처리되어서는안된다. 하수도망으로유입되어서는안된다.
- **비위생적 포장:**
- **권고:** 당국의지침에입각한쓰레기처리.

### 14 운송에 필요한 정보

· <b>환경적 유해물질:</b>	해당사항 없음.
· <b>이용자 특별 예방조치</b>	해당사항 없음.
· <b>MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크(bulk) 운송</b>	해당사항 없음.
· <b>UN "모범 규제":</b>	누락되다

### 15 법적 규제현황

- **해당 순물질 또는 혼합물에 대한 안전, 보건 및 환경 규제/법률**

· <b>Korean Existing Chemical Inventory</b>		
50-00-0	formaldehyde	KE-17074
64-19-7	Acetic Acid Glacial	KE-00013
88-89-1	2,4,6-trinitrophenol	KE-34715
7732-18-5	water, distilled, conductivity or of similar purity	KE-35400

- **GHS 라벨 요소**  
 본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

- **그림문자**



- **신호어 위험**

(9 쪽에계속)

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압점: 2016.01.26

개정: 2016.01.26

**제품명: BOUIN'S FLUID**

(8 쪽부터계속)

· **상표상에명확히위험성이표시된성분:**

formaldehyde  
2,4,6-trinitrophenol

· **유해.위험 문구**

폭발성: 대폭발 위험  
삼키면 유해함  
피부에 접촉하거나 흡입하면 유독함.  
피부에 심한 화상과 눈에 손상을 일으킴  
알레르기성 피부 반응을 일으킬 수 있음  
유전적인 결함을 일으킬 것으로 의심됨  
암을 일으킬 수 있음

· **예방조치 문구**

피부(모발)에 접촉 시: 모든 오염된 옷을 즉시 벗으시오 피부를 물/샤워로 행구시오.  
눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면콘택트렌즈를 제거하시오. 계속 씻으시오.  
즉시 독성물질센터/병원 연락 필요.  
(라벨 참조) 처치를 하시오.  
화염이 폭발성 물질에 도달하면 불을 끄려 하지 마시오.  
현지/지역/국가/국제 규정에 따라서 보관 하기  
잠금장치가 있는 저장장소에 저장하시오.  
현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

· **국내규정:**

· **사용제한에 대한 정보:**

노동자들은이러한예방준비하에암을유발시키는성분을함유한위험물을버리지말아야한다. 개별적인경우에관청은예외를허가할수있다.

· **화학물질 안전성 평가:** 화학물질 안전성 평가가 수행되지 않음

### 16 그 밖의 참고사항

이보고는우리지식에대한오늘날의상태에대하여평가하고있다, 하지만이보고서는생산특성에관한보증은기술하지않았으며계약적인법률관계에기반을두고있지도않다

· **최초 작성일자:** 2016.01.26

· **개정 횟수 및 최종 개정일자:** 1 / 2016.01.26

· **약어와 두문자어:**

EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
VOC: Volatile Organic Compounds (USA, EU)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
화약류 등급1.1: Explosives, Division 1.1  
인화성 액체 구분3: Flammable liquids, Hazard Category 3  
급성 독성(경구) 구분3: Acute toxicity, Hazard Category 3  
급성 독성(경구) 구분4: Acute toxicity, Hazard Category 4  
피부 부식성/자극성 구분1: Skin corrosion/irritation, Hazard Category 1  
심한 눈 손상/자극성 구분1: Serious eye damage/eye irritation, Hazard Category 1  
피부과민성 구분1: Sensitisation - Skin, Hazard Category 1  
생식세포 변이원성 구분2: Germ cell mutagenicity, Hazard Category 2  
발암성 구분1B: Carcinogenicity, Hazard Category 1B

# Sikkerhetsdatablad

iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkdato: 26.01.2016

revidert den: 26.01.2016

## Avsnitt 1: Identifikasjon av kjemikaliyet og ansvarlig firma

### · 1.1 Produktidentifikator

· Handelsnavn: **BOUIN'S FLUID**

· Artikelnummer: 15990-01, 15990-04, 15990-10, 15990-30, 15990-20

· 1.2 Relevante, identifiserte anvendelser av stoffet eller stoffblandingen, samt anvendelser som frarådes  
Ikke noe mer relevant informasjon tilgjengelig.

· Bruk av stoffet/ tilberedning laboratoriekjemikalier

· 1.3 Enkeltopplysninger om foretaket som leverer sikkerhetsdatabladet

· Produsent/leverandør:

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: sgkck@aol.com

www.emsdiasum.com

· Avdeling for nærmere informasjon: Product safety department

· 1.4 Nødnummer:

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

## Avsnitt 2: Viktigste faremomenter

· 2.1 Klassifisering av stoff eller stoffblanding

· Klassifisering i henhold til EC-forskrift nr.1272/2008



GHS01 Eksploderende bombe

Expl. 1.1 H201 Eksplosjonsfarlig; fare for masseeksplosjon.



GHS06 Dødningsfare med korslagte knokler

Acute Tox. 3 H311 Giftig ved hudkontakt.

Acute Tox. 3 H331 Giftig ved innånding.



GHS08 Helsefare

Muta. 2 H341 Mistenkes å kunne gi genetiske skader.

Carc. 1B H350 Kan forårsake kreft.



GHS05 Etsende virkning

Skin Corr. 1C H314 Gir alvorlige etseskader på hud og øyne.

Eye Dam. 1 H318 Gir alvorlig øyeskade.



GHS07

Acute Tox. 4 H302 Farlig ved svelging.

(fortsatt på side 2)

# Sikkerhetsdatablad

## iflg. forordning (EF) nr. 1907/2006, Artikkel 31

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(fortsatt fra side 1)

*Skin Sens. 1 H317 Kan utløse en allergisk hudreaksjon.*

*Flam. Liq. 3 H226 Brannfarlig væske og damp.*

### 2.2 Etikettelementer

#### Merking iht. bestemmelse (EC) Nr. 1272/2008

Produktet er klassifisert og merket i henhold til CLP-forordningen.

#### Farepiktogrammer GHS01

#### Varselord Fare

#### Farebestemmende komponenter ved etikettering:

formaldehyd

2,4,6-trinitrofenol

#### Faresetninger

H201 Eksplosjonsfarlig; fare for masseeksplosjon.

#### Sikkerhetssetninger

P210 Holdes vekk fra varme, varme overflater, gnister, åpen ild og andre antenningskilder. Røyking forbudt.

P230 Hold innholdet fuktig.

P250 Må ikke utsettes for sliping/støt/friksjon.

P373 IKKE bekjemp brannen når den når eksplosive varer.

P401 Oppbevares i henhold til lokale/regionale/nasjonale/internasjonale forskrifter.

P501 Innholdet / emballasjen skal avhendes i henhold til de lokale / regionale / nasjonale / internasjonale forskrifter.

### 2.3 Andre farer

#### Resultater av PBT- og vPvB-vurdering

**PBT:** Ikke brukbar.

**vPvB:** Ikke brukbar.

## Avsnitt 3: Stoffblandingers sammensetning og stoffenes klassifisering

### 3.2 Kjemisk karakterisering: Blandinger

**Beskrivelse:** Blanding av nedenstående oppførte stoffer med ufarlige tilsetninger.

#### Farlige innholdsstoffer:

CAS: 50-00-0 EINECS: 200-001-8	formaldehyd ☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ☠ Muta. 2, H341; Carc. 1B, H350; ☠ Skin Corr. 1B, H314; ⚠ Skin Sens. 1, H317	2,5-10%
CAS: 64-19-7 EINECS: 200-580-7	eddiksyre ☠ Flam. Liq. 3, H226; ☠ Skin Corr. 1A, H314	2,5-10%
CAS: 88-89-1 EINECS: 201-865-9	2,4,6-trinitrofenol ☠ Expl. 1.1, H201; ☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331	≤ 2,5%

**Ytterligere informasjon:** Teksten til de fareangivelsene som er inkludert her, kan konsulteres i kapittel 16.

## Avsnitt 4: Førstehjelpstiltak

### 4.1 Beskrivelse av førstehjelpstiltak

#### Generelle informasjon:

Klær som er tilsølt med produktet må fjernes omgående.

Forgiftningssymptomer kan også oppstå etter mange timer. Personer må derfor ha legetilsyn i minst 48 timer etter en ulykke.

Åndedrettsbeskyttelse må først fjernes etter at tilsølte klær er fjernet.

Kunstig åndedrett ved uregelmessig åndedrett eller åndedrettsstillstand.

(fortsatt på side 3)

# Sikkerhetsdatablad

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- **Etter innånding:**  
Tilførsel av frisk luft eller surstoff; søk legehjelp.  
Ved bevisstløshet lagring og transport i stabil sidestilling.
- **Etter hudkontakt:** Vask straks med vann og sepe og skylld godt etterpå.
- **Etter øyekontakt:** Skylld øynene med åpne øyenlokk i flere minutter under rennende vann og tilkall lege.
- **Etter svelging:**  
Søk lege straks.  
Drikk rikelig med vann og sørg for frisk luft. Tilkall lege omgående.
- **4.2 De viktigste symptomer og effekter, både akutt og forsinket** Ikke noe mer relevant informasjon tilgjengelig.
- **4.3 Indikasjon på omgående medisinsk hjelp eller påkrevet spesialbehandling**  
Ikke noe mer relevant informasjon tilgjengelig.

### Avsnitt 5: Tiltak ved brannslukning

- **5.1 Slökkemiddel**
- **Egnede slukningsmidler:** CO<sub>2</sub>, sand, slukningspulver. Bruk ikke vann.
- **Av sikkerhetsgrunner ikke egnede slukningsmidler:** Vann
- **5.2 Spesielle farer som oppstår pga. substanser eller blandinger** Ikke noe mer relevant informasjon tilgjengelig.
- **5.3 Informasjon vedr. brannbekjempelse**
- **Spesielt verneutstyr:** Ta på egnet åndedrettsbeskyttelse.

### Avsnitt 6: Tiltak ved utilsiktet utslipp

- **6.1 Personlige vernetiltak, verneutstyr og prosedyrer ved nødsituasjoner**  
Bring personer i sikkerhet.  
Ta på beskyttelsesdrakt. Hold ubeskyttede personer borte.
- **6.2 Miljøverntiltak:**  
Ansvarlige myndigheter varsles hvis produktet er kommet ned i vassdrag eller kloakk.  
La ikke produktet komme ned i kloakk/overflatevann/grunnvann.
- **6.3 Metoder og materiale for oppsamling og opprensing:**  
Ta opp stoffet med væskebindende materiale (sand, kiselgur, syrebindemiddel, universalbindemiddel, sagflis).  
Bruk nøytraliseringsmiddel.  
Bortskaff kontaminert materiale som avfall i.h.t. punkt 13.  
Sørg for tilstrekkelig ventilasjon.  
Skylld ikke bort med vann eller med vannholdige rengjøringsmidler.
- **6.4 Henvisning til andre avsnitt**  
Informasjoner om sikker håndtering, se kapittel 7.  
Informasjoner om personlig beskyttelsesutstyr, se kapittel 8.  
Informasjoner om bortskaffelse/deponering, se kapittel 13.

### Avsnitt 7: Håndtering og oppbevaring

- **7.1 Forholdsregler for sikker håndtering**  
Sørg for god ventilasjon/avsugning på arbeidsplassen.  
Beholderne må åpnes og håndteres forsiktig.  
Unngå aerosoldannelse.
- **Henvisninger om brann- og eksplosjonsvern:**  
Bruk av åpen ild forbudt - røyking forbudt.  
Beskytt mot varme.  
Gjør tiltak mot elektrostatisk oppladning.  
Unngå slag og gnissing.

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# Sikkerhetsdatablad

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Hold åndedrettsbeskyttelse i beredskap.

· **7.2 Vilkår for sikker lagring, inkl. eventuelle inkompatibiliteter**

· **Lagring:**

· **Krav til lagerrom og beholdere:** Ingen spesielle krav.

· **Informasjoner om felles lagring:** Ikke nødvendig.

· **Ytterligere informasjoner om lagervilkårene:**

Hold beholderne tett tillukket.

Beskyttes mot varme og direkte solpåvirkning.

· **7.3 Spesiell sluttbruk** Ikke noe mer relevant informasjon tilgjengelig.

## Avsnitt 8: Eksponeringskontroll og personlig verneutstyr

· **Ytterligere informasjoner om utforming av tekniske anlegg:** Ingen ytterligere informasjoner, se punkt 7.

· **8.1 Kontrollparametere**

· **Komponenter med grenseverdier for arbeidsplass som må overholdes:**

**50-00-0 formaldehyd**

AG Langtidsverdi: 0,6 mg/m<sup>3</sup>, 0,5 ppm

Takverdi: 1,2 mg/m<sup>3</sup>, 1 ppm

A K

**64-19-7 eddiksyre**

AG Langtidsverdi: 25 mg/m<sup>3</sup>, 10 ppm

E

**88-89-1 2,4,6-trinitrofenol**

AG Langtidsverdi: 0,1 mg/m<sup>3</sup>

H E

· **Ytterligere informasjoner:** Basis: listene som var gyldige ved oppstillingen.

· **8.2 Begrensning og kontroll av eksponering**

· **Personlig verneutstyr:**

· **Generelle verne- og hygienetiltak:**

Holdes adskilt fra næringsmidler, drikkevarer og fórstoffer.

Fjern omgående forurensede, gjennomvåtede klær.

Vask hendene før arbeidspauser og ved arbeidets slutt.

Beskyttelsesklær må oppbevares adskilt.

Unngå berøring med øynene.

Unngå berøring med øyne og hud.

· **Åndedrettsvern:**

Ved korttidig eller liten belastning åndedrettsfilterapparat; ved intensiv eller lengre utsetting: bruk omluft-uavhengig åndedrettsbeskyttelsesapparat.

· **Håndvern:**



Beskyttelseshansker

Hanskematerialet må være ugjennomtrengelig og bestandig overfor produktet /stoffet /blandingen.

På grunn av manglende tester kan det ikke gis noen anbefaling om hanskemateriale for produktet / tilberedningsprosessen/kjemikalieblandingen.

Hanskematerialet velges under hensyntagen til holdbarhetstid, gjennomtrengelighet og degradering.

(fortsatt på side 5)

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- **hanskemateriale**

Valget av egnet hanske er ikke bare avhengig av materiale, men også av andre kvalitetskjenninger og er forskjellig fra produsent til produsent. Da produktet representerer en sammensetning av flere stoffer, kan holdbarheten av hanskematerialet ikke forhåndsberegnes, og denne må testes før bruk.

- **gjennomtrengingstid for hanskemateriale**

Den nøyaktige holdbarhetstiden må bringes på det rene hos hanskeprodusenten og overholdes.

- **Øyevern:**

Vernebrille



Tettsittende vernebrille

## Avsnitt 9: Fysiske og kjemiske egenskaper

- **9.1 Informasjon om grunnleggende fysiske og kjemiske egenskaper**

- **alminnelige opplysninger**

- **Utseende:**

**Form:** Væske

**Farge:** Lysegul

- **Lukt:** Stikkende

- **Lukterskel:** Ikke bestemt.

- **pH-verdi:** Ikke bestemt.

- **Tilstandsendring**

**Smeltepunkt/smelteområde:** Ikke bestemt.

**Kokepunkt/kokeområde:** -21 °C

- **Flammepunkt:** 0 °C

- **Antennelighet (fast, gassformet):** Ikke brukbar.

- **Antennelsestemperatur:** 300 °C

- **Spaltningstemperatur:** Ikke bestemt.

- **Selvantennelighet:** Produktet er ikke selvantennelig.

- **Eksplisjonsfare:** Eksplisjonsfarlig ved støt, gnidning, ild eller andre antennelseskilder

- **Eksplisjonsgrenser:**

**Nedre:** Ikke bestemt.

**Øvre:** Ikke bestemt.

- **Damptrykk ved 20 °C:** 23 hPa

- **Tetthet ved 20 °C:** 0,99507 g/cm<sup>3</sup>

- **relativ tetthet** Ikke bestemt.

- **damptetthet** Ikke bestemt.

- **fordampningshastighet** Ikke bestemt.

- **Løslighet i / blandbarhet med vann:**

Ikke, hhv. lite blandbar.

- **Fordelingskoeffisient (n-oktanol/vann):** Ikke bestemt.

- **Viskositet:**

**Dynamisk:** Ikke bestemt.

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# Sikkerhetsdatablad

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<b>Kinematisk:</b>	Ikke bestemt.
<b>· Løsningsmiddelandel:</b>	
<b>Organiske løsningsmidler:</b>	18.0 %
<b>Vann:</b>	81.0 %
<b>VOC (EF)</b>	18,00 %
<b>Andel faste stoffer:</b>	1.0 %
<b>· 9.2 Annen informasjon</b>	Ikke noe mer relevant informasjon tilgjengelig.

### Avsnitt 10: Stabilitet og reaktivitet

- **10.1 Reaktivitet** Ikke noe mer relevant informasjon tilgjengelig.
- **10.2 Kjemisk stabilitet**
- **Termisk spaltning / vilkår som må unngås:** Ingen spaltning ved formålsriktig bruk.
- **10.3 Mulighet for farlige reaksjoner** Det kjennes ingen farlige reaksjoner.
- **10.4 Forhold som bør unngås** Ikke noe mer relevant informasjon tilgjengelig.
- **10.5 Inkompatible materialer:** Ikke noe mer relevant informasjon tilgjengelig.
- **10.6 Farlige nedbrytningsprodukter:** Ingen farlige spaltningsprodukter kjente.

### Avsnitt 11: Opplysninger om helsefare

- **11.1 Informasjon om toksikologiske virkninger**
- **Akutt giftighet** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.

#### · Klassifiseringsrelevante LD/LC50-verdier:

##### 50-00-0 formaldehyd

Oral	LD50	>200 mg/kg (rat)
------	------	------------------

- **Primær irritasjonsvirkning:**
- **Hudetsing/hudirritasjon** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Alvorlig øyeskade/øyeirritasjon** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Sensibiliserende ved innånding eller hudkontakt**  
Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Informasjon om følgende grupper med potensielle virkninger:**
- **CMR-virkninger (kreftfremkallende virkninger, arvestoffskadelige og reproduksjonsskadelige virkninger)**
- **Skader på arvestoffet i kjønnsceller** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Kreftframkallende egenskap** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Reproduksjonstoksisitet** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **STOT – enkelteksponering** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **STOT – gjentatt eksponering** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Aspirasjonsfare** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.

### Avsnitt 12: Miljøopplysninger

- **12.1 Giftighet**
- **Akvatisk toksisitet:** Ikke noe mer relevant informasjon tilgjengelig.
- **12.2 Persistens og nedbrytbarhet** Ikke noe mer relevant informasjon tilgjengelig.
- **12.3 Bioakkumulasjonspotensial** Ikke noe mer relevant informasjon tilgjengelig.
- **12.4 Mobilitet i jord** Ikke noe mer relevant informasjon tilgjengelig.
- **Økotoksiske virkninger:**
- **Bemerkning:** skadelig for fisk

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- **Ytterligere økologiske informasjoner:**
- **Generelle informasjoner:**  
*Vannfareklasse 2 (D) (Selvklassifisering): farlig for vann*  
*Ikke la stoffet komme ned i grunnvannet, i vassdrag eller i kloakker.*  
*Må ikke komme ufortynnet eller unøytralisert ned i spillvann eller i avløpsgrøft.*  
*Fare for drikkevann allerede ved utstrømming av små mengder i marken.*  
*skadelig for vannorganismer*
- **12.5 Resultater av PBT- og vPvB-vurdering**
- **PBT:** Ikke brukbar.
- **vPvB:** Ikke brukbar.
- **12.6 Andre skadelige virkninger** Ikke noe mer relevant informasjon tilgjengelig.

### Avsnitt 13: Fjerning av kjemikalieavfall

- **13.1 Metoder for avfallsbehandling**
- **Anbefaling:** *Må ikke bortscaffes sammen med husholdningsavfall. Må ikke komme ned i kloakk.*
- **Ikke rengjort emballasje:**
- **Anbefaling:** *Deponering i henhold til myndighetenes forskrifter.*

### Avsnitt 14: Opplysninger om transport

- |  |                      |
|--|----------------------|
| · <b>14.5 Miljøfarer:</b>  | <i>Ikke brukbar.</i> |
| · <b>14.6 Særskilte forholdsregler for bruker</b>                                | <i>Ikke brukbar.</i> |
| · <b>14.7 Transport i bulk iht. annekts II til MARPOL 73/78 og til IBC-koden</b> | <i>Ikke brukbar.</i> |
| · <b>UN "Model Regulation":</b>  | <i>bortfaller</i>    |

### Avsnitt 15: Opplysninger om lover og forskrifter

- **15.1 Helse-, sikkerhets- og miljøforskrifter/lovgivning som gjelder spesielt for stoffet eller stoffblandingen**
- **Nasjonale forskrifter:**
- **Informasjoner om arbeidsinnskrenkning:**  
*Arbeidstagere må ikke utsettes for de kreftfremkallende farlige stoffer som er inneholdt i denne blandingen. I enkelte tilfeller kan myndighetene tillate unntak.*
- **15.2 Kjemisk sikkerhetsvurdering:** *En kjemisk sikkerhetsvurdering er ikke utført.*

### Avsnitt 16: Andre opplysninger av betydning for helse, miljø og sikkerhet

*Opplysningene er basert på vårt kjennskap i dag. De utgjør dog ingen forsikring om produkttegenskaper og er ikke grunnlag for noe kontraktsmessig rettsforhold.*

- **Relevante satser**  
*H201 Eksplosjonsfarlig; fare for masseeksplosjon.*  
*H226 Brannfarlig væske og damp.*  
*H301 Giftig ved svelging.*  
*H311 Giftig ved hudkontakt.*  
*H314 Gir alvorlige etseskader på hud og øyne.*

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*H317 Kan utløse en allergisk hudreaksjon.**H331 Giftig ved innånding.**H341 Mistenkes å kunne gi genetiske skader.**H350 Kan forårsake kreft.***· Forkortelser og akronymer:***GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Expl. 1.1: Explosives, Division 1.1**Flam. Liq. 3: Flammable liquids, Hazard Category 3**Acute Tox. 3: Acute toxicity, Hazard Category 3**Acute Tox. 4: Acute toxicity, Hazard Category 4**Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A**Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B**Skin Corr. 1C: Skin corrosion/irritation, Hazard Category 1C**Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1**Skin Sens. 1: Sensitisation - Skin, Hazard Category 1**Muta. 2: Germ cell mutagenicity, Hazard Category 2**Carc. 1B: Carcinogenicity, Hazard Category 1B*

NO

# Ficha de datos de seguridad

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### SECCIÓN 1: Identificación de la sustancia o la mezcla y de la sociedad o la empresa

#### · 1.1 Identificador del producto

· **Nombre comercial:** BOUIN'S FLUID

· **Número del artículo:** 15990-01, 15990-04, 15990-10, 15990-30, 15990-20

· **1.2 Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados**  
No existen más datos relevantes disponibles.

· **Utilización del producto / de la elaboración** Sustancias químicas de laboratorio

#### · 1.3 Datos del proveedor de la ficha de datos de seguridad

· **Fabricante/distribuidor:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: sgkcck@aol.com

www.emsdiasum.com

Aname

C/ Perez Galdos no. 2

28693 Quijorna

Madrid, Spain

Tel: +34.91.816.89.50

Fax: +34.91.816.85.94

email: ventas@aname.es

· **Área de información:** Product safety department

· **1.4 Teléfono de emergencia:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

### SECCIÓN 2: Identificación de los peligros

· **2.1 Clasificación de la sustancia o de la mezcla**

· **Clasificación con arreglo al Reglamento (CE) n° 1272/2008**



GHS01 bomba explotando

Expl. 1.1 H201 Explosivo; peligro de explosión en masa.



GHS06 calavera y tibias cruzadas

Acute Tox. 3 H311 Tóxico en contacto con la piel.

Acute Tox. 3 H331 Tóxico en caso de inhalación.



GHS08 peligro para la salud

Muta. 2 H341 Se sospecha que provoca defectos genéticos.

Carc. 1B H350 Puede provocar cáncer.



GHS05 corrosión

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Skin Corr. 1C H314 Provoca quemaduras graves en la piel y lesiones oculares graves.

Eye Dam. 1 H318 Provoca lesiones oculares graves.



GHS07

Acute Tox. 4 H302 Nocivo en caso de ingestión.

Skin Sens. 1 H317 Puede provocar una reacción alérgica en la piel.

Flam. Liq. 3 H226 Líquidos y vapores inflamables.

### · 2.2 Elementos de la etiqueta

#### · Etiquetado con arreglo al Reglamento (CE) n° 1272/2008

El producto se ha clasificado y etiquetado de conformidad con el reglamento CLP.

#### · Pictogramas de peligro GHS01

#### · Palabra de advertencia Peligro

#### · Componentes peligrosos a indicar en el etiquetaje:

formaldehído

2,4,6-trinitrofenol

#### · Indicaciones de peligro

H201 Explosivo; peligro de explosión en masa.

#### · Consejos de prudencia

P210 Mantener alejado del calor, de superficies calientes, de chispas, de llamas abiertas y de cualquier otra fuente de ignición. No fumar.

P230 Mantener humedecido.

P250 Evitar la abrasión/el choque/la fricción.

P373 NO luchar contra el incendio cuando el fuego llega a los explosivos.

P401 Almacenar conforme a la reglamentación local/regional/nacional/internacional.

P501 Eliminar el contenido o el recipiente conforme a la reglamentación local/regional/nacional/internacional.

### · 2.3 Otros peligros

#### · Resultados de la valoración PBT y mPmB

· PBT: No aplicable.

· mPmB: No aplicable.

## SECCIÓN 3: Composición/información sobre los componentes

### · 3.2 Caracterización química: Mezclas

· Descripción: Mezcla formada por las sustancias especificadas a continuación con adiciones no peligrosas.

#### · Componentes peligrosos:

CAS: 50-00-0 EINECS: 200-001-8	formaldehído ⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ☠ Muta. 2, H341; Carc. 1B, H350; ⚠ Skin Corr. 1B, H314; ⚠ Skin Sens. 1, H317	2,5-10%
CAS: 64-19-7 EINECS: 200-580-7	ácido acético ⚠ Flam. Liq. 3, H226; ⚠ Skin Corr. 1A, H314	2,5-10%
CAS: 88-89-1 EINECS: 201-865-9	2,4,6-trinitrofenol ☠ Expl. 1.1, H201; ☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331	≤ 2,5%

· Indicaciones adicionales: El texto de los posibles riesgos aquí indicados se puede consultar en el capítulo 16.

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### SECCIÓN 4: Primeros auxilios

#### · 4.1 Descripción de los primeros auxilios

##### · Instrucciones generales:

Quitarse de inmediato toda prenda contaminada con el producto.

Los síntomas de intoxicación pueden presentarse después de muchas horas, por lo que se requiere una supervisión médica durante un mínimo de 48 horas después del accidente.

Antes de quitarse la protección respiratoria, quítese la ropa contaminada.

En caso de respiración irregular o apnea (paro respiratorio), hágase la respiración artificial.

##### · En caso de inhalación del producto:

Suministrar aire fresco u oxígeno; solicitar ayuda médica.

Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.

##### · En caso de contacto con la piel: Lavar inmediatamente con agua y jabón y enjuagar bien.

##### · En caso de con los ojos:

Limpia los ojos abiertos durante varios minutos con agua corriente y consultar un médico.

##### · En caso de ingestión:

Consultar inmediatamente un médico.

Beber mucha agua a respirar aire fresco. Solicitar asistencia médica inmediatamente.

##### · 4.2 Principales síntomas y efectos, agudos y retardados No existen más datos relevantes disponibles.

##### · 4.3 Indicación de toda atención médica y de los tratamientos especiales que deban dispensarse inmediatamente No existen más datos relevantes disponibles.

### SECCIÓN 5: Medidas de lucha contra incendios

#### · 5.1 Medios de extinción

· Sustancias extintoras apropiadas: CO<sub>2</sub>, arena, polvo extintor. No utilizar agua.

· Sustancias extintoras inapropiadas por razones de seguridad: Agua

· 5.2 Peligros específicos derivados de la sustancia o la mezcla No existen más datos relevantes disponibles.

· 5.3 Recomendaciones para el personal de lucha contra incendios

· Equipo especial de protección: Colocarse la protección respiratoria.

### SECCIÓN 6: Medidas en caso de vertido accidental

#### · 6.1 Precauciones personales, equipo de protección y procedimientos de emergencia

Poner las personas a salvo.

Llevar puesto equipo de protección. Mantener alejadas las personas sin protección.

#### · 6.2 Precauciones relativas al medio ambiente:

Al penetrar en las aguas o en el alcantarillado, avisar a las autoridades pertinentes.

Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.

#### · 6.3 Métodos y material de contención y de limpieza:

Quitar con material absorbente (arena, kieselgur, aglutinante de ácidos, aglutinante universal, aserrín).

Utilizar un neutralizador.

Desechar el material contaminado como vertido según ítem 13.

Asegurar suficiente ventilación.

No enjuagar con agua ni productos de limpieza acuosos.

#### · 6.4 Referencia a otras secciones

Ver capítulo 7 para mayor información sobre una manipulación segura.

Ver capítulo 8 para mayor información sobre el equipo personal de protección.

Para mayor información sobre cómo desechar el producto, ver capítulo 13.

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### SECCIÓN 7: Manipulación y almacenamiento

- **7.1 Precauciones para una manipulación segura**  
Asegurar suficiente ventilación /aspiración en el puesto de trabajo.  
Abrir y manejar el recipiente con cuidado.  
Evitar la formación de aerosoles.
- **Prevención de incendios y explosiones:**  
Mantener alejadas las fuentes de encendido. No fumar.  
Proteger del calor.  
Tomar medidas contra las cargas electrostáticas.  
Evitar golpes y roces.  
Tener preparados los aparatos respiratorios.
- **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**
- **Almacenamiento:**
- **Exigencias con respecto al almacén y los recipientes:** No se requieren medidas especiales.
- **Normas en caso de un almacenamiento conjunto:** No es necesario.
- **Indicaciones adicionales sobre las condiciones de almacenamiento:**  
Mantener el recipiente cerrado herméticamente.  
Proteger del calor y de la luz directa del sol.
- **7.3 Usos específicos finales** No existen más datos relevantes disponibles.

### SECCIÓN 8: Controles de exposición/protección individual

- **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**  
Sin datos adicionales, ver punto 7.

- **8.1 Parámetros de control**

- **Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:**

#### 50-00-0 formaldehído

LEP	Valor de corta duración: 0,37 mg/m <sup>3</sup> , 0,3 ppm
	Sen, s

#### 64-19-7 ácido acético

LEP	Valor de corta duración: 37 mg/m <sup>3</sup> , 15 ppm
	Valor de larga duración: 25 mg/m <sup>3</sup> , 10 ppm
	VLI

#### 88-89-1 2,4,6-trinitrofenol

LEP	Valor de larga duración: 0,1 mg/m <sup>3</sup>
	VLI

- **Indicaciones adicionales:** Como base se han utilizado las listas vigentes en el momento de la elaboración.

- **8.2 Controles de la exposición**

- **Equipo de protección individual:**
- **Medidas generales de protección e higiene:**  
Mantener alejado de alimentos, bebidas y alimentos para animales.  
Quitarse de inmediato la ropa ensuciada o impregnada.  
Lavarse las manos antes de las pausas y al final del trabajo.  
Guardar la ropa protectora por separado.  
Evitar el contacto con los ojos.  
Evitar el contacto con los ojos y la piel.

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- **Protección respiratoria:**

Si la exposición va a ser breve o de poca intensidad, colocarse una máscara respiratoria. Para una exposición más intensa o de mayor duración, usar un aparato de respiración autónomo.

- **Protección de manos:**



Guantes de protección

El material del guante deberá ser impermeable y resistente al producto / sustancia / preparado.

Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias químicas.

Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.

- **Material de los guantes**

La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro. Teniendo en cuenta que el producto está fabricado a partir de diferentes materiales, su calidad no puede ser evaluada de antemano, de modo que los guantes deberán ser controlados antes de su utilización.

- **Tiempo de penetración del material de los guantes**

El tiempo de resistencia a la penetración exacto deberá ser pedido al fabricante de los guantes. Este tiempo debe ser respetado.

- **Protección de ojos:**

Gafas de protección



Gafas de protección herméticas

### SECCIÓN 9: Propiedades físicas y químicas

- **9.1 Información sobre propiedades físicas y químicas básicas**

- **Datos generales**

- **Aspecto:**

**Forma:** Líquido  
**Color:** Amarillo claro

- **Olor:** Penetrante

- **Umbral olfativo:** No determinado.

- **valor pH:** No determinado.

- **Cambio de estado**

**Punto de fusión /campo de fusión:** Indeterminado.

**Punto de ebullición /campo de ebullición:** -21 °C

- **Punto de inflamación:** 0 °C

- **Inflamabilidad (sólido, gaseiforme):** No aplicable.

- **Temperatura de ignición:** 300 °C

- **Temperatura de descomposición:** No determinado.

- **Autoinflamabilidad:** El producto no es autoinflamable.

- **Peligro de explosión:** Riesgo de explosión por choque, fricción, fuego u otras fuentes de ignición.

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· <b>Límites de explosión:</b>	
<b>Inferior:</b>	No determinado.
<b>Superior:</b>	No determinado.
· <b>Presión de vapor a 20 °C:</b>	23 hPa
· <b>Densidad a 20 °C:</b>	0.99507 g/cm <sup>3</sup>
· <b>Densidad relativa</b>	No determinado.
· <b>Densidad de vapor</b>	No determinado.
· <b>Velocidad de evaporación</b>	No determinado.
· <b>Solubilidad en / miscibilidad con agua:</b>	Poco o no mezclable.
· <b>Coefficiente de reparto (n-octanol/agua):</b>	No determinado.
· <b>Viscosidad:</b>	
<b>Dinámica:</b>	No determinado.
<b>Cinemática:</b>	No determinado.
· <b>Concentración del disolvente:</b>	
<b>Disolventes orgánicos:</b>	18.0 %
<b>Agua:</b>	81.0 %
<b>VOC (CE)</b>	18,00 %
<b>Contenido de cuerpos sólidos:</b>	1.0 %
· <b>9.2 Otros datos</b>	No existen más datos relevantes disponibles.

### SECCIÓN 10: Estabilidad y reactividad

- **10.1 Reactividad** No existen más datos relevantes disponibles.
- **10.2 Estabilidad química**
- **Descomposición térmica / condiciones que deben evitarse:** No se descompone al emplearse adecuadamente.
- **10.3 Posibilidad de reacciones peligrosas** No se conocen reacciones peligrosas.
- **10.4 Condiciones que deben evitarse** No existen más datos relevantes disponibles.
- **10.5 Materiales incompatibles:** No existen más datos relevantes disponibles.
- **10.6 Productos de descomposición peligrosos:** No se conocen productos de descomposición peligrosos.

### SECCIÓN 11: Información toxicológica

- **11.1 Información sobre los efectos toxicológicos**
- **Toxicidad aguda** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

· **Valores LD/LC50 (dosis letal /dosis letal = 50%) relevantes para la clasificación:**

**50-00-0 formaldehído**

Oral	LD50	>200 mg/kg (rat)
------	------	------------------

- **Efecto estimulante primario:**
- **Corrosión o irritación cutáneas** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Lesiones o irritación ocular graves**  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Sensibilización respiratoria o cutánea**  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

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# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 26.01.2016

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- **Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)**
- **Mutagenicidad en células germinales**  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Carcinogenicidad** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad para la reproducción** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad específica en determinados órganos (STOT) – exposición única**  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad específica en determinados órganos (STOT) – exposición repetida**  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Peligro de aspiración** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

### SECCIÓN 12: Información ecológica

- **12.1 Toxicidad**
- **Toxicidad acuática:** No existen más datos relevantes disponibles.
- **12.2 Persistencia y degradabilidad** No existen más datos relevantes disponibles.
- **12.3 Potencial de bioacumulación** No existen más datos relevantes disponibles.
- **12.4 Movilidad en el suelo** No existen más datos relevantes disponibles.
- **Efectos ecotóxicos:**
- **Observación:** Nocivo para los peces.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**  
Nivel de riesgo para el agua 2 (autoclasificación): peligroso para el agua  
No dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados.  
En estado no diluido o no neutralizado, no verter en el alcantarillado o en otros sistemas de desagüe.  
Una cantidad mínima vertida en el subsuelo ya representa un peligro para el agua potable.  
nocivo para organismos acuáticos
- **12.5 Resultados de la valoración PBT y mPmB**
- **PBT:** No aplicable.
- **mPmB:** No aplicable.
- **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

### SECCIÓN 13: Consideraciones relativas a la eliminación

- **13.1 Métodos para el tratamiento de residuos**
- **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.
- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.

### SECCIÓN 14: Información relativa al transporte

- |   |               |
|---|---------------|
| · <b>14.5 Peligros para el medio ambiente:</b>  | No aplicable. |
| · <b>14.6 Precauciones particulares para los usuarios</b>                                     | No aplicable. |
| · <b>14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC</b> | No aplicable. |
| · <b>"Reglamentación Modelo" de la UNECE:</b>   | suprimido     |

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### SECCIÓN 15: Información reglamentaria

- **15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla**
- **Directiva 2012/18/UE**
- **Sustancias peligrosas nominadas - ANEXO I formaldehído**
- **Categoría Seveso**  
P1a EXPLOSIVOS  
H2 TOXICIDAD AGUDA
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel inferior 10 t**
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel superior 50 t**
- **Disposiciones nacionales:**
- **Indicaciones sobre las limitaciones de trabajo:**  
Los empleados no deben exponerse a las sustancias cancerígenas contenidas en el producto. En casos aislados las autoridades pueden hacer excepciones.
- **15.2 Evaluación de la seguridad química:** Una evaluación de la seguridad química no se ha llevado a cabo.

### SECCIÓN 16: Otra información

Los datos se fundan en el estado actual de nuestros conocimientos, pero no constituyen garantía alguna de cualidades del producto y no generan ninguna relación jurídica contractual.

- **Frases relevantes**  
H201 Explosivo; peligro de explosión en masa.  
H226 Líquidos y vapores inflamables.  
H301 Tóxico en caso de ingestión.  
H311 Tóxico en contacto con la piel.  
H314 Provoca quemaduras graves en la piel y lesiones oculares graves.  
H317 Puede provocar una reacción alérgica en la piel.  
H331 Tóxico en caso de inhalación.  
H341 Se sospecha que provoca defectos genéticos.  
H350 Puede provocar cáncer.
- **Abreviaturas y acrónimos:**  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
VOC: Volatile Organic Compounds (USA, EU)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Expl. 1.1: Explosives, Division 1.1  
Flam. Liq. 3: Flammable liquids, Hazard Category 3  
Acute Tox. 3: Acute toxicity, Hazard Category 3  
Acute Tox. 4: Acute toxicity, Hazard Category 4  
Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A  
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B  
Skin Corr. 1C: Skin corrosion/irritation, Hazard Category 1C  
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1  
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1  
Muta. 2: Germ cell mutagenicity, Hazard Category 2  
Carc. 1B: Carcinogenicity, Hazard Category 1B