

## **1. Identification of the substance/preparation and of the company/undertaking**

### *Identification of the product*

Formic acid

### *Manufacturer/supplier identification*

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## **2. Hazards identification**

### **Classification of the substance or mixture**

#### **Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**

Flammable liquids (Category 3)

Acute toxicity, Oral (Category 4)

Acute toxicity, Inhalation (Category 3)

Skin Corrosion (Category 1A)

Serious eye damage (Category 1)

Acute aquatic toxicity (Category 3)

### **Label elements**

Pictogram



Signal word    Danger

### **Hazard statement(s)**

H226      Flammable liquid and vapour.

H302      Harmful if swallowed.

H314      Causes severe skin burns and eye damage.

H331      Toxic if inhaled.

H402      Harmful to aquatic life.

### **Precautionary statement(s)**

P210      Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P240      Ground/bond container and receiving equipment.

P280      Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P330 + P331    IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302 + P352      IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338    IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P311      IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

P403 + P233      Store in a well-ventilated place. Keep container tightly closed.

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Supplemental Hazard Statements  
none

### **3. Composition/information on ingredients**

#### *Synonyms*

Formic acid

CAS-No.: 64-18-6

*M*: 46.03 g/mol

Molecular formula: HCOOH

### **4. First aid measures**

#### **If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### **In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

#### **In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### **If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### **5. Fire-fighting measures**

#### **Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### **Advice for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

### **6. Accidental release measures**

#### **Personal precautions**

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

#### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### **Methods and materials for containment and cleaning up**

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

### **7. Handling and storage**

#### **Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

#### **Conditions for safe storage**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

### **8. Exposure controls/personal protection**

#### **Appropriate engineering controls**

General industrial hygiene practice.

#### **Personal protective equipment**

**Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Body Protection**

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

**9. Physical and chemical properties**

**Form:** clear liquid

**Colour:** colourless

**Odour:** pungent

**pH value:** not available

**Melting point:** -9 °C.

**Boiling point:** 107 °C

**Ignition temperature:** not available

**Flash point:** 48 °C

**Autoignition temperature:** not available

**Explosion limits**

**lower:** 18%(V)

**upper:** 57%(V)

**Density :** ~1.2g/cm<sup>3</sup>

**Bulk density:** not available

**Solubility in**

**water (20 °C) :** soluble in water

**diluted acids (20 °C) :** not available

**Thermal decomposition:** not available

**10. Stability and reactivity****Chemical stability**

Stable under recommended storage conditions.

**Conditions to avoid**

Heat, flames and sparks, direct sunlight.

**Materials to avoid**

Strong oxidizing agents, Strong bases, Powdered metals.

**Hazardous decomposition products**

Other decomposition products - no data available

**11. Toxicological information**

**Acute toxicity**

LD50 Oral - rat - 730 mg/kg

LC50 Inhalation - Rat - 4 h - > 7.4 mg/l

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Specific target organ toxicity - single exposure**

no data available

**Specific target organ toxicity - repeated exposure**

no data available

**Aspiration hazard**

no data available

**12. Ecological information**

**Toxicity**

Toxicity to daphnia and other aquatic invertebrates      EC50 - Daphnia magna - 34.2 mg/l - 48 h

**Persistence and degradability**

No data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**PBT and vPvB assessment**

no data available

**Other adverse effects**

no data available

**13. Disposal considerations**

**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

**14. Transport information**

**ADR/RID**

UN-Number: 1779 Class: 8 (3) Packing group: II

Proper shipping name: FORMIC ACID

**IMDG**

UN-Number: 1779 Class: 8 (3) Packing group: II

Proper shipping name: FORMIC ACID

Marine pollutant: no

**IATA**

UN-Number: 1779 Class: 8 (3) Packing group: II

Proper shipping name: FORMIC ACID

**15. Regulatory information**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

**16. Other information**

General update.

*Regional representation:*

This information is given on the authorised Safety Data Sheet for your country.