

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

Printing date 14.03.2018

Revision: 14.03.2018

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

- **1.1 Product identifier**
- **Trade name:** Formic acid 99%
- **Article number:** 0691
- **CAS Number:**
64-18-6
- **EC number:**
200-579-1
- **Index number:**
607-001-00-0
- **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**
Chemical for research, development, manufacturing, laboratory chemical for analysis.

- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Sinoright International Trade Co.,Ltd
2301 Liang QIU BLDG DALIAN,CHINA
Tel: +86-41139210844
Email: info@sinoright.net

- **Further information obtainable from:** Product safety department.
- **1.4 Emergency telephone number:**
For emergency telephone numbers of the poisons centers in Europe please use this link: <http://www.sinorightcn.com>

SECTION 2: Hazards identification

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



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS05 corrosion

Skin Corr. 1A 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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- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02 GHS05 GHS07

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
formic acid
- **Hazard statements**
H226 *Flammable liquid and vapour.*
H302 *Harmful if swallowed.*
H314 *Causes severe skin burns and eye damage.*
- **Precautionary statements**
P303+P361+P353 *IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*
P305+P351+P338 *IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
P310 *Immediately call a POISON CENTER/doctor.*
P405 *Store locked up.*
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

- **3.1 Chemical characterisation: Substances**
- **CAS No. Description**
64-18-6 formic acid
- **Identification number(s)**
- **EC number:** *200-579-1*
- **Index number:** *607-001-00-0*

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.
- **After inhalation:** *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.*

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- **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:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **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**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Dilute with plenty of water.
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.
- **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**
Do not seal receptacles gas-tight.
Avoid contact with skin and eyes.
Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

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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:**

Store at room temperature in a shaded and ventilated place.

· **Information about storage in one common storage facility:** Store away from metals.

· **Further information about storage conditions:**

May decompose forming gaseous products, especially when stored over long periods.

Open containers in a well ventilated area in such a way to enable internal pressure to escape, especially when stored over long periods.

Keep container tightly sealed.

· **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:**

64-18-6 formic acid

IOELV Long-term value: 9 mg/m³, 5 ppm

· **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.

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.

· **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:



Tightly sealed goggles

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

· Form:	Liquid
· Colour:	Colourless
· Odour:	Strong
· Odour threshold:	Not determined.

· pH-value (10 g/l) at 20 °C: 2.2

· Change in condition

· **Melting point/freezing point:** 4 °C (OECD Test Guideline 102)
 · **Initial boiling point and boiling range:** 101 °C (at 1.013 hPa)

· Flash point: 49.5 °C (at 1.013 hPa)

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 528 °C (Directive 92/69/EEC)

· Decomposition temperature: 350 °C (OECD Test Guideline 113)

· Auto-ignition temperature: Not determined.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

· **Lower:** 12 Vol %
 · **Upper:** 38 Vol %

· Vapour pressure at 20 °C: 42 hPa (OECD Test Guideline 104)

· Density at 20 °C: 1.22 g/cm³ (OECD Test Guideline 109)

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water:

Fully miscible.

· Partition coefficient: n-octanol/water: -2,1 (23 °C)
OECD Test Guideline 107

· Viscosity:

· **Dynamic:** 1,8 mPa.s at 20 °C
Method: OECD Test Guideline 114

· **Kinematic:** Not determined.

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- **Solvent content:**

<i>Water:</i>	1.0 %
<i>VOC (EC)</i>	0.00 %

<i>Solids content:</i>	0.0 %
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- **9.2 Other information** *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**
Harmful if swallowed.

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

64-18-6 formic acid		
<i>Oral</i>	LD50	1,100 mg/kg (rat)

<i>Oral</i>	LD50	1,100 mg/kg (rat)
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- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **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.*

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- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
- **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.

· **European waste catalogue**

HP 3	Flammable
HP 6	Acute Toxicity
HP 8	Corrosive

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- **14.1 UN-Number**
· **ADR, IMDG, IATA** UN1779
- **14.2 UN proper shipping name**
· **ADR** UN1779 FORMIC ACID
· **IMDG** FORMIC ACID, MARINE POLLUTANT
· **IATA** FORMIC ACID

· **14.3 Transport hazard class(es)**

· **ADR**



- **Class** 8 (CF1) Corrosive substances.
- **Label** 8+3

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· **IMDG**

· **Class** 8 Corrosive substances.
· **Label** 8/3

· **IATA**

· **Class** 8 Corrosive substances.
· **Label** 8 (3)

· **14.4 Packing group**

· **ADR, IMDG, IATA** II

· **14.5 Environmental hazards:**

· **Marine pollutant:** Yes
Symbol (fish and tree)

· **14.6 Special precautions for user**

· **Danger code (Kemler):** Warning: Corrosive substances.
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· **EMS Number:** F-E,S-C
· **Segregation groups** Acids
· **Stowage Category** A

· **14.7 Transport in bulk according to Annex II of**

Marpol and the IBC Code Not applicable.

· **Transport/Additional information:**· **ADR**

· **Limited quantities (LQ)** 1L
· **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml
· **Transport category** 2
· **Tunnel restriction code** D/E

· **IMDG**

· **Limited quantities (LQ)** 1L
· **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1779 FORMIC ACID, 8 (3), II

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SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02 GHS05 GHS07

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
formic acid
- **Hazard statements**
H226 *Flammable liquid and vapour.*
H302 *Harmful if swallowed.*
H314 *Causes severe skin burns and eye damage.*
- **Precautionary statements**
P303+P361+P353 *IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*
P305+P351+P338 *IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
P310 *Immediately call a POISON CENTER/doctor.*
P405 *Store locked up.*
P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** *Substance is not listed.*
- **Seveso category P5c** **FLAMMABLE LIQUIDS**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** *5,000 t*
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** *50,000 t*
- **REGULATION (EC) No 1907/2006 ANNEX XVII** *Conditions of restriction: 3*
- 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.

- **Department issuing SDS:** *Product safety department*
- **Contact:** *Product safety department*
- **Abbreviations and acronyms:**
ADR: *Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*
IMDG: *International Maritime Code for Dangerous Goods*
IATA: *International Air Transport Association*
GHS: *Globally Harmonised System of Classification and Labelling of Chemicals*
EINECS: *European Inventory of Existing Commercial 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*

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PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
· *** Data compared to the previous version altered.**

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