

## Safety Data Sheet

SDS Number SDS-39  
Prepare Date 07.03.2013  
Revision Date 22.01.2022  
Revision 8



likitkimya

## FORMIC ACID

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

#### 1.1 Product identifiers

Product name Formic acid %85  
CAS-No 64-18-6

#### 1.2 Relevant identified uses of the substance or mixture and uses advised

Identified uses Laboratory chemicals, Manufacture of substances

#### 1.3 Details of the supplier of the safety data sheet

**Company** Likit Kimya Sanayi Ticaret A.Ş.  
**Terminal Address** Sultanköy Merkez Mah. İncirli Mandıra Cad. No:64  
M.Ereğlisi/TEKİRDAĞ/TURKEY  
**Terminal Telephone** +90 282 613 41 38  
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**Web sites** [www.likitkimya.com](http://www.likitkimya.com)

#### 1.4 Emergency telephone number

**Emergency Phone** 112  
**Company information desk** +90 282 613 41 38

### 2. Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008

H227 Combustible liquid  
H302 Harmful if swallowed  
H314 Causes severe skin burns and eye damage.  
H331 Toxic if inhaled.

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 Label elements

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

Pictogram



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Signal Word Danger

### Hazard statement(s)

H227 Combustible liquid  
 H302 Harmful if swallowed.  
 H314 Causes severe skin burns and eye damage.  
**H331 Toxic if inhaled.**

### Precautionary statement(s)

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
 P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
 P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.  
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

### 2.3 Other hazards

pungent Odor

## 3. Composition/information on ingredients

### 3.1 Substances

Formula  $\text{CH}_2\text{O}_2$   
 Molecular weight 46,03 g/mol  
 Hazardous ingredients according to Regulation (EC) No 1272/2008

Component		Classification	Concentration
<b>Formik Asit</b>			
CAS No	64-18-6	Flammable liquids : Category 4	%84 ≤ C ≤ 85,5%
EC No	200-579-1	Acute toxicity (Oral) : Category 4	
Index-No.	607-001-00-0	Acute toxicity (Inhalation) : Category 3 Skin Corr. 1B, H314	

## 4. First aid measures

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

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

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### In case of skin contact

Take off contaminated clothing and shoes immediately. 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.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available.

## 5. Firefighting measures

### 5.1 Extinguishing media

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

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

Use water spray to cool unopened containers.

## 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

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. For personal protection see section 8.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### 6.3 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 (see section 13).

### 6.4 Reference to other sections

For disposal see section 13.

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### 7. Handling and storage

#### 7.1 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.

For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep away from sources of ignition - No smoking. Protect from sunlight. Keep away from combustible material. The product may form CO (carbon monoxide) under prolonged storage. Before entering storage tanks, the CO (carbon monoxide) level should be checked. Materials to avoid Bases Amines Strong acids and oxidizing agents Copper Aluminum Combustible material.

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

### 8. Exposure controls/personal protection

#### 8.1 Control parameters

##### Components with workplace control parameters

Ingredients	CAS-No	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
formic acid	64-18-6	TWA	5 ppm	ACGIH
		STEL	10 ppm	ACGIH
		TWA	5 ppm 9 mg/m3	NIOSH REL
		TWA	5 ppm 9 mg/m3	OSHA Z-1
		TWA	5 ppm 9 mg/m3	OSHA P0

#### 8.2 Exposure controls

##### Appropriate engineering control

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

##### Personal protective equipment

##### Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). 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

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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.

### Full contact

Material: butyl-rubber  
 Minimum layer thickness: 0,3 mm  
 Break through time: 480 min

### Splash contact

Material: Nature latex/chloroprene  
 Minimum layer thickness: 0,6 mm  
 Break through time: 480 min

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

### Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Control of environmental exposure Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	Form	liquid
	Colour	colourless
b) Odour	Pungent Odor	
c) Odour Threshold	No data available.	
d) pH	< 1	
e) Melting point/freezing point	-13 °C	
f) Initial boiling point and boiling range	107 °C	
g) Flash point	65 °C	
h) Evaporation rate	No data available	

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- |   |  |
|---|--|
| i) Flammability (solid, gas)                    | No data available  |
| j) Upper/lower flammability or explosive limits | upper flammability limit 51 %(V)<br>lower flammability limit 18 %(V) |
| k) Vapour pressure                              | < 4.4 kPa (20 °C)  |
| l) Vapour density                               | No data available  |
| m) Relative density                             | 1.2 (20 °C)  |
| n) Water solubility                             | completely soluble   |
| o) Partition coefficient: noctanol/water        | No data available  |
| p) Auto-ignition temperature                    | 427 °C   |
| q) Decomposition temperature                    | 350 °C   |
| r) Viscosity                                    | No data available  |
| s) Explosive properties                         | No data available  |
| t) Oxidizing properties                         | No data available  |

### 9.2 Other safety information

No data available

## 10. Stability and reactivity

### 10.1 Reactivity

Reacts with the following substances: Bases, Amines.

### 10.2 Chemical stability

Stable under normal conditions. The product may form CO (carbon monoxide) under prolonged storage.

### 10.3 Possibility of hazardous reactions

Exothermic reaction Reacts with the following substances: Bases Amines

### 10.4 Conditions to avoid

Do not expose to temperatures above: 30 °C  
To avoid thermal decomposition, do not overheat.

### 10.5 Incompatible materials

Strong oxidizing agents, Strong acids, Bases, Amines, Copper, Aluminum, Combustible material

### 10.6 Hazardous decomposition products

Thermal decomposition  
Carbon monoxide  
The product may form CO (carbon monoxide) under prolonged storage.  
In the event of fire see section 5

## 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Harmful if swallowed.

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Toxic if inhaled.

LD50 Oral - Rat - 730 mg/kg (OECD Test Guideline 401)

LC50 Inhalation - Rat - 4 h - 7,4 mg/l

### Skin corrosion/irritation

Skin - Rabbit

Result: Severe skin irritation (Draize Test)

### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Severe eye irritation

### Respiratory or skin sensitisation

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

Buehler Test - Guinea pig

Result: Did not cause sensitisation on laboratory animals. (OECD Test Guideline 406).

### 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.

### Reproductive toxicity

No data available.

### Specific target organ toxicity - single exposure

No data available.

### Specific target organ toxicity - repeated exposure

No data available.

### Aspiration hazard

No data available.

### Additional Information

RTECS: Not available

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Kidney - Irregularities - Based on Human Evidence

## 12. Ecological information

### 12.1 Toxicity

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 130 mg/l Exposure time: 96 h  
Toxicity to daphnia and EC50 (Daphnia magna (Water flea)): 365 mg/l Exposure time: 48 h  
other aquatic invertebrates  
Toxicity to algae : EC50 (Chlorella pyrenoidosa): 1,240 mg/l Exposure time: 72 h

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### 12.2 Persistence and degradability

Biodegradability Result: > 90 % - Readily biodegradable  
(OECD Test Guideline 301C)  
Biochemical Oxygen Demand (BOD) 86 mg/g  
Chemical Oxygen Demand (COD) 348 mg/g  
Ratio BOD/ThBOD 8,60 %

### 12.3 Bioaccumulative potential

Bioaccumulation is unlikely.

### 12.4 Mobility in soil

Medium: Water  
Remarks: soluble.

### 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. .

### 12.6 Other adverse effects

Harmful to aquatic life.  
Additional ecological information  
No data available

## 13. Disposal considerations

### 13.1 Waste treatment methods

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packagin

Dispose of as unused product.

## 14. Transport information

### 14.1 UN number

ADR/RID: 1779 IMDG: 1779 IATA: 1779

### 14.2 UN proper shipping name

ADR/RID FORMIC ACID SOLUTION  
IMDG FORMIC ACID SOLUTION  
IATA Formic acid solution

### 14.3 Transport hazard class(es)

ADR/RID: 8(3) IMDG: 8(3) IATA: 8(3)

### 14.4 Packaging group

ADR/RID: II IMDG: II IATA: II

Conforms to Regulation (EC) No. 1907/2006  
(REACH), Annex II

Terminal Adres: Seymen Yolu. 3.km Marmaraeğlisi/Tekirdağ  
Recep OKUL – [recep\\_okul@likitkimya.com](mailto:recep_okul@likitkimya.com)  
İbrahim Çağında – [ibrahim\\_caginda@likitkimya.com](mailto:ibrahim_caginda@likitkimya.com)



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### 14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

### 14.6 Special precautions for user

No data available.

## 15. Regulatory information

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

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

### 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

## 16. Other information

### Full text of H-Statements referred to under sections 2 and 3.

H226 Combustible liquid  
H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H331 Toxic if inhaled.

### Further information

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