

Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)



64560 Formic Acid 75 %

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Revised edition: 17.09.2015

Version: 1

Printed: 10.11.2017

1. Identification of the Substance/Mixture and of the Company/Undertaking

1.1. Product Identifier

Product Name: Formic Acid 75 %

Article No.: 64560

1.2. Relevant identified Uses of the Substance or Mixture and Uses advised against

Identified uses:

Basic substance with not specified application.
Cleaning agent

Uses advised against:

1.3. Details of the Supplier of the Safety Data Sheet (Producer/Importer)

Company: Kremer Pigmente GmbH & Co. KG

Address: Hauptstr. 41-47, 88317 Aichstetten, Germany

Tel./Fax.: Tel +49 7565 914480, Fax +49 7565 1606

Internet: www.kremer-pigmente.de

EMail: info@kremer-pigmente.de

Importer: --

1.4. Emergency No.

Emergency No.: +49 7565 914480 (Mon-Fri 8:00 - 17:00)

2. Hazards Identification

2.1. Classification of the Substance or Mixture

Classification according to Regulation
(EC) No. 1272/2008 (CLP/GHS)

H302	Skin corrosion, hazard category 1B
Cat.: 4	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
Cat.: 1A	
H318	Causes serious eye damage.
Cat.: 1	
H332	Harmful if inhaled.
Cat.: 4	

Classification according to Directive No.
67/548/EC or No. 1999/45/EC

Caustic (C) R34 Causes burns.

Safety Phrases:

Possible Environmental Effects:

2.2. Label Elements

Classification according to Regulation
(EC) No. 1272/2008 (CLP/GHS)

Hazard designation:

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GHS05-2



GHS07

Signal word:

Danger

Hazard designation:

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
EUH071	Corrosive to the respiratory tract.

Safety designation:

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/ clothing/ eye/ face protection.
P301+P330+P331	If swallowed: Rinse mouth. Do not induce vomiting.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses and continue rinsing.
P310	Immediately call a poison center or physician.
P405	Store locked up.
P501	Dispose of contents/ container according to regional, national and international regulations.

Hazardous components for labelling:

2. 3. Other Hazards

3. Composition/Information on Ingredients

3. 1. Substance

3. 2. Mixture

Chemical Characterization:

Mixture

Information on Components / Hazardous Ingredients:

Formic acid (C; R35; H226-302-314-331); REACH Reg. No. 01-2119491174-37	75 %	CAS-Nr: 64-18-6 EINECS-Nr: 200-579-1 EC-Nr: 607-001-00-0
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Additional information:

4. First Aid Measures

4. 1. Description of the First Aid Measures

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General information:

Remove contaminated clothes immediately.

After inhalation:

Supply fresh air.

If breathing is difficult call a physician.

Give artificial respiration in case breathing is not regular or if it has stopped.

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

After skin contact:

Remove contaminated clothing immediately. Wash off immediately with plenty of water and soap.

Consult a physician immediately.

After eye contact:

Rinse open eyes with plenty of water for at least 15 minutes.

Consult physician.

After ingestion:

Rinse mouth with water and drink plenty of water.

Do not induce vomiting.

Risk of perforation!

Immediately get medical help.

4. 2. Most important Symptoms and Effects, both Acute and Delayed

Symptoms:

Can cause burning of eyes and mucous membrane. Contact with the liquid can cause itching and burning, as well as blistering of the skin.

Effects:

4. 3. Indication of any Immediate Medical Attention and special Treatment needed

Treatment:

Oral intake: do not used sodium hydrogen carbonate (NaHCO₃) or calcium carbonate (CaCO₃) to neutralize, since carbon dioxide (CO₂) is formed which can cause the perforation of the stomach. Slowly give magnesium oxide (MgO) suspended in water to drink.

5. Fire-Fighting Measures

5. 1. Extinguishing Media

Suitable extinguishing media:

CO₂, extinguishing powder, water jet.

Fight larger fire with water jet or alcohol resistant foam.

Unsuitable extinguishing media:

Never apply a strong water jet.

5. 2. Special Hazards arising from the Substance or Mixture

Special hazards:

Produkt reacts with base metals forming hydrogen gas. Vaporized product irritates the respiratory tract.

Formic acid fumes are highly corrosive.

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*Fumes can form an explosive mixture with air.
The vapor is heavier than air, spreads along the ground and distant ignition is possible.
Formation of carbon monoxide (CO) if combustion is incomplete.
Contain escaping vapors with water.*

5.3. Advice for Firefighters

Protective equipment:

Wear self-contained respiratory protective device and full protective gear.

Further information:

Cool exposed containers with water spray.

6. Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Personal precautions:

*Wear protective clothing.
Avoid contact with skin and eyes. Do not ingest or inhale.
Keep away from sources of ignition. No smoking.*

6.2. Environmental Precautions

Environmental precautions:

*Prevent contamination of soils, drains and surface water.
Contact local authorities if product pollutes soil or vegetation.
Dilute with plenty of water.*

6.3. Methods and Material for Containment and Cleaning Up

Methods and material:

*Contain with absorbent material (e.g. sand, acid binder, universal binder, sawdust) and collect in appropriate containers for disposal.
Suitable material to dilute or neutralize: soda, sodium bicarbonate.*

6.4. Reference to other Sections

*For information for safe handling see Section 7.
Protective clothing, see Section 8.
See Section 13 for information on disposal.*

7. Handling and Storage

7.1. Precautions for Safe Handling

Instructions on safe handling:

*Provide adequate ventilation.
Respiratory protection when handling without exhaust system.
Open and handle container with care.
Wear adequate protective clothing (see para. 8).
Avoid the formation of aerosol.*

Hygienic measures:

Avoid contact with eyes and skin.

7.2. Conditions for Safe Storage, including any Incompatibilities

Storage conditions:

Store in tightly sealed containers in a cool and well ventilated

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location.

Keep container tightly closed. Protect against heat and direct sunlight. Store cool and dry. Heat can lead to a pressure increase and risk of bursting.

Requirements for storage areas and containers:

Store the product in the original container.
Suitable container material: glass, steel, plastic.

Information on fire and explosion protection:

Keep away from sources of ignition - do not smoke. Take measures to prevent electrostatic discharge.
Do not store together with: oxidants, metals and alkalis.

Storage class (VCI):

8 B: Non-combustible corrosive substances (TRGS 510, Storage of hazardous materials in transportable containers)

Further Information:

Maximum storage temperature: 30°C

7.3. Specific End Use(s)

Further information:

No information available.

8. Exposure Controls/Personal Protection

8.1. Parameters to be Controlled

Parameters to be controlled (DE):

Formic acid, CAS 64-18-6; TLV: 5 ml/m³; 9.5 mg/m³; 2(l)

Parameters to be controlled:

IOELV (EC): 9 mg/m³, 5 ml/m³ (long-term value)

Derived No-Effect Level (DNEL):

Formic acid:
9.5 mg/m³ (worker/consumer, inhalation, long-term/short-term exposition - systemic and local effects)
3 mg/m³ (consumer, inhalation, long-term exposition - systemic and local effects)
9.5 mg/m³ (consumer, inhalation, chronic effects - systemic)

Predicted No-Effect Concentration (PNEC):

Formic acid:
Fresh water: 2 mg/l
Seawater: 0.2 mg/l
Fresh water sediment: 13.4 mg/kg
Sea water sediment: 1.34 mg/kg
Intermittent release: 1 mg/l
Soil: 1.5 mg/kg
Sewage treatment plant (STP): 7.2 mg/l

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8.2. Exposure Controls

Technical protective measures:

Provide adequate ventilation/exhaust system.

Personal Protection

General protective measures:

Remove contaminated clothing immediately.

Keep away from foodstuffs and drinks. Do not eat, drink or smoke during work. Wash hands before breaks and at the end of work.

Avoid contact with skin, eyes and clothing.

Respiratory protection:

Respirator mask required if ventilation is insufficient. Wear filter respirator in case of short-term or low exposure, and wear a self-contained breathing apparatus in case of long-term or higher exposure.

Recommended: Particle filter E-P2 (EN 141)

Hand protection:

Chemical protective gloves (EN 374 (Europe), F739 (US)).

Protective glove material:

Recommended: Protective index 6, > 480 min. of permeation time accord. EN 374.

Butyl rubber (> 120 min, 0.7 mm).

Chloroprene rubber (> 480 min, 0.5 mm)

Fluoro carbon rubber (Viton)

Not suitable material: nitrile rubber

Eye protection:

Tightly fitting safety goggles (EN 166).

Body protection:

Protective clothing, acid-resistant.

Chemical resistant safety shoes.

Environmental precautions:

Prevent contamination of open water ways and sewage system.

Avoid contamination of ground water.

9. Physical and Chemical Properties

9.1. Information on Basic Physical and Chemical Properties

Form: liquid

Color: colorless

Odor: pungent

Odor threshold:
No information available.

pH-Value:
not determined

Melting temperature:
not determined

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Boiling temperature:	100°C
Flash point:	> 100°C
Evaporation rate:	No information available.
Flammability (solid, gas):	520°C
Upper explosion limit:	33 Vol.-%
Lower explosion limit:	14 Vol.-%
Vapor pressure:	43 hPa (20°C)
Vapor density:	No information available.
Density:	1.174 - 1.177 g/ml (20°C) not determined
Solubility in water:	completely miscible
Coefficient of variation (n-Octanol/Water):	-2.1 logPOW
Auto-ignition temperature:	Product is not auto-ignitable.
Decomposition temperature:	No data available.
Viscosity, dynamic:	not determined
Explosive properties:	Product does not present an explosion hazard.
Oxidizing properties:	no information available
Bulk density:	not determined

9.2. Further Information

Solubility in solvents:

Viscosity, kinematic

Burning class:

Solvent content:

Solid content:

Particle size:

Other information:

No further information.

10. Stability and Reactivity

10.1. Reactivity

Stable if used according to specifications.

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10.2. Chemical Stability

Stable if used according to specifications.

10.3. Possibility of Hazardous Reactions

*Vigorous reactions with concentrated alkalis and oxidants.
Reactions with base metals: development of hydrogen.*

10.4. Conditions to Avoid

Conditions to avoid:

No further information available.

Thermal decomposition:

10.5. Incompatible Materials

Strong oxidizing agents, alkalis, base metals, conc. sulfuric acid.

10.6. Hazardous Decomposition Products

*In case of fire: formation of carbon monoxide and carbon dioxide.
Reacts with sulfuric acid: decomposition under formation of carbon monoxide.*

10.7. Further Information

11. Toxicological Information

11. 1. Information on Toxicological Effects

Formic acid (64-18-6):

Acute Toxicity

LD50, oral:

730 mg/kg (rat)

LD50, dermal:

No information available.

LC50, inhalation:

7.85 mg/l (4h; rat)

Primary effects

Irritant effect on skin:

Causes chemical burns to skin and mucous membrane.

Irritant effect on eyes:

Causes severe chemical burns.

Inhalation:

No information available.

Ingestion:

No information available

Sensitization:

No sensitizing effects known.

Mutagenicity:

Not mutagenic (Ames Test)

Reproductive toxicity:

No relevant data found.

Carcinogenicity:

No relevant data found.

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Teratogenicity:

No information available.

Specific target organ toxicity (STOT):

No relevant data found.

Additional toxicological information:

No risk of aspiration.

12. Ecological Information

12.1. Aquatic Toxicity

Fish toxicity:

Formic acid: LC50: 130 mg/l (96h, Danio rerio)

Daphnia toxicity:

Formic acid: EC50: 365 mg/l (48h, Danio rerio)

Bacteria toxicity:

No data available.

Algae toxicity:

Formic acid: EC50: > 1000 mg/l (72h, Desmodesmus subspicatus)

12.2. Persistency and Degradability

Readily biodegradable (> 90 %; OECD 301A)

12.3. Bioaccumulation

No bioaccumulation expected due to the distribution coefficient n-Octanol/water (logPOW).

12.4. Mobility

Not expected to adsorb on soil.

No accumulation expected according to the coefficient of variation n-octanol/water (logPow).

12.5. Results of PBT- und vPvP Assessment

Not applicable.

12.6. Other Adverse Effects

Water hazard class:

*1, slightly hazardous (German Regulation; Self-assessment).
Do not let product contaminate ground water, waterways or
sewage system.*

Behaviour in sewage systems:

*The product is an acid.
Product should be neutralized before discarding to sewage
system.
No impairment of the biodegradability of active sludge expected
when small amounts are discharged in biological sewage plants.*

Further ecological effects:

*This product causes no biological oxygen depletion.
After neutralization only a relatively low adverse effect of the
formed salts is present. The pH value has to be taken into
consideration if no neutralisation is carried out. The toxic effect for
fish and bacteria is below pH 6 and above pH 9.*

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AOX Value:

13. Disposal Considerations

13.1. Waste Treatment Methods

Product:

Dispose of according to official national and local regulations.

European Waste Code (EWC):

Uncleaned packaging:

Dispose of according to official local regulations.

Residues may cause an explosion hazard.

Do not puncture, cut or weld uncleaned drums. Risk of explosion.

Suggested cleaning agent: water. Detergent can be added if necessary.

Waste Code No.:

14. Transport Information

14.1. UN Number

ADR, IMDG, IATA 3412

14.2. UN Proper Shipping Name

ADR/RID: AMEISENSÄURE

IMDG/IATA: FORMIC ACID

14.3. Transport Hazard Classes

ADR Class: 8

Hazard no.: 8

Classification code: C3

Tunnel restriction code: E

IMDG Class (sea): 8

Hazard no.: 8

EmS No.: F-A, S-B

IATA Class: 8

Hazard no.: 8

14.4. Packaging Group

ADR/RID: II

IMDG: II

IATA: II

14.5. Environmental Hazards

None

14.6. Special Precautions for User

Warning: corrosive substances

14.7. Transportation in Bulk according to Annex II of MARPOL 73/78 and IBC-Code

not applicable

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14. 8. Further Information

15. Regulatory Information

15. 1. Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

Water hazard class:

1, slightly hazardous for water (German Regulation)

Local regulations on chemical accidents:

Does not underlie the Accident Ordinance.

Employment restrictions:

The employment restrictions for young workers in accordance with the Youth Employment Protection Law (94/33/EC) are to be observed.

Restriction and prohibition of application:

Technical instructions on air quality:

Classification I: 50-100 %

15. 2. Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out for this product.

15. 3. Further Information

16. Other Information

This product should be stored, handled and used in accordance with good hygiene practices and in conformity with any legal regulations. This information contained herein is based on the present state of knowledge and is intended to describe our product from the point of view of safety requirements. It should be therefore not be construed as guaranteeing specific properties.