

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 11.05.2014

Page 1 of 7

Formic Acid, Reagent Grade

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Formic Acid, Reagent Grade

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: S25331

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

Fisher Science Education
6771 Silver Crest Road, Nazareth, PA 18064
(724)517-1954

Emergency telephone number:

Fisher Science Education Emergency Telephone No.: 800-535-5053

SECTION 2: Hazards identification

Classification of the substance or mixture:

Flammable liquids, category 3
Skin corrosion, category 1A
Serious eye damage, category 1

Hazard statements:

Flammable liquid and vapour.
Causes severe skin burns and eye damage.
Causes serious eye damage.
Harmful to aquatic life.

Precautionary statements:

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/light/.../equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Store in a well ventilated place. Keep cool.
Dispose of contents and container to an approved waste disposal plant.

Other Non-GHS Classification:

WHMIS

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

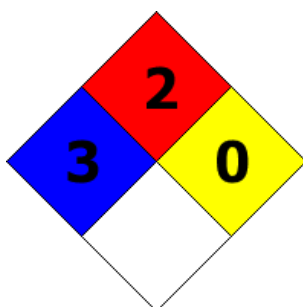
Effective date : 11.05.2014

Page 2 of 7

Formic Acid, Reagent Grade



NFPA/HMIS



NFPA SCALE (0-4)

Health	3
Flammability	2
Physical Hazard	0
Personal Protection	X

HMIS RATINGS (0-4)

SECTION 3: Composition/information on ingredients

Ingredients:

CAS 64-18-6

Formic Acid

>95 %

Percentages are by weight

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

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

After skin contact:

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

After eye contact:

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

After swallowing:

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

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

Indication of any immediate medical attention and special treatment needed: None

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 11.05.2014

Page 3 of 7

Formic Acid, Reagent Grade

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

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Carbon oxides.

Advice for firefighters:

Protective equipment:

Wear self-contained breathing apparatus for firefighting if necessary.

Additional information (precautions):

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. 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.

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.

Methods and material 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).

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

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.

Conditions for safe storage, including any incompatibilities:

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. Vent periodically. Handle and open container with care. Hygroscopic. Refrigerate before opening.

SECTION 8: Exposure controls/personal protection



Control Parameters:

64-18-6, Formic Acid, OSHA PEL: TWA 5 ppm (9 mg/m³).
64-18-6, Formic Acid, ACGIH: TLV: 5 ppm, 9.4 mg/m³ as TWA.
64-18-6, Formic Acid, ACGIH: TLV: 10 ppm, 19 mg/m³ as STEL.
64-18-6, Formic Acid, NIOSH REL: TWA 5 ppm (9 mg/m³); NIOSH IDLH: 30 ppm.

Appropriate Engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 11.05.2014

Page 4 of 7

Formic Acid, Reagent Grade

Respiratory protection:	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose 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).
Protection of skin:	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.
Eye 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).
General hygienic measures:	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.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Colorless to Very Faint Yellow Liquid	Explosion limit lower: Explosion limit upper:	Not applicable Not applicable
Odor:	Not determined	Vapor pressure:	Not determined
Odor threshold:	Not determined	Vapor density:	Not determined
pH-value:	2.2	Relative density:	Not determined
Melting/Freezing point:	8.4 °C	Solubilities:	Completely miscible in water.
Boiling point/Boiling range:	100.8 °C	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	48° C	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	Not determined	Decomposition temperature:	Not determined
Flammability (solid,gaseous):	Non flammable	Viscosity:	a. Kinematic: Not determined b. Dynamic: Not determined
Density: 1.22 g/ml			

SECTION 10: Stability and reactivity

Reactivity:

No data available.

Chemical stability:

Stable under recommended storage conditions. Contains the following stabiliser(s): Water (5 %).

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 11.05.2014

Page 5 of 7

Formic Acid, Reagent Grade

Possible hazardous reactions:

No data available.

Conditions to avoid:

Heat, flames and sparks.

Incompatible materials:

Strong oxidizing agents, Strong bases, Powdered metals.

Hazardous decomposition products:

Other decomposition products - No data available In the event of fire: see section 5.

SECTION 11: Toxicological information

Acute Toxicity:		
Oral:	11900 mg/kg	LD50 oral-rat: (Ascorbic Acid, 64-18-6)
Chronic Toxicity: No additional information.		
Corrosion Irritation: No additional information.		
Sensitization:	No additional information.	
Single Target Organ (STOT):	No additional information.	
Numerical Measures:	No additional information.	
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 OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.	
Mutagenicity:	No additional information.	
Reproductive Toxicity:	No additional information.	

SECTION 12: Ecological information

Ecotoxicity:

Toxicity to fish : LC50 - Leuciscus idus (Golden orfe) - 46 - 100 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna (Water flea) - 34.2 mg/l - 48 h

Toxicity to bacteria: Pseudomonas putida - 46.7 mg/l - 17 h

Persistence and degradability:

Biodegradability Result: > 90 % - Readily biodegradable. Biochemical Oxygen Demand (BOD) 86 mg/g.

Chemical Oxygen Demand (COD) 348 mg/g. Ratio BOD/ThBOD 8.60 %.

Bioaccumulative potential:

Formic Acid, Reagent Grade

Bioaccumulation is unlikely.

Mobility in soil:

No data available.

Other adverse effects: None

SECTION 13: Disposal considerations

Waste disposal recommendations:

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. Contact a licensed professional waste disposal service to dispose of this material.

SECTION 14: Transport information

UN-Number:

1779

UN proper shipping name:

Formic acid Reportable Quantity (RQ): 5000 lbs

Transport hazard class(es): None

Packing group: II

Environmental hazard: None

Transport in bulk: Not Applicable

Special precautions for user: None

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute, Chronic, Fire

SARA Section 313 (Specific toxic chemical listings):

64-18-6 Formic Acid.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

None of the ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 11.05.2014

Page 7 of 7

Formic Acid, Reagent Grade

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDGIInternational Maritime Code for Dangerous Goods.
PNECPredicted No-Effect Concentration (REACH).
CFRCode of Federal Regulations (USA).
SARASuperfund Amendments and Reauthorization Act (USA).
RCRResource Conservation and Recovery Act (USA).
TSCAToxic Substances Control Act (USA).
NPRINational Pollutant Release Inventory (Canada).
DOTUS Department of Transportation.
IATAInternational Air Transport Association.
GHSGlobally Harmonized System of Classification and Labelling of Chemicals.
ACGIHAmerican Conference of Governmental Industrial Hygienists.
CASChemical Abstracts Service (division of the American Chemical Society).
NFPANational Fire Protection Association (USA).
HMISHazardous Materials Identification System (USA).
WHMISWorkplace Hazardous Materials Information System (Canada).
DNELDerived No-Effect Level (REACH).

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