Material Safety Data Sheet

FORMIC ACID, REAGENT GRADE

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Carolina Biological Supply Company
2700 York Rd | Burlington, NC 27215 • to order: 800.334.5551 • for support: 800.227.1150

CAROLINA
www.carolina.com

Section 1 - Product Description

Product Name: Formic Acid 88%
Product Code(s): 86-3808, 86-3810
Size: 120 mL, 500 mL
Chemical Name: Formic Acid Solution
CAS Number: 64-18-6
Formula: HCOOH
Synonyms: Methanoic acid, hydrogen carboxylic acid
Distributor: Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F) **Chemtrec** 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 - Hazard Identification

Emergency Overview: Contact with combustible material may cause fire. Causes severe burns. May be fatal if swallowed or inhaled.
Potential Health Effects:
Eyes: May cause irritation.
Ingestion: May cause gastrointestinal discomfort.
Skin: Non-Hazardous under normal use.
Inhalation: May cause irritation to respiratory tract.

Section 3 - Composition / Information on Ingredients

Principal Hazardous Components: Formic Acid (CAS#64-18-6) 88%
TLV units: ACGIH-TLV: 5 ppm (TWA); 10 ppm (Ceiling)
PEL units: OSHA-PEL: 5 ppm (TWA)

Section 4 - First Aid Measures

Emergency and First Aid Procedures:
Eyes - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin - After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.
Ingestion - If swallowed, if conscious, give plenty of water and induce vomiting immediately as directed by medical personnel. Immediately call a physician or poison control center. Never give anything by mouth to an unconscious person.
Inhalation - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Section 5 - Firefighting Procedures

Flash Point (Method Used): (90% Solution) 50 °C
NFPA Rating:
Health: 3
Fire: 2
Reactivity: 0
Extinguisher Media: Use media suitable to extinguish surrounding fire.
Flammable Limits in Air % by Volume: (Pure Formic Acid) LEL: 18% UEL: 57%
Autoignition Temperature: (Pure Formic Acid) 601 °C
Special Firefighting Procedures: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: N/A

Section 6 - Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: Ventilate area of spill. Eliminate all sources of ignition. Remove all non-essential personnel from area. Clean-up personnel should wear proper protective equipment and clothing. Absorb material with suitable absorbent and containerize for disposal.

Section 7 - Special Precautions

Precautions to Take in Handling or Storing: Should be handled in 316 stainless steel, glass, ceramic, or similar corrosive resistant materials.
Keep container tightly closed in a cool, well-ventilated place.

Section 8 - Protection Information

Respiratory Protection (Specify Type): None needed under normal conditions of use with adequate ventilation. A NIOSH/MSHA chemical cartridge respirator should be worn if PEL or TLV is exceeded.
Ventilation:
Local Exhaust: Yes
Mechanical(General): Yes
Special: No
Other: No
Protective Gloves: Natural rubber, Neoprene, PVC or equivalent.
Eye Protection: Splash proof chemical safety goggles should be worn.
Other Protective Clothing or Equipment: Lab coat, apron, eye wash, safety shower.

Section 9 - Physical Data

Molecular Weight: 46.03
Boiling Point: 107 °C
Vapor Density(Air=1): 1.6
Percent Volatile by Volume: N/A
Solubility in Water: Soluble
Melting Point: -12 °C
Vapor Pressure: 40 mmHg at 24 °C
Specific Gravity (H2O=1): 1.2
Evaporation Rate (BuAc=1): 2.1
Appearance and Odor: Clear, colorless liquid, characterisitc and pungent odor.

Section 10 - Reactivity Data

Stability: Stable
Conditions to Avoid: Heat and sources of ignition.
Incompatibility (Materials to Avoid): N/A
Hazardous Decomposition Products: COx,
Hazardous Polymerization: Will not occur

Section 11 - Toxicity Data

Toxicity Data: orl-rat LD50 1100 mg/kg; orl-mus LD50 700 mg/kg

Effects of Overexposure:
Acute: See Section 2
Chronic: Not listed as a carcinogen by IARC, NTP or OSHA. Mutation data cited.
Conditions Aggravated by Overexposure: N/A
Target Organs: Respiratory system,
Primary Route(s) of Entry: N/A

Section 12 - Ecological Data

EPA Waste Numbers: U123

Section 13 - Disposal Information

Waste Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.

Section 14 - Transport Information

DOT Proper Shipping Name: UN1779, Formic acid, 8, II

Section 15 - Regulatory Information

EPA TSCA Status: On TSCA Inventory
Hazard Category for SARA Section 311/312 Reporting: Chronic Fire Acute

Name List:
Formic Acid 88% - No

Chemical Category:
Formic Acid 88% - No

CERCLA Section 103 RQ(lb.): Formic Acid 88% - 5000
RCRA Section 261.33: Formic Acid 88% - Yes

Section 16 - Additional Information

The information provided in this Material Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the Material Safety Data Sheet. Any employer must carefully assess the applicability of any information contained herein in regards to the particular use to which the employer puts the material.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists
CAS Number	Chemical Services Abstract Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation
IARC	International Agency of Research on Cancer
N/A	Not Available
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
ppm	Parts per million
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act