

Safety Data Sheet

Formic Acid, 20% Aqueous

Section 1 - Chemical Product and Company Identification

SDS Name: Formic Acid, 20% Aqueous

Catalog Numbers: SO-1243

Company Identification: Transene Company, Inc., DBA ROWLEY BIOCHEMICAL, Inc.
10 ELECTRONICS AVENUE
DANVERS, MA 01923

For information, call: 978-739-4883

Emergency Number: 800-424-9300

For CHEMTREC assistance, call: 800-424-9300

Section 2 - Hazards Identification

GHS Classifications

H290-Corrosive to metals: 1

H303-Acute toxicity, oral: 5

H314-Skin corrosion/irritation: 1B

H318-Serious eye damage/eye irritation: 1

20% of the mixture consists of ingredients of unknown acute dermal toxicity.

Pictograms or Hazard symbols and Hazard statement(s):



Signal Word: Danger

Hazard Statements:

H290-May be corrosive to metals

H303-May be harmful if swallowed

H314-Causes severe skin burns and eye damage

H318-Causes serious eye damage

Precautionary Statements:

P234-Keep only in original packaging.

P260-Do not breathe dusts or mists.

P264-Wash thoroughly after handling.

P280-Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312-If swallowed: Call a Poison Center/doctor if you feel unwell.

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 person to fresh air and keep comfortable for breathing.

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.

P363-Wash contaminated clothing before reuse.

P390-Absorb spillage to prevent material damage.

P405-Store locked up.

P406-Store in a corrosion resistant container with a resistant inner liner.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
64-18-6	Formic Acid	20 v/v
7732-18-5	Water	Balance

Section 4 - First Aid Measures

Eye Exposure: In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Get medical attention.

Dermal Exposure: In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention.

Oral Exposure: If swallowed, get immediate medical advice. Do NOT induce vomiting.

Inhalation Exposure: If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use dry chemical, carbon dioxide, dry sand, water spray, or alcohol-resistant foam.

Hazardous Combustion Products: Carbon oxides, hydrogen, irritating and toxic fumes and gases.

Flash Point: Not available

Auto ignition Temperature: Not available

Explosion Limits, Lower: Not available

Upper: Not available

NFPA Rating: (estimated) Health: 2; Flammability: 1; Instability: 1

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s):

Wear personal protective equipment. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Remove all sources of ignition. Take precautionary measures against static discharges. Ensure adequate ventilation.

Methods for Cleaning up: Absorb with sand, earth, or vermiculite. Carefully sweep up and containerize for proper disposal. Use spark-proof tools and explosion-proof equipment. Do not release to the environment. Do not release to drains.

Section 7 - Handling and Storage

Use care when handling. Wear personal protective equipment. Wash thoroughly after handling. Ensure adequate ventilation. Use only under a chemical fume hood. Avoid contact with skin, eyes, and clothing. Keep in a tightly closed and non-metal container. Store in a cool, dry, and well-ventilated area. Keep away from heat, sparks, and flames. Protect from direct sunlight. Keep away from incompatible materials.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Exposure Limits:

Chemical Name	ACGIH - TLV	NIOSH - IDLH	OSHA - Final PELs
Formic Acid CAS#64-18-6	5 ppm TWA 10 ppm STEL	30 ppm IDLH 5 ppm TWA 9 mg/m ³ TWA	5 ppm TWA 9 mg/m ³ TWA

OSHA Vacated PELs: Formic Acid: 5 ppm TWA; 9 mg/m³ TWA

Section 9 - Physical and Chemical Properties
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Physical State: Liquid
Appearance: Clear, colorless
Odor: Slight acrid
Vapor Pressure: Not available
Odor Threshold: Not available
Vapor Density: Not available
pH: Approx. 1.1-1.5
Relative Density: Not available
Melting point/freezing point: Not available
Solubility: Soluble in water
Boiling Point: Not available
Flash Point: Not available
Evaporation Rate: Not available
Flammability (solid, gas): Not available
Partition coefficient: n-octanol/water: Not available
Autoignition Temperature: Not available
Decomposition Temperature: Not available
Viscosity: Not available
Specific Gravity/Density: Not available

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials, ignition sources, and excess heat. Avoid direct sunlight.
Incompatibilities with Other Materials: Strong oxidizing agents, strong bases, finely powdered metals, and metals.
Hazardous Decomposition Products: Carbon oxides, hydrogen, irritating and toxic fumes and gases.

Section 11 - Toxicological Information
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CAS#64-18-6 Formic Acid: RTECS#: LQ490000
LD50 Oral: 730 mg/kg (rat)
LD50 Dermal: >2000 mg/kg

LC50 Inhalation: 15 g/m³ 15min (rat); 7.85 mg/L 4h vapor (rat)

Carcinogenicity: Formic Acid CAS#64-18-6 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop. 65.

Information on the likely routes of exposure: Routes of entry anticipated: oral, dermal, inhalation, and eye.

Epidemiology: Not available.

Teratogenicity: Not available.

Reproductive Effects: Not available.

Developmental Effects: Not available.

Neurotoxicity: Not available.

Mutagenicity: Not available

Specific Target Organ Toxicity, Single Exposure: Not available.

Specific Target Organ Toxicity, Repeated Exposure: Not available.

Symptoms associated with exposure: Symptoms of overexposure may include headache, dizziness, tiredness, shortness of breath, nausea, vomiting, cough, wheezing, and burning sensation. Corrosive material. Extremely destructive to the tissue of the mucous membranes, upper respiratory tract, eyes, and skin. Ingestion may cause severe swelling, severe damage to the delicate tissue, and danger of perforation. Causes severe skin burns and eye damage. May cause kidney irregularities.

The toxicological properties of this material have not been thoroughly investigated.

Section 12 - Ecological Information

Ecotoxicity: Do not release to the environment. Do not release to drains.

CAS#64-18-6 Formic Acid:

LC50, freshwater fish: 46-100 mg/L 96h (leuciscus idus)(golden orfe)

EC50, freshwater algae: 25 mg/L 96h

EC50, water flea: 34 mg/L 48h

Persistence and degradability: Not available.

Bio-accumulative potential: Not available.

Mobility: Will likely be mobile in the environment due to its water solubility.

Section 13 - Disposal Considerations

DISPOSAL: Dispose of in accordance with all federal, state, and local regulations.

Section 14 – Transport Information

DOT

Proper Shipping Name: Formic Acid

UN3412

PG II

Hazard class 8

Section 15 - Regulatory Information

Canada Regulatory Information

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all the information required by the CPR.

Section 16 - Additional Information

SDS Creation Date: 5-11-12

Revision #1: YM 1/5/15

Revision #2: 9-18-24

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