

Safety Data Sheet (SDS)

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Formic Acid

Signal Word
DANGER

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

Chemtrec Emergency Phone Number: (800) 424-9807

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Flammable liquids (Category 3). Flammable liquid and vapor (H226). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).



Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302).



Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin burns and eye damage (H314).



Hazard class: Acute toxicity, inhalation (Category 3). Toxic if inhaled (H331). Avoid breathing gas, mist, vapors or spray (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Formic acid	64-18-6	HCOOH	46.03	88% (23.4M)
Synonyms: Aminic acid solution; Methanoic acid solution				

SECTION 4 — FIRST AID MEASURES

Immediately call a POISON CENTER or physician (P310). **If inhaled:** Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340). **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If on skin or hair:** Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). Wash contaminated clothing before reuse (P363). **If swallowed:** Rinse mouth. Do NOT induce vomiting (P301+P330+P331).

SECTION 5 — FIRE FIGHTING MEASURES

NFPA Class II combustible liquid.

NFPA Code

Flash point: 50 °C Flammable limits: Lower: 18% Upper: 57% Autoignition Temperature: 601 °C

H-3

When heated to decomposition, may emit toxic fumes.

F-2

In case of fire: Use a tri-class dry chemical fire extinguisher (P370+P378).

R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and ventilate area. Contain the spill with sand or other inert absorbent material, neutralize with sodium bicarbonate or calcium hydroxide, and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #1. Store with acids, anhydrides and peracids.

Keep cool (P235). Keep container tightly closed (P233). Store in a dedicated acid cabinet and away from any source of water; if an acid cabinet is not available, store in a Flinn Saf-Cube™. Avoid prolonged storage (see Section 10). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

Exposure guidelines: PEL/TLV 5 ppm (OSHA/ACGIH); Ceiling 10 ppm (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear, colorless, fuming liquid. Penetrating odor.

Boiling point: 101 °C

Soluble: Water, alcohol, and ether

Melting point: 8.3 °C

Refractive index: 1.3714

Specific gravity: 1.22

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers, strong bases, and finely powdered metals.

Shelf life: Poor. Avoid extended storage. Upon aging, decomposes to carbon monoxide and water thus creating potential explosive danger in a tightly sealed bottle. Explosions have occurred.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritating to eyes, skin, and respiratory tract, blisters.

ORL-RAT LD₅₀: 1100 mg/kg

IHL-RAT LC₅₀: 15 g/m³/15m

Chronic effects: Skin irritation.

SKN-RBT LD₅₀: N.A.

Target organs: Eyes, skin, respiratory tract.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #24a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Formic acid. Hazard class: 8, Corrosive. UN number: UN1779.

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (200-579-1), RCRA code U123.

SECTION 16 — OTHER INFORMATION

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N.A. = Not available, not all health aspects of this substance have been fully investigated.

N/A = Not applicable

Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.

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