

**IMPORTANT**  
**MATERIAL SAFETY DATA SHEET**

READ CAREFULLY BEFORE USING CHEMICAL  
OSHA requires that this form be kept on file

Product No. S75125

Product Name FORMIC ACID, 88%

**24 HOUR EMERGENCY ASSISTANCE**  
**CHEMTREC 800-424-9300**  
HAZARD RATING

4-EXTREME	Health Hazard	2
3-SEVERE	Flammability	2
2-MODERATE	Reactivity	1
1-SLIGHT		
0-MINIMAL		

SECTION I NAME

Chemical Synonyms N/A

Formula HCOOH

C.A.S. No. 64-18-6

**SECTION II HAZARDOUS INGREDIENTS OF MIXTURES**

Principal Hazardous Component(s)	%	P.E.L.	TLV Units
Formic Acid*	88%	5ppm	9mg/m <sup>3</sup>

**SECTION III PHYSICAL DATA**

Melting Point (°F)	-12°C	Specific Gravity (H <sub>2</sub> O=1)	1.2
Boiling Point (°F)	107°C	Percent Volatile by Volume (%)	100
Vapor Pressure (mm Hg)	40 @ 24°C	Evaporation Rate (Based on Acetone = 1)	2.1
Vapor Density (Air=1)	1.6		
Solubility in Water	100%		
Appearance & Odor	Clear colorless liquid, biting, pungent odor.		

**SECTION IV FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	50°C closed cup	Flammable Limits in Air % by Volume	Lower	Upper
Extinguisher Media	Use any medium suitable for extinguishing supporting fire.			

**Special Firefighting Procedures**

Use water to cool. In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with a full facepiece operated in the pressure demand or other positive pressure mode.

**Unusual Fire and Explosion Hazards**

Combustible liquid, autoignition temperature 434°C. Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Vapors can flow along surfaces to distant ignition source and flash back.

D.O.T. Formic acid, 8, UN1779, PGI

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

**SECTION V HEALTH HAZARD DATA**

Threshhold Limit Value

5 ppm TWA

Effects of Overexposure  
**TOXIC!** Severe irritant by all exposure routes. Burns.

**Emergency and First Aid Procedures**

Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse.  
Eyes: Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally.  
Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.  
Ingestion: Give several glasses of water or milk to drink, if available. Vomiting may occur spontaneously, but DO NOT INDUCE. Never give anything by mouth to an unconscious person. Get medical attention immediately. And, in all of the above cases, call a physician.

**SECTION VI REACTIVITY DATA**

Stability	Conditions to Avoid
Stable <input checked="" type="checkbox"/> Unstable <input type="checkbox"/>	Heat, ignition sources.
Incompatibility (Materials to Avoid)	Sulfuric Acid, Strong oxidizers/caustic, Hydrogen Peroxide, Furfuryl Alcohol
Hazardous Decomposition Products	Carbon oxides
Hazardous Polymerization	Conditions to Avoid
May <input type="checkbox"/> Will Not <input checked="" type="checkbox"/> Occur	None

**SECTION VII SPILL OR LEAK PROCEDURES**

Steps to be Taken in Case Material is Released or Spilled  
Ventilate area of leak or spill. Remove all sources of ignition. Clean-up personnel require protective clothing and respiratory protection from vapors. Small spills may be absorbed on paper towels and evaporated in a fume hood. Allow enough time for fumes to clear, hood then ignite paper in a suitable location away from combustible materials. Contain and recover liquid when possible.  
**Waste Disposal Method**  
Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only. Can be liquid incinerated in RCRA-approved combustible chamber or absorbed with vermiculite, dry sand, earth, or similar material. Scoop up with non-sparking tools and place in a closed container, and dispose in a RCRA-approved facility. Do not flush to the sewer.

**SECTION VIII SPECIAL PROTECTION INFORMATION**

Respiration Protection (Specify Type)	Organic cartridge or self-contained.
Ventilation	Local Exhaust X Special Mechanical (General) X Other
Protective Gloves	Rubber
Other Protective Equipment	Apron
Eye Protection	Goggles

**SECTION IX SPECIAL PRECAUTIONS**

Precautions to be Taken in Handling & Storing  
Keep container tightly closed when not in use.  
Store in a cool, well-ventilated area.

Other Precautions  
None

Approved by Steven C. Quandt Effective Date 03/17/2001

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. For laboratory use only. Not for drug, food or household use. Keep out of reach of children.