

**ALDON CORPORATION****MATERIAL SAFETY DATA SHEET**1533 W. Henrietta Rd.
Avon, New York 14414
(716) 226-6177MSDS No. FF 270
Effective Date March 1, 1999**SECTION V HEALTH HAZARD DATA** FF 270**Threshold Limited Value** STEL: 10 ppm, 19 mg/m³; TWA: 5 ppm; 9.4 mg/m³ (Air)
(ACGIH 1992-93).**Effects of Overexposure** **TARGET ORGANS AFFECTED:** Respiratory system, liver, kidneys.
Formic acid is a highly toxic substance which also has corrosive action on any body tissue it contacts.
EYE CONTACT: With liquid or high vapor concentrations will produce irritation and conjunctivitis and may cause corneal burns. **SKIN:** Contact will cause irritation and burns. **INHALATION:** Excessive inhalation of vapors is irritating to upper respiratory tract. **INGESTION:** Causes acute local tissue damage with other effects ranging from nausea and dizziness to unconsciousness.**Emergency and First Aid Procedures**
EYES: Immediately flush with plenty of water for at least 15 minutes, including under eyelids. Get immediate medical attention. **SKIN:** Flush with water, then wash with soap and water. Get medical attention if irritation persists. **INHALATION:** Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention. **INGESTION:** If swallowed, do NOT induce vomiting. If conscious, give one or two glasses of milk or water to drink. Call a physician immediately. Never give anything by mouth to an unconscious person.**SECTION VI REACTIVITY DATA****Stability** **Unstable** **Conditions to Avoid** Excessive temperature and heat.
Stable X**Incompatibility (Materials to Avoid)** Alkalies, strong oxidizers, concentrated sulfuric acid.**Hazardous Decomposition Products** Thermal decomposition or burning may produce carbon dioxide and/or carbon monoxide. Decomposes > 38°C (100°F).**Hazardous Polymerization** **Conditions to Avoid**
May Occur **Will Not Occur** Not applicable.
X**SECTION VII SPILL OR LEAK PROCEDURES****Steps to be taken in case material is released or spilled** Provide maximum ventilation and eliminate ignition sources. Absorb spill in vermiculite, sand, earth, paper towel and place in a suitable container for disposal. Neutralize remaining traces of residue with soda ash and flush to drain with large amounts of water.**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.
Dispose of in an approved incinerator equipped with an afterburner and scrubber or contract with a licensed waste disposal service.**SECTION VIII SPECIAL PROTECTION INFORMATION****Respiration Protection (Specify Type)** Work in a ventilation hood or wear a NIOSH/MSHA-approved organic vapor respirator.**Ventilation** **Local Exhaust** Recommended. **Special** No.
Mechanical (General) Recommended. **Other** No.**Protective Gloves** Rubber. **Eye Protection** Goggles**Other Protective Equipment** Smock, apron, Chemical safety glasses, eye wash station, ventilation hood, proper gloves, fire extinguisher.**SECTION IX SPECIAL PRECAUTIONS****Precautions to be Taken in Handling & Storing** Store in a cool, dry place away from strong oxidizers and fire hazards. Wash thoroughly after handling.
Keep container tightly closed when not in use.**Other Precautions** Read label on container before using. Do not wear contact lenses when working with chemicals.
Avoid breathing vapors. Use with adequate ventilation. Avoid contact with skin, eyes and clothing. Remove all contaminated clothing and shoes at once. Wash before reusing.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Revision No. 6 **Date** 3/1/99 **Approved** Michael Raszeja **Chemical Safety Coordinator** MR

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 determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. * Hazardous Materials Industrial Standards. Printed on recycled paper.

SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	FORMIC ACID
Chemical Synonyms	Methanoic Acid; Formylic Acid
Formula	HCOOH
Unit Size	up to 4 Lt.
C.A.S. No.	64-18-6

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3

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CHEMTREC
800-424-9300
Day 716-226-6177

NFPA
HAZARD RATING
LEAST SLIGHT MODERATE HIGH EXTREME
0 1 2 3 4

Health 3
Fire 2
Reactivity 0

HMIS *
3 4

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Formic Acid	88-90%	See Section V.
DANGER! CORROSIVE! CAUSES SEVERE		
SKIN AND EYE BURNS. HARMFUL IF		
SWALLOWED OR INHALED. COMBUSTIBLE.		

SECTION III PHYSICAL DATA

Melting Point (°F)	-5°C (23°F)	Specific Gravity (H ₂ O = 1)	1.213 (20/20°C)
Boiling Point (°F)	101°C (213°F)	Percent Volatile by Volume (%)	100%
Vapor Pressure (mm Hg)	33 mm at 20°C	Evaporation Rate (Butyl Acetate = 1)	1.6
Vapor Density (Air=1)	1.59		
Solubility in Water	Complete.		
Appearance & Odor	Clear, colorless fuming liquid; pungent penetrating odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	71°C (160°F) ASTM D1310 (TOC)	Flammable Limits in Air % by Volume	Lower	Upper
			18%	57%

Extinguisher Media	Carbon dioxide (CO ₂); dry chemical (ABC); water spray.
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SPECIAL FIREFIGHTING PROCEDURES
This combustible material is a moderate fire hazard when exposed to heat or flame. Firefighters must use eye protection and a NIOSH/MSHA approved self-contained breathing equipment with full protective clothing to fight fires in which this material is involved.
Auto-ignition Temperature: 600°C (1114°F)**UNUSUAL FIRE AND EXPLOSION HAZARDS**
Corrosive fumes. Dangerously caustic to skin. Fire or excessive heat may produce hazardous decomposition products; can react vigorously with oxidizing materials.

(1996 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.7, GUIDE PAGE NO. 153)

D.O.T. **FORMIC ACID, 8, UN 1779, PG II**

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