



ALDON CORPORATION

MATERIAL SAFETY DATA SHEET

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MSDS No. FF 250
Effective Date March 1, 1999

SECTION V HEALTH HAZARD DATA

FF 250

Threshold Limited Value

Formaldehyde: Ceiling 0.3 ppm, 0.37 mg/m³. Methanol: TLV (ACGIH) 200 ppm, 262 mg/m³ TWA, STEL 250 ppm, 328 mg/m³ Skin; PEL (OSHA) 200 ppm, 260 mg/m³ TWA; STEL 150 ppm Skin.

Effects of Overexposure

INHALATION: Causes irritation to upper respiratory tract, lung irritation with coughing, difficulty breathing, discomfort. **SKIN:** Prolonged or repeated contact with skin may cause allergic irritation. Vapor irritating. **EYES:** Contact with liquid causes severe eye burns. **INGESTION:** May be fatal or cause blindness if swallowed. Cannot be made non-poisonous. Effects of overexposure may include discomfort such as nausea, headache or weakness, irritation of respiratory tract. Difficulty breathing or shortness of breath.

Emergency and First Aid Procedures

EYES: Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention. **SKIN:** Flush thoroughly with water, then wash with mild soap and water. If allergic irritation occurs get medical attention. **INHALATION:** Remove to fresh air. Administer oxygen by trained people or artificial respiration if necessary. **INGESTION:** If swallowed, if conscious, give one or two glasses of water to drink. Induce vomiting. Repeat until vomit fluid is clear. Get immediate medical attention. Never give anything by mouth to an unconscious person.

SECTION VI REACTIVITY DATA

| Stability | Unstable | Conditions to Avoid | Avoid strong alkalis or mineral acids. Store at temperatures 59-86°F (15-30°C). |
|-----------|----------|---------------------|--|
| | Stable | | |

| Incompatibility (Materials to Avoid) | Strong acids, phenols, strong oxidizers, hydrochloric acid, ammonia, iodine, alkalies, tannin, iron products, gelatin, bisulfite. |
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| Hazardous Decomposition Products | Thermal decomposition or burning may produce irritating formaldehyde vapor or carbon monoxide. |
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| Hazardous Polymerization | | Conditions to Avoid |
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| May Occur | Will Not Occur | Exposure to cold may cause precipitation of polymers; which redissolve slowly on heating. |
| | X | |

SECTION VII SPILL OR LEAK PROCEDURES

| Steps to be taken in case material is released or spilled | Absorb spill in sand, vermiculite or other available absorbing material and place in a suitable container. Flush spill area with water. Wash with dilute ammonia solution to remove any residual odor. |
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| 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. |
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Dispose of in an approved incinerator equipped with an afterburner and scrubber or in an approved chemical landfill. If at-site treatment or disposal facility are not available, contract with a licensed waste disposal service.

SECTION VIII SPECIAL PROTECTION INFORMATION

| | | | | | |
|---------------------------------------|---|---|--|----------------|--|
| Respiration Protection (Specify Type) | | For laboratory use work in ventilation hood or wear NIOSH/MSHA-approved cartridge respirator for organic vapors.* | | | |
| Ventilation | Local Exhaust | Yes. | | Special | No. |
| | Mechanical (General) | Yes. | | Other | Adequate to maintain below exposure limit. |
| Protective Gloves | | Rubber. | | Eye Protection | Splash proof goggles or face shield. |
| Other Protective Equipment | Smock, apron, eye wash station, ventilation hood, proper gloves, fire extinguisher. | | | | |

SECTION IX SPECIAL PRECAUTIONS

| Precautions to be Taken in Handling & Storing | Store in a moderately warm place. Minimum storage temperatures to prevent polymerization range from 59-86°F (15-30°C). Keep away from heat and flame. Avoid breathing vapors or mist. Avoid contact with skin and clothing. Remove and wash contaminated clothing before reuse. Wash thoroughly after handling. |
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| Other Precautions | Read label on container before using. Do not wear contact lenses when working with chemicals. * OSHA requires a full facepiece respirator equipped with cartridges or canisters be worn when formaldehyde concentrations exceed the 0.75 ppm PEL but are below 10 ppm. At formaldehyde concentrations up to 100 ppm, an industrial-sized canister (one worn on the chest or back) and full facepiece respirator is required. Cartridges are to be replaced after three hours of use, and canisters are to be replaced every two or four hours for the 100 and 10 ppm limitations, respectively. |
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
For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

| Revision | No. 8 | Date | 3/1/99 | Approved | Michael Raszeja | Chemical Safety Coordinator | MR |
|----------|-------|------|--------|----------|-----------------|-----------------------------|----|
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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 | FORMALDEHYDE SOLUTION |
| Chemical Synonyms | Formalin; Methanol |
| Formula | Mixture. |
| Unit Size | up to 55 gal. |
| C.A.S. No. | Mixture. |

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|---|--------|--|------------|---------|
|  | | CHEMTREC 800-424-9300 Day 716-226-6177 | Health | 3 |
| | | | Fire | 2 |
| | | | Reactivity | 0 |
| NFPA HAZARD RATING | | | HMIS * | |
| LEAST | SLIGHT | MODERATE | HIGH | EXTREME |
| 0 | 1 | 2 | 3 | 4 |

SECTION II INGREDIENTS OF MIXTURES

| Principal Component(s) | % | TLV Units |
|--|-------|----------------|
| Formaldehyde: (CAS No. 50-00-0) - suspected human carcinogen | 37.2% | See Section V. |
| Methanol (as inhibitor): (CAS No. 67-56-1) | 11% | See Section V. |
| Water: (CAS No. 7732-18-5) | 51.8% | See Section V. |

DANGER! CORROSIVE LIQUID! HARMFUL OR FATAL IF SWALLOWED. HARMFUL IF ABSORBED THROUGH SKIN. VAPOR HARMFUL.

SECTION III PHYSICAL DATA

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|------------------------|--|---|-----------------|
| Melting Point (°F) | Decomposes on freezing. | Specific Gravity (H ₂ O = 1) | 1.08-1.13 |
| Boiling Point (°F) | 96°C (205°F) | Percent Volatile by Volume (%) | 100% |
| Vapor Pressure (mm Hg) | 17-20 mm @ 25°C (77°F) | Evaporation Rate (Butyl Acetate =1) | Greater than 1. |
| Vapor Density (Air=1) | 1.03 | | |
| Solubility in Water | Complete. | | |
| Appearance & Odor | Clear, colorless liquid; pungent highly irritating odor. | | |

SECTION IV FIRE AND EXPLOSION HAZARD DATA

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|---------------------------|---|-------------------------------------|-------|-------|
| Flash Point (Method Used) | 60°C (140°F) (TCC) | Flammable Limits in Air % by Volume | Lower | Upper |
| | | | 7% | 73% |
| Extinguisher Media | Use water spray; dry chemical (ABC); foam; carbon dioxide (CO ₂). | | | |

SPECIAL FIREFIGHTING PROCEDURES

In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective clothing. Wear goggles if eye protection is not provided.

(1996 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.7, GUIDE PAGE NO. 132)

UNUSUAL FIRE AND EXPLOSION HAZARDS

The gas vaporizes readily from solution and is flammable in air. Ignition temperature, 424°C (795°F) for 37% solution. Fire or excessive heat may produce hazardous decomposition products; can react vigorously with oxidizing materials.