



AV-330 Safeguard MATERIAL SAFETY DATA SHEET

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1. PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: AV-330 Safeguard
CLASSIFICATION: Hydrophilic Foam

SUPPLIER

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2. COMPOSITION/INGREDIENT INFORMATION

Ingredient / CAS Number	Exposure Limits	Concentration
4,4-Diphenylmethane Diisocyanate CAS #101-68-8	OSHA PEL: Ceiling limit 0.20 mg/m ³ ACGIH: 0.05 mg/m ³ (8-hour, 40 hours/week)	Trade Secret

3. HAZARDS IDENTIFICATION

HEALTH HAZARDS:

EYE CONTACT: Vapors are irritating to the eyes. Splashes may cause severe irritation with redness, tearing, and blurred vision.

SKIN CONTACT: Exposure can cause redness, swelling, drying and cracking of the skin. Prolonged or repeated contact may cause moderate dermatitis.

INGESTION: May have corrosive effects on the lining of the mouth and stomach. May cause abdominal pain, nausea, diarrhea, and vomiting.

INHALATION: Exposure can cause upper respiratory tract irritation. May cause dizziness coughing, dullness, and headache. Higher concentrations can produce Central Nervous System depression, narcosis, and unconsciousness. Prolonged or repeated overexposure may cause blood disorders, gastrointestinal disturbances and lung damage; kidneys, liver, and nervous system may be affected.

4. FIRST AID MEASURES

EYES: Flush with copious amounts of water, preferably lukewarm water for at least 15 minutes, holding eyelids open all the time. Refer individual to physician or ophthalmologist for immediate follow-up.

SKIN: Remove contaminated clothing. Wash affected skin thoroughly with soap and water. Wash contaminated clothing before reusing. For severe exposure, get under safety shower after removing clothing, and then get medical attention. For lesser exposures, seek medical attention if irritation develops or persist after the area is washed.

INHALATION: Move to an area free from risk of further exposure. Administer oxygen or artificial respiration if needed. Obtain medical attention. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Consult a physician if this should occur.

INGESTION: Do not induce vomiting. Give 1-2 cups of milk or water to drink. Do not give anything by mouth to an unconscious person. Consult a physician.

5. FIRE AND EXPLOSION HAZARDS

FLASH POINT: >200°F (>93°)

FLAMMABLE LIMITS: Not determined

EXTINGUISHING MEDIA: Dry chemical, carbon dioxide, foam and water spray for large fires.

PROTECTIVE EQUIPMENT: Full emergency equipment self-contained breathing apparatus and full protective clothing should be worn by firefighters.

SPECIAL FIRE FIGHTING PRECAUTIONS: During a fire, MDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion (see Stability and reactivity). At temperatures greater than 400° F (204° C) polymeric MDI can polymerize and decompose, which can cause pressure build up in closed containers. Explosive rupture is possible. Therefore, use water to cool fire-exposed containers.

6. ACCIDENTAL RELEASE MEASURES

GENERAL PROCEDURES: Evacuate and ventilate spill area. Dike spill to prevent entry into water system. Wear full protective equipment, including equipment during clean up (see Personal protection).

7. HANDLING AND STORAGE

HANDLING: Use only in well ventilated areas, unless used with recommended respiratory protection. Empty containers contain residue; observe all precautions and warnings listed for the product.

STORAGE: Keep in a tightly closed container to prevent moisture contact. Store below 86°F in a dry place away from heat.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

ENGINEERING CONTROLS: Local exhaust.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Liquid chemical goggles. Vapor resistant goggles should be worn when contact lenses are in use. In a splash hazard environment chemical goggles should be in combination with a full-faced shield.

SKIN: Permeation resistant gloves (butyl rubber, nitrile rubber, and polyvinyl alcohol). However, please note that PVA degrades in water. Cover as much of the exposed skin area as possible with appropriate clothing. If skin creams are used, keep area covered by cream to a minimum.

RESPIRATORY: If exposure exceeds occupational exposure limits, use an appropriate NIOSH approved full-face piece respirator, half-face piece respirator with splash goggles, or powered, filtered air-supplied hood.

OTHER PROTECTIVE EQUIPMENT: Provide eyewash fountain and quick drench facilities in close proximity to points of potential exposure.

HYGIENE PRACTICES: Wash with soap and water after handling. Remove contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Transparent yellow liquid with slight musty odor

BOILING POINT: 450° F (245° C) @ 750 mm Hg for MDI

MELTING POINT: Not established

ODOR THRESHOLD: 0.39 ppm (MDI)

pH: Not established

SPECIFIC GRAVITY: 1.12 @ 72° F (22° C)±3%

SOLUBILITY IN WATER: Complete

VISCOSITY: 350 - 750 cP @ 72° F (22° C)

% VOLATILE BY VOLUME: 0%

VAPOR PRESSURE: Less than .010 mm Hg @ 68° F

VAPOR DENSITY: 3.66 (air = 1)

WEIGHT PER GALLON: 9.32 lb./gal ± 3% (1.117 kg/L ± 3%)

10. STABILITY AND REACTIVITY

STABILITY: Stable in sealed containers under normal conditions.

CONDITIONS TO AVOID: Storage of open or sealed containers in moist or wet environment.

MATERIALS TO AVOID: Water, amines, strong bases, and alcohols will cause some corrosion to copper alloys and aluminum.

DECOMPOSITION PRODUCTS: By high heat and fire: carbon monoxide, oxides of nitrogen, traces of HCN, MDI vapors or aerosols.

POLYMERIZATION: May occur, contact with moisture and other materials, which react with isocyanates, or temperatures about 400° F (204° C), may cause some polymerization.

11. TOXICOLOGICAL INFORMATION

CARCINOGENICITY: In the study described above (chronic toxicity), the occurrence of pulmonary adenomas and single pulmonary adenomas and a single pulmonary adenocarcinoma was considered to be related to MDI. These tumors were observed only in rats exposed to high concentration of 6.0 mg/m³.

TERATOGENICITY: None Determined

REPRODUCTIVE TOXICITY: Acetone is being investigated as a reproductive effector, a tumorigen, and a mutagen.

MUTAGENICITY: Positive (salmonella microsome test with metabolic activation; cell transformation assay) as well as negative (mouse lymphoma specific locus mutation test with or without metabolic activation) results have been observed "in vitro". However, MDI was negative in an "in vitro" (mouse micronucleus) assay.

12. ECOLOGICAL INFORMATION

ECOLOGY DATA: Diphenylmethane Diisocyanate (monomeric and polymeric)

AQUATIC TOXICITY: LC50-24 hours (static) greater than 500 mg/liter for daphnia magna, Limnea stagnalis, and zebra fish (Brachydanio rerio) for both polymeric and monomeric MDI.

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORT INFORMATION**DOT (DEPARTMENT OF TRANSPORTATION)****PROPER SHIPPING NAME:** Liquid resin non-regulated**HAZARD CLASS:** None**UN NUMBER:** None**PACKING GROUP:** None**LABEL:** None**PLACARD:** None**NMFC (NATIONAL MOTOR FREIGHT CARRIERS)****FREIGHT CLASS:** 65**15. REGULATORY INFORMATION****SARA TITLE III****SECTION 313:** Delayed Health Hazard**REPORTABLE QUANTITY:** None**TSCA REGULATORY:** All components of this product are either on the TSCA Inventory or exempt.**NFPA (NATIONAL FIRE PROTECTION AGENCY)****HEALTH:** 2**FLAMMABILITY:** 1**REACTIVITY:** 1**SPECIAL:** 0**16. OTHER INFORMATION**

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