

**EMERGENCY CONTACTS**

Call Chemtrec: (800) 424-9300  
 In District of Columbia: (202) 483-7616

**Section 1. Chemical Product Information**

Product name..... **Azo-Grout™ 424**  
 Synonyms ..... Isocyanate prepolymer  
 CAS Number..... Mixture

**AZON USA INC.**  
 2204 Ravine Road  
 Kalamazoo, MI 49004-3516  
 U.S.A.  
 Tel: 269.385.5942  
 Fax: 269.385.5937

**Section 2. Composition / Information on Ingredients****INGREDIENTS**

Ingredient Name	CAS Number	Concentration
Diphenylmethane diisocyanate (MDI)	26447-40-5	< 10%
Diphenylmethane diisocyanate (homopolymer)	39310-05-9	< 3%
Triethyl phosphate	78-40-0	< 0.2%
Dibutylmaleate	105-76-0	< 45 %

**Section 3. Hazards Identification****EMERGENCY OVERVIEW**

Potential Health Effects- Prolonged or repeated skin contact may be toxic. fumes may be toxic. ingestion may be poisonous.

Emergency Treatment- Remove source of irritation, wash contacted area, consult physician.

**Section 4. First Aid Measures**

First Aid For Eyes- Flush with copious amount 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.

First Aid For Skin- Remove contaminated clothing. Wash affected skin thoroughly with soap and water. Wash contaminated clothing thoroughly before reuse. For severe exposures, get under safety shower after removing clothing, then get medical attention. For lesser exposures, seek medical attention if irritation develops or persists after the area is washed.

First Aid For Ingestion- DO NOT induce vomiting. Give 1 to 2 cups of milk or water to drink. Do not give anything by mouth to an unconscious person. Consult physician.

First Aid For Inhalation- Move to an area free from risk of further exposure. Administer oxygen or artificial respiration as necessary. Obtain medical attention. Asthmatic type symptoms may develop and may be immediate or delayed up to several hours. Consult physician should this occur.

**Section 5. Fire Fighting Measures**

Flash Point- 390°F (199°C) Pensky-Martens Closed Cup (ASTM D-93)

Extinguishing Media- Dry chemical, carbon dioxide, foam, or water spray for large fires.

Special Fire Fighting Instructions- Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters. During a fire, MDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. At temperatures greater than 400 °F, isocyanates can polymerize and decompose which can cause pressure build-up in closed containers.

Explosive rupture is possible. Therefore, use cold water to cool fire-exposed containers.

**Section 6. Accidental Release Measures**

Evacuate and ventilate spill area. Dike spill to prevent entry into water system. Wear full protective equipment, including respiratory equipment during clean up. If temporary control of isocyanate vapor is required, a blanket of protein foam (available at most fire departments) may be placed over the spill. Large quantities may be pumped into closed, but not sealed, containers for disposal.

Minor Spill- Absorb isocyanates with sawdust or other absorbent, shovel into suitable unsealed containers, transport to well ventilated area (outside) and treat with large amounts of water. Allow to stand uncovered for 48 hours to let CO<sub>2</sub> gas escape.

Clean Up- Decontaminate floor with water, letting stand for at least 15 minutes.

**Section 7. Handling and Storage**

Containers should be stored between 64°F and 86°F. The shelf life for this product is 12 months. If container is exposed to high heat, 400°F (204°C) it can become pressurized and possibly rupture.

Empty Container Precautions- Empty containers must be handled with care due to product residue.

Decontaminate containers prior to disposal. Empty decontaminated containers should be crushed to prevent reuse. Do not heat or cut empty container with electric or gas torch. Gases may be highly toxic.

Handling/Storage Precautions- Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. Avoid contact with skin and eyes. Do not breathe aerosols or vapors. Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent chronic overexposure from inhalation. This material can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposures to lower concentrations. Exposure to vapors of heated isocyanates can be extremely dangerous. Employee education and training in the safe use and handling of this compound are required under the OSHA Hazard Communication Standard.

**Section 8. Personal Protection**

Eye Protection- Liquid chemical goggles. Vapor resistant goggles should be worn when contact lenses are in use. In a splash hazard environment chemical goggles should be used in combination with a full face shield.

Ventilation- Local exhaust should be used to maintain levels below the TLV or PEL whenever Azo-Grout 424 is processed, heated or spray applied.

Respiratory Protection- Concentrations greater than the TLV or PEL can occur when isocyanates are sprayed, heated or used in a poorly ventilated area. In such cases, or whenever concentrations of isocyanate exceed the TLV or PEL, respiratory protection must be worn. A positive pressure, supplied air respirator or a self-contained breathing apparatus is recommended. In situations where isocyanates are not sprayed, heated or used in a poorly ventilated area, and a supplied air or self-contained breathing apparatus is unavailable or its use impractical, at least an air purifying respirator equipped with an organic vapor cartridge and particulate pre-filters must be worn. However, this should be permitted only for short periods of time (less than one hour) at relatively low concentrations (at or near the TLV or PEL). However, due to the poor warning properties of isocyanates, proper fit and timely replacement of filter elements must be ensured. Observe OSHA regulations for respirator use (29 CFR 1910.134).

Skin Protection- Permeation resistant gloves (butyl rubber, nitrile rubber, 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 the area covered by the cream to a minimum.

Monitoring- Isocyanate exposure levels must be monitored. Monitoring of airborne isocyanates in the breathing zone of individuals should become part of the overall employee exposure characterization program.

Monitoring techniques have been developed by NIOSH and OSHA.

Medical Surveillance- Medical supervision of all employees who handle or come in contact with isocyanates is recommended. These should include pre-employment and periodic medical examinations with pulmonary function tests (FEV<sub>1</sub>, FVC as a minimum). Persons with asthmatic type conditions, chronic bronchitis, other chronic respiratory diseases or recurrent skin eczema or sensitization should be excluded from working with isocyanates. Once a person is diagnosed as sensitized to an isocyanate, no further exposure can be permitted.

Additional Protective Measures- Safety showers and eyewash stations should be available. Educate and train employees in safe use of product. Follow all label instructions.

**Section 9. Physical and Chemical Properties**

PHYSICAL FORM.....	Liquid
COLOR .....	Light yellow
ODOR .....	Sweet
BOILING POINT .....	406°F (209°C)
FREEZING POINT.....	Below 32°F (0°C) for MDI
SOLUBILITY IN WATER.....	Soluble, reacts with water to liberate CO <sub>2</sub> gas
SPECIFIC GRAVITY.....	1.069 at 77°F (25°C)
BULK DENSITY .....	8.3 lb./gal
pH .....	Not determined
VAPOR PRESSURE.....	Less than 1 x 10 <sup>-5</sup> mm/Hg at 77 °F (25°C) for MDI
VAPOR DENSITY.....	8.5 (MDI) (Air =1)

**Section 10. Stability and Reactivity**

Stability- Stable

Hazardous Polymerization- May occur. Contact with moisture, other materials which react with isocyanates, or temperatures above 400°F (204°C), may cause polymerization.

Incompatibilities- Water, amines, strong bases, alcohols. Will cause some corrosion to copper alloys and aluminum.

Decomposition Product- By heat and fire - carbon monoxide, oxides of nitrogen, traces of HCN, MDI vapors or aerosols.

**Section 11. Toxicological Information**

Acute Toxicity

Oral LD50- The acute oral LD50 (rat) for this material is greater than 10,000 mg/kg.

Dermal LD50- The acute dermal LD50 (rabbit) is greater than 5,000 mg/kg. This product may be a skin irritant.

Inhalation LC50- An acute LC50 for this product is not available.

Eye effects- This product should be considered a moderate eye irritant. Eye contact may cause corneal opacity.

Skin Effects- Chronic dermal exposure may cause sensitization to diisocyanates.

Sensitization- Chronic inhalation of this product may cause sensitization.

Chronic Toxicity- Not Known

Carcinogenicity/Mutagenicity- This product is not expected to be carcinogenic or mutagenic.

**Section 12. Ecological Information**

Aquatic Toxicity- 48 hours LC50 for Daphnia magna 112-150 mg/L.

**Section 13. Disposal Considerations**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

**Section 14. Transportation Information**

This material is not regulated as a DOT hazardous material.

**Section 15. Regulatory Information**

OSHA status - Hazardous/ irritant

TSCA status - Components are listed on TSCA inventory

CERCLA reportable quantity - Not applicable

SARA Title III:

Section 302 Extremely hazardous substances TPQ - None established

Section 311/312 Hazard categories - Health: Immediate (Acute)

Section 313 Toxic chemicals - None present (40 CFR 372)

**Section 16. Other Information**

NFPA 704M ratings:	HEALTH	FLAMMABILITY	REACTIVITY	OTHER
4 – Extreme	2	1	1	
3 – High				
2 – Moderate				
1 – Slight				
0 – Insignificant				

Reason for issue .....Update handling and storage information

Prepared by .....Steve Beck

Approval date .....11/14/2011

**For additional health and safety information contact the Azon USA Product Safety Division at 1-800-788-5942.**

**WARRANTY** The information contained in this document is to assist customers in determining whether our products are suitable for their applications. Our products are intended for sale to industrial and commercial customers. The customer must inspect and test our products before use, and satisfy themselves as to the contents and suitability. Nothing herein shall constitute a warranty, expressed or implied, including any warranty of merchantability or fitness, nor is protection from any law or patent to be inferred. All patent rights are reserved. The exclusive remedy for all proven claims is replacement of our materials, and in no event shall we be liable for special, incidental, or consequential damages.