

**Azo-Grout™ 680LV**

**1 PRODUCT AND COMPANY IDENTIFICATION**

Product Identifier: Azo-Grout™ 680LV  
 SDS Number: Azo-Grout 680LV-F0732-US  
 Revision Date: 1/12/22  
 Version: 2  
 Chemical Family: Isocyanate-terminated Prepolymer  
 Product Use: For industrial or professional use only.

Supplier Details: AZON USA INC.  
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**2 HAZARDS IDENTIFICATION**

**Classification of the Substance or Mixture**

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

- Health, Respiratory sensitization, 1
- Health, Skin sensitization, 1
- Health, Skin corrosion/irritation, 2
- Health, Specific target organ toxicity - Repeated exposure, 2
- Health, Specific target organ toxicity - Single exposure, 3
- Health, Acute toxicity, 4 Inhalation
- Health, Serious Eye Damage/Eye Irritation, 2 A

**GHS Label Elements, Including Precautionary Statements**

GHS Signal Word: **DANGER**

GHS Hazard Pictograms:



GHS Hazard Statements:

- H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H317 - May cause an allergic skin reaction
- H315 - Causes skin irritation
- H373 - May cause damage to the respiratory system through prolonged or repeated exposure by inhalation
- H335 - May cause respiratory irritation
- H332 - Harmful if inhaled
- H319 - Causes serious eye irritation

GHS Precautionary Statements:

- P260 - Do not breathe fumes, mist and vapors.
- P264 - Wash skin and face thoroughly after handling.
- P271 - Use only outdoors or in a well-ventilated area.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P284 - In case of inadequate ventilation, wear respiratory protection.
- P303+352 - IF ON SKIN (or hair): Wash with plenty of soap and water.
- P304+340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P308+313 - IF exposed or concerned: Get medical advice/attention.

P312 - Call a POISON CENTER or doctor/physician if you feel unwell.

P333+311 - If skin irritation or a rash occurs: Call a POISON CENTER or doctor/physician.

P337+311 - If eye irritation persists: Call a POISON CENTER or doctor/physician.

P342 - If experiencing respiratory symptoms: Call a doctor or emergency medical facility (i.e. 911)

P362 - Take off contaminated clothing and wash before reuse.

P403+233 - Store in a well ventilated place. Keep container tightly closed.

P405 - Store locked up.

P501 - Dispose of contents/container in accordance with federal/state/local regulations.

### 3 COMPOSITION/INFORMATION OF INGREDIENTS

Chemical Ingredients:		
CAS#	%	Chemical Name:
101-68-8	2-7%	4,4'-Methylenediphenyl diisocyanate
26447-40-5	0.1-0.5%	MDI Mixed Isomers
*****	40-50%	Trade Secret
112-15-2	45-55%	Diethylene glycol monoethyl ether acetate
25686-28-6	0.25-1%	Benzene, 1,1'-methylenebis[4-isocyanato-, homopolymer
26471-62-5	<0.1%	Toluene diisocyanate

-The specific chemical identity is a Trade Secret.

-The exact percentage of the components has been withheld as a Trade Secret.

### 4 FIRST AID MEASURES

- Inhalation:** Move to an area free from further exposure. Extreme asthmatic reactions that may occur in sensitized persons can be life threatening. Get medical attention immediately. Administer oxygen or artificial respiration as needed. Asthmatic symptoms may develop and may be immediate or delayed up to several hours.
- Skin Contact:** Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash thoroughly with soap and water. Get medical attention if irritation or rash develops on affected area. Wash clothing before reuse.
- Eye Contact:** Rinse with water immediately for 15 minutes. Remove contact lenses if present. Seek immediate medical attention.
- Ingestion:** Rinse mouth and then drink plenty of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get immediate medical attention.

**Most Important Symptom(s)/Effect(s)Acute:**

Diisocyanate vapors or mist at concentrations above the TLV or PEL can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Persons with a preexisting, nonspecific bronchial hyperreactivity can respond to concentrations below the TLV or PEL with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the TLV or PEL may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms (e.g., fever, chills), has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible. Causes skin irritation with symptoms of reddening, itching, and swelling. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling, and rash. Cured material is difficult to remove. Contact with MDI can cause discoloration. Causes eye irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. Vapor or aerosol may cause irritation with symptoms of burning and tearing. May cause irritation of the digestive tract. Symptoms may include abdominal pain, nausea, vomiting, and diarrhea.

**Delayed:** Symptoms affecting the respiratory tract can also occur several hours after overexposure.

**Extinguishing media:**

Suitable media includes carbon dioxide, dry chemical, or water spray.

Unsuitable extinguishing media: High volume water jet.

**Special hazards arising from the substance or mixture:**

Toxic and/or irritating fumes can be produced during burning of this material. Decomposition products may be hazardous (see section 10 for details on decomposition products).

**Advice for firefighters:**

Firefighters should wear self-contained breathing apparatus and full protective clothing. Downwind personnel should be evacuated. Use water spray to cool containers and minimize the risk of rupture. Do not reseal contaminated containers as pressure buildup may rupture them.

**Personal precautions, protective equipment, and emergency procedures:**

Evacuate personnel. Ensure adequate ventilation. Wear suitable PPE as described in section 8.

**Environmental precautions:**

Prevent migration into groundwater, sewers, or streams. Land spills may require excavation of contaminated soil. Material should not be released into the environment.

**Methods and materials for containment and cleaning up:**

Ensure adequate ventilation. Contain any spills with dikes or adsorbents. Material may be soaked with a dilute ammonium hydroxide or water/alcohol mixture to react isocyanate. Allow time for reaction to be complete before disposal.

**Handling Precautions:****Precautions for safe handling**

Use in a well ventilated area, using good industrial hygiene practices. Avoid contact with eyes, skin, and clothing, and wear proper PPE (see section 8).

**Storage Requirements:****Conditions for safe storage, including anything that is incompatible**

Store material at ambient temperature (18°C-29°C) and pressure. Keep away from sources of direct heat and moisture. Keep container tightly closed when not in use, and seal with a nitrogen blanket. Moisture contamination may evolve carbon dioxide gas, which may cause containers to pressurize. Material is stable under normal conditions.

**Engineering Controls:** Provide local exhaust ventilation to keep airborne concentrations below the recommended occupational exposure limits.

**Personal Protective Equipment:**

**Type of Protection (Minimum Suggested Equipment)**  
**Hand:** Chemical resistant gloves (e.g. nitrile, neoprene, butyl rubber). Gloves should be tested to determine suitability for prolonged contact.  
**Eye:** Safety glasses with side shields or safety goggles  
**Skin:** Impervious clothing, including but not limited to apron, full body suit, chemical resistant shoes or shoe covers. Use long sleeves at a minimum.  
**Respiratory:** If concentrations are above the occupational exposure limits, an approved respirator should be used (air-purifying or air supplied)

**Additional Protective Measures**

Emergency showers and eye wash stations should be available. Educate and train employees in the safe use and handling of this product. Follow all label instructions.

**Occupational Exposure Limit(s):**

Chemical Name	Limit Type	Value	Comments
4,4'-Methylenediphenyl diisocyanate	TLV-TWA	0.005 ppm	ACGIH Guideline
4,4'-Methylenediphenyl diisocyanate	PEL-Ceiling	0.02 ppm	OSHA Guideline

**Toluene Diisocyanate- (26471-62-5) (<0.1 %)**

Chemical Name	Limit Type	Value	Comments
Toluene Diisocyanate	PEL-Ceiling	0.02ppm	OSHA Guideline
Toluene Diisocyanate	PEL-TWA	0.005 ppm	Cal/OSHA Guideline
Toluene Diisocyanate	TLV-STEL	0.005 ppm	ACGIH Guideline
Toluene Diisocyanate	TLV-TWA	0.001 ppm	ACGIH Guideline
Toluene Diisocyanate	IDLH Conc.	2.5 ppm	NIOSH Guideline

Components listed in Section 3 which are not listed in this section do not have any known ACGIH TLV or OSHA PEL occupational exposure limits.

<b>Appearance:</b>	Clear to hazy	<b>Odor:</b>	Slight
<b>Physical State:</b>	Liquid	<b>Solubility:</b>	Not soluble in water (reacts with water)
<b>Odor Threshold:</b>	Not determined	<b>Freezing/Melting Pt.:</b>	No data available
<b>Spec Grav./Density:</b>	100 +/- 10 cps @ 25C	<b>Flash Point:</b>	100°C
<b>Viscosity:</b>	1.083 +/- 0.003 @ 25C	<b>Octanol:</b>	Not determined
<b>Boiling Point:</b>	Not determined	<b>Vapor Density:</b>	Not determined
<b>Flammability:</b>	Not applicable	<b>Auto-Ignition Temp:</b>	Not determined
<b>Partition Coefficient:</b>	Not determined	<b>UFL/LFL:</b>	Not applicable
<b>Vapor Pressure:</b>	0.00001 mmHg (25°C/77°F)		
<b>pH:</b>	Not determined		
<b>Evap. Rate:</b>	Not determined		
<b>Decomp Temp:</b>	Not determined		

Reactivity:	This material will react slowly with water or moisture.
Chemical Stability:	Under normal use, no hazardous reaction will occur.
Conditions to Avoid:	Exposure to extreme temperatures, sources of moisture, and contact with incompatible materials should be avoided.
Materials to Avoid:	Water, alcohols, amines, acids, alkalines, strong oxidizing agents, and strong bases may react with the evolution of heat and carbon dioxide.
Hazardous Decomposition:	Hydrogen cyanide, carbon oxides, nitrogen oxides, and isocyanate vapors
Hazardous Polymerization:	No dangerous reactions will occur under normal use/storage conditions. Contact with moisture, other materials that react with isocyanates, or temperatures above 350 F (177 C), may cause polymerization

#### Routes of Exposure and Health Effects/Symptoms:

**Inhalation:** Harmful if inhaled. Can cause respiratory sensitization, breathing difficulties and irritation.

**Skin contact:** Causes skin irritation. Can cause allergic skin reaction.

**Eye contact:** May cause eye irritation with symptoms of reddening, tearing, stinging, and swelling.

**Ingestion:** Not a likely route of entry. Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

#### Immediate and Delayed Health Effects:

**Irritation, Lachrymation, Breathing difficulties, Sensitization**

Concentrations below the occupational exposure limits may cause allergic respiratory reaction in sensitized individuals.

Overexposure may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs); chemical or hypersensitivity pneumonitis, with flu-like symptoms (e.g., fever, chills).

Symptoms affecting the respiratory system can be delayed.

#### LD50s and LC50s:

##### 4,4'-Methylenediphenyl diisocyanate

LD50 (oral): > 7,616 mg/kg (rat)

LD50 (dermal): > 9,400 mg/kg (rabbit)

LC50 (inhalation): 0.368 mg/L (rat, 4 hours)

##### Toluene Diisocyanate - (26471-62-5) (<0.1%)

LD50 (oral): >4,000mg/kg (rat)

LD50 (Dermal): >9,400mg/kg (rabbit)

LC50 (vapor): 0.48mg/L (rat, 1 hour)

##### Toluene Diisocyanate - (26471-62-5) (<0.1%)

NTP: Reasonably anticipated to be human carcinogen

IARC: Group 2B

##### Diphenylmethane-4,4'-diisocyanate (MDI):

Assessment of carcinogenicity: A carcinogenic potential cannot be excluded after prolonged exposure to severely irritating concentrations. These effects are not relevant to humans at occupational levels of exposure. IARC Group 3 (not classifiable as to human carcinogenicity)

No data available on product.

##### 4,4'-Methylenediphenyl diisocyanate:

Endpoint/Species/Duration/Result

LC50/Fish/24 hours/>500mg/L

EC50/Water flea (Daphnia)/24 hours/>500mg/L

Toluene diisocyanate (<0.1%):  
Endpoint/Species/Duration/Result  
LC50/Rainbow trout/96 hours/133mg/L  
EC50/Water flea (Daphnid)/48 hours/12.5mg/L  
ErC50/Algae/96 hours/3230-4300mg/L

## 13 DISPOSAL CONSIDERATIONS

Follow all applicable local, state, and federal disposal regulations.

Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.

## 14 TRANSPORT INFORMATION

DOT (US)  
Not Regulated

IMDG  
Not Regulated

IATA  
Not Regulated

## 15 REGULATORY INFORMATION

Component (CAS#) [%] - CODES

RQ(5000LBS), 4,4'-Methylenediphenyl diisocyanate (101-68-8) [2-7%] CERCLA, HAP, MASS, NJHS, OSHAWAC, PA, SARA313, TSCA, TXAIR

Diethylene glycol monoethyl ether acetate (112-15-2) [45-55%] HAP, TSCA

Benzene, 1,1'-methylenebis[4-isocyanato-, homopolymer (25686-28-6) [0.25-1%] TSCA

RQ(100LBS), Toluene diisocyanate (26471-62-5) [<0.1%] CERCLA, HAP, MASS, NJEHS, NJHS, PA, PROP65, SARA313, TOXICRCRA, TSCA, TXHWL



### WARNING

This product can expose you to chemicals including Toluene diisocyanate, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### Regulatory CODE Descriptions

RQ = Reportable Quantity  
CERCLA = Superfund clean up substance  
HAP = Hazardous Air Pollutants  
MASS = MA Massachusetts Hazardous Substances List  
NJHS = NJ Right-to-Know Hazardous Substances  
OSHA = OSHA Workplace Air Contaminants  
PA = PA Right-To-Know List of Hazardous Substances  
SARA313 = SARA 313 Title III Toxic Chemicals  
TSCA = Toxic Substances Control Act  
TXAIR = TX Air Contaminants with Health Effects Screening Level  
NJEHS = NJ Extraordinarily Hazardous Substances  
PROP65 = CA Prop 65  
TOXICRCRA = RCRA Toxic Hazardous Wastes (U-List)  
TXHWL = TX Hazardous Waste List

### 4,4'-Methylenediphenyl diisocyanate

Reportable Quantity: 5000 pounds  
SARA TITLE III: Section 313

Toluene Diisocyanate - (26471-62-5) (<0.1%)  
Reportable Quantity: 100 pounds

Country / Inventory / Status:  
United States / TSCA / On the inventory  
Canada / DSL / On the inventory

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## OTHER INFORMATION

Abbreviation Key:

**PEL** - permissible exposure limit

**TWA** - time weighted average

**TLV** - threshold limit value

**STEL** - short term exposure limit

**IDLH** - immediately dangerous to life and health

**OSHA** - Occupational Safety and Health Administration

**ACGIH** - American Conference of Governmental Industrial Hygienists

**NIOSH** - National Institute for Occupational Safety and Health

**N/A** - Not applicable

**LC<sub>50</sub>** - lethal concentration to 50% of test subjects

**LD<sub>50</sub>** - lethal dose to 50% of test subjects

**STOT-SE** - Specific target organ toxicity (single exposure)

**STOT-RE** - Specific target organ toxicity (repeated exposure)

**EC<sub>50</sub>** - effective concentration that causes 50% of response from test subjects

**ErC<sub>50</sub>** - EC<sub>50</sub> in terms of growth rate reduction

**CERCLA** - Comprehensive Environmental Response, Compensation, and Liability Act

**SARA** - Superfund Amendments and Reauthorization Act

**TSCA** - Toxic Substances Control Act

**DSL** - Domestic Substances List

**NDSL** - Non-Domestic Substances List

This SDS complies with 29 CFR 1910.1200 (THE HAZARD COMMUNICATION STANDARD, USA) and GHS. Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, AZON USA INC. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will AZON USA INC. be responsible for damages of any nature whatsoever resulting from the use of, misuse or reliance upon information. No representations or warranties, either express or implied, or merchantability, fitness for a particular purpose or any other nature are made hereunder with respect to information or the product to which information refers. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure its activities comply with federal, state or provincial and local laws and regulations.

Revision Date: 1/12/2022