

SECTION 1 IDENTIFICATION

Product Name Alsan Flashing
Recommended Use Liquid Waterproofing
Manufacturer Performance Roof Systems
Address 4821 Chelsea Avenue
Kansas City, MO 64130
Phone Number (800) 727-9872
Emergency Number (800) 424-9300 (CHEMTREC)

SECTION 2 HAZARDS

GHS Classification Flammable Liquids: Hazard Category 2
Skin Irritation: Hazard Category 2
Eye Irritation: Hazard Category 1
Skin Sensitization: Hazard Category 1
Respiratory Sensitization: Hazard Category 1
Carcinogenicity: Hazard Category 2
STOT, Single Exposure: Hazard Category 3
STOT, Repeated Exposure: Category 2
Aquatic Hazard (Acute): Hazard Category 3

Hazard Pictographs



Signal Word

DANGER

Hazard Statements

H225 - Highly flammable liquid and vapor.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 - May cause respiratory irritation.
H351 - Suspected of causing cancer.
H361 - Suspected of damaging the unborn child.
H373 - May cause damage to organs through prolonged or repeated exposure.
(bladder, hearing organs, kidneys, liver, respiratory system)
H402 - Harmful to aquatic life.

Precautionary Statements

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe vapor.
P264 - Wash hands thoroughly after handling.

SECTION 2 HAZARDS

Precautionary Statements

- P271 - Use only outdoors or in a well-ventilated area.
- P273 - Avoid release to the environment.
- P272 - Contaminated work clothing must not be allowed out of the workplace.
- P280 - Wear protective gloves. Wear eye or face protection.
Wear protective clothing.
- P284 - Wear respiratory protection.

Response

- P302+P352+P363 - IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse.
- P304+P341+P312 - IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
- P305+P351+P338 - If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P308+P313 - If exposed or concerned: Get medical attention.
- P333+P313 - If skin irritation or rash occurs: Get medical attention.
- P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or physician.

Storage

- P405 - Store locked up.
- P403 - Store in a well-ventilated place.
- P235 - Keep cool.

Disposal

- P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

OTHER HAZARDS

None known

SECTION 3 COMPOSITION

Chemical Composition: Mixture

COMPONENT	CAS NUMBER	PERCENT BY WEIGHT
Poly(oxy-1,4-butanediyl)	25190-06-1	10 - 25
Toluene	108-88-3	5 - 10
Butanone	78-93-3	5 - 10
Calcium oxide	1305-78-8	5 - 10
4,4'-Methylenediphenyl Diisocyanate	101-68-8	5 - 10
Titanium dioxide	13463-67-7	3 - 5
Lubricating oils, used, residues	129893-17-0	1 - 5
Diphenylmethane diisocyanate homopolymer	39310-05-9	1 - 5
Diphenylmethane-2,4'-diisocyanate	5873-54-1	1 - 5
4-Isocyanatosulphonyltoluene	4083-64-1	<1
Ethylbenzene	100-41-4	<1

Note: The above components and their percentages are provided for health and safety purposes, ONLY. This document should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

SECTION 4 FIRST AID MEASURES

Eyes	If foreign matter enters eyes, immediately flush with large amounts of potable water for at least 20 minutes or until irritation subsides. Get medical attention if irritation persists.
Skin	Remove contaminated clothing and wash with soap and water. Wash affected areas with soap and water for at least five minutes. If irritation persists or a rash occurs, seek medical attention. Launder or dry-clean clothing before reuse.
Inhalation	If signs and symptoms of respiratory toxicity are observed, remove subject from area and seek immediate medical attention. Keep the subject warm and at rest. If necessary, administer oxygen or perform artificial respiration if necessary and qualified personnel are available to do so.
Ingestion	Do not induce vomiting – aspiration hazard. If the subject is conscious, wash mouth and give 2 or more cups of milk or water. Seek immediate medical assistance. Do not attempt to give anything by mouth to an unconscious or convulsive person.
Symptoms, Acute & Delayed Immediate Medical Attention	Refer to Section 11 - Toxicological Information All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials

SECTION 5 FIRE FIGHTING MEASURES

Flash Point	> 50.9°F (Closed cup)
Hazardous Products of Combustions	Carbon dioxide, carbon monoxide, nitrogen oxides and metal oxides
Extinguishing Media	Dry chemical, CO ₂ , water spray (fog) or foam
Unsuitable Extinguishing Media	Do not use water jet or water-based fire extinguishers.
Firefighting instruction	Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. This material is harmful to aquatic life. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Explosion Hazard	In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.
Protection Gear	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Emergency Procedures	No emergency procedures should be necessary if material is used under ordinary conditions as recommended.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Environmental Precautions

Prevent spills from entering sewers or contaminating soil. Water polluting material. May be harmful to the environment if released in large quantities. Report releases as required by local, state and federal authorities.

Method and Materials for Containment & Clean Up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. **Refer to Section 13 - for waste disposal.**

SECTION 7 HANDLING AND STORAGE

Handling

Use personal protective equipment as described in Section 8. Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not handle until all safety precautions have been read and understood. Avoid exposure during pregnancy. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Use explosion-proof electrical. Take precautionary measures against electrostatic discharges.

Storage

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials **See Section 10 for incompatible materials** and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Occupational Exposure Limits

COMPONENT	CAS NUMBER	OSHA PEL	ACGIH TLV	NIOSH REL
Toluene	108-88-3	TWA: 200 ppm (8 Hrs) CEIL: 300 ppm	TWA: 20 ppm (8 Hrs)	TWA: 375 mg/m ³ (10 Hrs) CEIL: 560 mg/m ³
Butanone	78-93-3	TWA: 590 mg/m ³ (8 Hrs)	TWA: 590 mg/m ³ (8 Hrs) CEIL: 885 mg/m ³	TWA: 590 mg/m ³ (10 Hrs) CEIL: 885 mg/m ³
Calcium oxide	1305-78-8	TWA: 5 mg/m ³ (8 Hrs)	TWA: 2 mg/m ³ (8 Hrs)	TWA: 2 mg/m ³ (10 Hrs)
4,4'-Methylenediphenyl Diisocyanate	101-68-8	CEIL: 0.2 mg/m ³	TWA: 0.005 ppm (8 Hrs)	TWA: 0.05 mg/m ³ (10 Hrs) CEIL: 0.2 mg/m ³
Titanium dioxide	13463-67-7	TWA: 10 mg/m ³ (8 Hrs)	TWA: 10 mg/m ³ (8 Hrs)	Not established
Ethylbenzene	100-41-4	TWA: 435 mg/m ³ (8 Hrs)	TWA: 20 ppm (8 Hrs)	TWA: 435 mg/m ³ (10 Hrs) STEL: 545 mg/m ³

ABBREVIATION KEY

NIOSH = National Institute for Occupational Safety
OSHA = Occupational Safety & Health Administration
ACGIH = American Conference of Governmental Industrial Hygiene

PEL = Permissible Exposure Level
TLV = Threshold Limit Value
TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Engineering Measures/
Controls**

Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.

General Industrial Hygiene

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Environmental Exposure
Controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

PERSONAL PROTECTIVE EQUIPMENT

Pictographs



Eyes/Face

Safety glasses with side shields

Follow the national guidelines concerning the use of protective eye wear.

Hand

Protective Gloves

Wear protective gloves and clothing to prevent skin irritation or injury from contact with the product. Glove materials known to be effective against permeation by isocyanates include butyl rubber, nitrile rubber, and polychloroprene.

Skin/Body

Normal work clothing (long sleeved shirts, long pants and smooth bottom work shoes) is recommended.

Inhalation

Use NIOSH or MSHA approved respiratory protective equipment when airborne exposure limits are exceeded.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Brown
Odor	Solvent
Odor Threshold	No data available
pH	No data available
Relative Evaporation Rate	No data available
Boiling Point	No data available
Freezing Point	No data available
Flash Point	50.9°F
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Specific Gravity (H₂O =1)	No data available
Vapor pressure	No data available
Vapor Density (AIR=1)	>1
Relative density	107
Solubility	No data available
Viscosity	Dynamic (room temperature) 30000 mPa·s
Flow time (ISO 2431)	No data available
VOC	225 g/L

ABBREVIATION KEY

NIOSH = National Institute for Occupational Safety

MSHA = Mine Safety and Health Administration

SECTION 10 STABILITY AND REACTIVITY

Reactivity	No specific test data related to reactivity available for this product or its ingredients
Chemical Stability	Stable at room temperature in closed containers under advised storage and handling conditions.
Conditions to Avoid	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
Incompatible materials	Oxidizing materials, strong acids and reducing agents
Hazardous Polymerization	This product reacts slowly with water and may release carbon dioxide which may lead to increased pressure in closed packages.

SECTION 11 TOXICOLOGICAL INFORMATION

Component Analysis

COMPONENT	CAS NUMBER	ORAL LD50 (mg/kg)	DERMAL LD50 (mg/kg)	INHALATION LC50 (mg/L)
Toluene	108-88-3	>5,580 (rat)	>8,390 (rabbit)	>25.7 (rat) 4 hour
Butanone	78-93-3	>2,737 (rat)	>6,480 (rabbit)	> 32,000 (rat) 4 hour
4,4'-Methylenediphenyl Diisocyanate	101-68-8	>9,200 (rat)	N/A	N/A
Titanium dioxide	13463-67-7	>5,000 (rat)	N/A	>6.82 (rat) 4 hour
Diphenylmethane diisocyanate homopolymer	39310-05-9	>2,234 (rat)	N/A	N/A
4-Isocyanatosulphonyltoluene	4083-64-1	>2,234 (rat)	N/A	>775 (rat) 4 hour
Ethylbenzene	100-41-4	>3,500 (rat)	>5,000 (rabbit)	N/A

POTENTIAL HEALTH EFFECTS

Eyes	
Acute (Immediate)	Conjunctivitis, irritation, tearing and burning
Chronic (Delayed)	Causes serious eye irritation
Skin	
Acute (Immediate)	Irritation and inflammation. Allergic skin reaction may occur. Dermatitis
Chronic (Delayed)	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Inhalation	
Acute (Immediate)	Harmful if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties.
Chronic (Delayed)	May cause damage to organs through prolonged or repeated exposure.
Ingestion	
Acute (Immediate)	Product is not intended nor is it likely to be ingested or eaten.
Chronic (Delayed)	No known significant effects or critical hazards
Component Carcinogenicity	
Toluene (108-88-3)	IARC: Group 3
4,4'-Methylenediphenyl Diisocyanate (101-68-8)	IARC: Group 3
Titanium dioxide (13463-67-7)	IARC: Group 2B - Possible Carcinogen
Ethylbenzene (101-41-4)	IARC: Group 2B - Possible Carcinogen

ABBREVIATION KEY

LD50 = Lethal dose, 50 percent
VOC = Volatile organic compounds

LC50 = Lethal concentration, 50 Percent

SECTION 11 TOXICOLOGICAL INFORMATION

Carcinogenicity	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity	No known significant effects or critical hazards.
Reproductive toxicity	Adverse symptoms may include the following: reduced fetal weight, increase in fetal deaths and skeletal malformations
STOT Single Exposure	STOT SE Hazard Category 3
STOT Repeated Exposure	STOT RE Hazard Category 2
Acute Toxicity estimates	33330.5 mg/kg Oral 29.84 mg/L Inhalation (vapor) 26.64 mg/L Inhalation (dusts and mists)

SECTION 12 ECOLOGICAL INFORMATION

Eco toxicity

COMPONENT	CAS NUMBER	FISH LC50 (mg/L)	DAPHNA EC50 (mg/L)	ALGAE EC50 (mg/L)
Toluene	108-88-3	>5.8(rainbow trout) 96 Hours	>6 (Water flea) 48 Hours	>245 (algae) 72 Hours
Butanone	78-93-3	>3,320(fathead minnow) 96 Hours	>7,060 (Water flea) 48 Hours	N/A
Calcium oxide	1305-78-8	>1070 (Carp) 96 Hours	N/A	N/A
4,4'-Methylene Bisphenyl Isocyanate	101-68-8	>1000 (Zebra fish) 96 Hours	>1000 (Water flea) 48 Hours	>1640 (algae) 72 Hours
Diphenylmethane diisocyanate homopolymer	39310-05-9	>1000 (Zebra fish) 96 Hours	>1000 (Water flea) 48 Hours	N/A
Diphenylmethane-2,4'-diisocyanate	5873-54-1	N/A	>1000 (Water flea) 48 Hours	N/A
Ethylbenzene	100-41-4	>5.1 (Atlantic silverside) 96 Hours	>1.8 (Water flea) 48 Hours	>7.9 (algae) 72 Hours

Persistence & Degradability No data available

Bioaccumulation Potential

COMPONENT	CAS NUMBER	LOG P _{OW}	BFC	POTENTIAL
Toluene	108-88-3	2.73	90	low
Butanone	78-93-3	.03	-	low
Calcium oxide	1305-78-8	-	2.34	low
4,4'-Methylene Bisphenyl Isocyanate	101-68-8	-0.68 to 0.01	200	low
Propane-1,2-diol, propoxylated	25322-69-4	8.56	-	low
Diphenylmethane diisocyanate homopolymer	39310-05-9	4.51	200	low
Diphenylmethane-2,4'-diisocyanate	5873-54-1	-	200	
Ethylbenzene	100-41-4	3.6	-	low

Soil Absorption/Mobility No data available

Ozone-Depletion Potential No known significant effects or critical hazards

ABBREVIATION KEY

IARC = International Agency for Research on Cancer
LC₅₀ = Lethal concentration, 50 Percent
lof_{ow} = octanol-water partition coefficient

STOT = Specific Target Organ Toxicity
EC₅₀ = Effective concentration, 50 Percent

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal Methods The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14 TRANSPORT INFORMATION

Classification (DOT)	3
Identification Number	UN1263
Shipping name	Paint
Packaging group	III
Environmental Hazards	No
DOT-RQ Details	Toluene (108-88-3); 1000 lbs / 454 kg Xylene; 100 lbs / 45.4 kg 4,4'-Methylenediphenyl Diisocyanate; 5000 lbs / 2270 kg
DOT Classification	Reportable quantity 8629.6 lbs / 3917.8 kg [967.27 gal / 3661.5 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements. Special provisions 383

SECTION 15 REGULATORY INFORMATION

TSCA Inventory	Components are listed
DSL Inventory	Components are listed
Sara 313	Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA): Toluene (108-88-3); 4,4'-Methylene Bisphenyl Isocyanate (101-68-8) Ethylbenzene (100-41-4)
Sara 311/312 Categories	Fire Hazard, Acute Health Hazard, Chronic Health Hazard

SECTION 15 REGULATORY INFORMATION

CERCLA

Under requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), **4,4'-Methylene Bisphenyl Isocyanate (101-68-8)** and have a Reportable Quantity of 5,000 lbs. Any spill or release above this RQ must be reported to the National Response Center (800-424-8802).

CA Proposition 65

WARNING: This product can expose you to chemicals including **Ethylbenzene, Titanium dioxide**, which are known to the State of California to cause cancer, and **Toluene, N-methyl-2-pyrrolidone**, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Since the carcinogenic ingredients in this compound are encapsulated, the risk of exposure by inhalation is minimum when used in accordance with the user documentation.

Right to Know States

COMPONENT	CAS NUMBER	CA	MA	MN	NJ	PA	RI
Poly(oxy-1,4-butanediyl)	25190-06-1	No	No	No	Yes	Yes	No
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes	Yes
Butanone	78-93-3	Yes	Yes	Yes	Yes	Yes	Yes
Calcium oxide	1305-78-8	No	Yes	Yes	Yes	Yes	Yes
4,4'-Methylene Bisphenyl Isocyanate	101-68-8	No	Yes	Yes	Yes	Yes	Yes
Titanium dioxide	13463-67-7	Yes	Yes	Yes	Yes	Yes	Yes
Diphenylmethane-2,4'-diisocyanate	5873-54-1	No	Yes	Yes	Yes	Yes	No
4-Isocyanatosulphonyltoluene	4083-64-1	No	No	No	Yes	Yes	No
Ethylbenzene	100-41-4	Yes	Yes	Yes	Yes	Yes	Yes

SECTION 16 OTHER INFORMATION

Preparation Date April 2020

Revision Date March 2022

Summary of Changes Branding Update

Disclaimer

The information and recommendations contained herein are to the best of Performance Roof Systems' knowledge and belief, accurate and reliable as of the date issued. Performance Roof Systems does not warrant or guarantee their accuracy or reliability, and Performance Roof Systems shall not be liable for any loss or damage arising out of the use thereof.

The information and recommendations are offered for the users consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use. It is also the users responsibility to make certain that it is relying upon the most recent, updated, information and recommendations available from Performance Roof Systems.

ABBREVIATION KEY

CERCLA = Comprehensive Environmental Response, Compensation, & Liability Act
GHS = Global Harmonized System
NFPA = National Fire Protection Agency

HMIS = Hazardous Material Identification System