AST-XPAND™
EXPANDING FOAM SEALANT
SAFETY DATA SHEET

Section 1- Product and Company Identification

Manufacture/Supplier : Anti-Seize Technology
2345 N. 17th Ave.
Franklin Park, IL 60131

Phone: 847-455-2300
Fax: 847-455-2371
Web: antiseize.com
Emergency Phone, 24 hr: Infotrac @ 1-800-535-5053 (US & Canada)
1-352-323-3500 (International)
Web: infotrac.net
Product Use: Foam insulator and sealant
Restriction of Use: None presently known

Date: July 27, 2018

Section 2-Hazard Identification

GHS Classification (Hazcom 2012):
Flammable Aerosol-Category 1
Gases under pressure-compressed gas
Acute Toxicity (inhalation), Category4-Inhalation
Skin irritation-Category 2
Serious eye irritation- Category 2A
Sensitization, respiratory -Category 1
Sensitization, skin -Category 1
Specific target organ toxicity, single exposure- Category 3,
Specific target organ toxicity, repeated exposure- Category 2-inhalation

Label Elements:

Signal word:
Danger

Hazard Statements:
Aerosol can content under pressure and extremely flammable
Do not heat above 120°F (49°C), puncture or incinerate
May cause skin and serious eye irritation on direct contact
May cause irritation of mucous membranes in the mouth and digestive tract if swallowed.
May irritate mucous membranes with tightness in chest, coughing or allergic asthma-like sensitivity if inhaled.

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Precautionary Phrases:
Prevention:
Obtain special instructions before use.
Do not puncture or incinerate container
Do not tamper with valve.
Do not expose to heat or store at temperatures above 120°F (49°C)
Use with adequate ventilation.
Open doors and windows or use other means to ensure fresh air supply during use and while product is drying.
Do not breath gas/mist/vapors.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
In case of inadequate ventilation wear respiratory protection.

Response:
IF IN EYES: Remove contact lenses if worn. Rinse with water for at least 15 minutes. If eye irritation persists seek medical attention.

IF ON SKIN: Wash with plenty of soap and water. If skin irritation persists or if rash occurs seek medical attention. Remove contaminated clothing.

IF INHALED: If breathing becomes labored, remove to fresh air. Keep person in a comfortable position for breathing. If breathing remains abnormal seek medical attention.

Storage:
Keep away from children
Protect from sunlight.
Store in well ventilated place.
Exposure to high temperatures may cause can to burst
Store locked up.

Disposal: Dispose of contents in accordance with local, regional and national regulations.

Other Hazards: None presently known**.**

Section 3- Composition/ Information on Ingredients

CHEMICAL	CAS NUMBER	PERCENT
Urethane pre-polymer blend	Proprietary	60-100
4,4´-Diphenylmethane Dissocyanate	101-68-8	5-10
Polymethylene Polyphenyl isocyanate (MDI)	9016-87-9	5-10
Isobutane	75-28-5	3-7
Dimethyl Ether	115-10-6	3-7
Propane	74-98-6	1-5

The specific identity and/or exact percentage of composition has been withheld as a trade secret.

Section 4 – First Aid Measures

Eye: Immediately flush eyes with water for at least 15 minutes holding the eyelids apart. Remove contact lenses if present and easy to do. Continue rinsing. Get medical attention without delay, preferably form an ophthalmologist. Suitable eye wash facility should be immediately available.

Skin: Remove contaminated clothing immediately and wash with soap and water. In case of skin disorders such as eczema, rash, skin irritation seek medical attention and bring this Safety Data Sheet to the attending physician or trained medical personnel. Cleaning very soon after exposure is important. Corn oil, acetone (contained in some nail polish removers) or Polyglycol based skin cleaner or similar products may be more effective than soap and water. Cured foam can be physically removed by persistent washing with soap and water and a non-abrasive soap. If irritation develops, use a skin cream. If skin irritation persists, seek medical attention.

Inhalation: Remove to fresh air and keep comfortable for breathing. If breathing is labored administer oxygen as needed by qualified personal. If breathing remains labored get medical attention.

Ingestion: If large amounts ingested, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Most Important symptoms and effects, both acute and delayed:
May cause an allergic skin reaction. May cause eye irritation. May cause gastrointestinal irritation, stomach distress, nausea or vomiting if swallowed. May cause allergy or asthma symptoms or breathing difficulty if inhaled.

Section 5 – Fire Fighting Measures

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers, Foam.
Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams or protein foams may function, but will be less effective.
Extinguishing Media to Avoid: Do not use direct water stream. Straight or direct water streams may not be effective to extinguish fire.

Special hazards arising from the substance or mixture.

Hazardous Combustion Products: During a fire smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating . Combustion products may include and are not limited to: Nitrogen oxides. Isocyanates. Hydrogen chloride. Carbon monoxide. Carbon dioxide. Hydrogen cyanide.

Unusual Fire and Explosion Hazards: Contains flammable propellant. Aerosol cans exposed to fire can rupture and become flaming projectiles. Propellant release may result in a fireball. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Dense smoke is produced when product bums .

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water may not be effective in extinguishing fire. Do not use direct water stream. May spread fire. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Eliminate ignition sources. Move container from fire area if this is possible without hazard. Use water spray to cool fire exposed containers and fire-affected zone until fire is out.
Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

Section 6 – Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Evacuate area. Only trained and properly protected personnel must be involved in clean-up operations. Keep personnel out of low areas. Keep personnel out of confined or poorly ventilated areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Confined space entry procedures must be followed before entering the area. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Vapor explosion hazard. See Section 10 for more specific information. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. "

Methods and materials for containment and cleaning up: Contain spilled material if possible. Isolate area until gas has dispersed. Use non-sparking tools in cleanup operations. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Collect in suitable and properly labeled containers. Absorb with materials such as: Clay. Dirt. Milord®. Sand. Sawdust. Vermiculite. See Section 10 for more specific information. See Section 13, Disposal Considerations, for additional information .

Section 7 – Handling and Storage

Handling General Handling: Keep away from heat, sparks and flame. No smoking, open flames or sources of ignition in handling and storage area. Avoid contact with eyes, skin, and-clothing. Avoid prolonged or repeated contact with skin. Avoid breathing vapor. Wash thoroughly after handling. Keep container closed. Use only with adequate ventilation. Keep out of reach of children. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flashback may occur. Contents under pressure. Do not puncture or incinerate container. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Do not enter confined spaces unless adequately ventilated. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. See , Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Storage:
Minimize sources of ignition such as static build up, heat, sparks or flames. Store in dry place. See Section 10 for more specific information.

Shelf life: use within 12 months for best results. Do not store at temperatures exceeding 100° f

Section 8 – Exposure Controls / Personal Protection

CHEMICAL NAME	EXPOSURE LIMITS
4,4’ Methylenediphenyl Diisocyanate	0.005 ppm ACGIH TLV 0.020 OSHA PEL (CEILING) 0.005 ppm NIOSH, TWA
Isobutane	1000ppm ACGIH TLV 1000 ppm OSHA PEL
Propane	1000 ppm ACGIH TLV 1000 ppm OSHA PEL
Dimethyl Ether	1000 ppm, NIOSH TWA

Engineering Controls
Ventilation: Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Exhaust systems should he designed to move the air away from the source of vapor/aerosol generation and people working at this point. The odor and irritancy of this material are inadequate to warn of excessive exposure. Lethal concentrations may exist in areas with poor ventilation.

Personal Protection Eye/Face 'Protection: Use safety glasses (with side shields).

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.
Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene, Polyethylene, Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Viton. Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The, selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.
Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air-purifying respirator equipped with an organic vapor sorbent and a particle filter. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective use a positive-pressure air-supplying respirator (air line or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self contained breathing apparatus or positive-pressure air fine with auxiliary self-contained air supply. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply. The following should be effective types of air purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Section 9 – Physical and Chemical Properties

Appearance: Viscous liquid which turn to yellow foam	**Vapor Density (air = 1):** No test data available
Odor: Slight hydrocarbon odor during curing stage, off white to yellowish foam	**Specific Gravity:** 1.1 estimated
Odor Threshold: Not established	**Water Solubility:** Not soluble
pH: Not available	**Octanol/Water Partition Coefficient: (log Pow)** Reacts with water
Melting Point/Freezing Point: No test data	**Autoignition Temperature:** Not available
Boiling Point: Not applicable	**Decomposition Temperature:** Not available
Flash Point: -155°F (-104°C)	**Viscosity:** Not available
Evaporation Rate: No data available	**Explosion Properties:** None
Flammable Limits: **LEL**: Not established **UEL:** Not established	**Oxidizing Properties:** Not oxidizing
Vapor Pressure: 1,151 kPa@55°C	**Aerosol Fire Protection Level:** Not applicable
VOC Content: 165g/L	**Flammability (solid, gas):** Flammable gas

Section 10 – Stability and Reactivity

Reactivity: Not reactive under normal conditions of use.

Chemical Stability: Stable under normal storage and handling conditions. Unstable at elevated temperatures.

Possibility of Hazardous Reactions: Can occur. Elevated temperatures can cause hazardous polymerization. Do not heat this material to encourage polymerization.

Conditions to Avoid: Avoid temperatures above 122°F (50° C). Elevated temperatures can cause container to vent and/or rupture. Exposure to elevated temperatures can cause product to decompose.

Incompatible Materials: Avoid contact with: Acids, alcohols, amines, ammonia, bases or caustics, metal compounds, strong oxidizers. Products based on Diisocyanate may react with many materials to release heat. The reaction rate increases with temperature and surface area: these reactions can become violent.

Hazardous Decomposition Products: The thermal decomposition products are highly dependent upon the combustion conditions. Noxious or toxic fumes may be generated, some of which may be toxic or irritating.

Section 11 – Toxicological Information

Acute Toxicity

Ingestion: Low toxicity if swallowed in small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury, and cause gastrointestinal irritation.

As product Single dose "Oral LD50 has not been determined.
Estimated. LD50, rat > 2,000 mg/Kg

Dermal:

Prolonged skin contact is unlikely to result in absorption of harmful amounts
The dermal LD50 has not been determined. Estimated. LD50, rabbit > 2,000 mg/Kg.

Inhalation: As product: The LC50 has not been determined.

Eye damage/eye irritation: May cause eye irritation. May cause slight temporary corneal injury.

Skin corrosion/irritation Prolonged contact may cause moderate skin irritation with local redness. Material may stick to skin causing irritation upon removal. May stain skin.

Sensitization:

Skin: Skin contact may cause an allergic skin reaction. Animal studies have shown that skin contact with Isocyanates may play a role in respiratory sensitization.

Respiratory: May cause allergic respiratory response. MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening.

Repeated Dose Toxicity: Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols. Contains component(s) which have been reported to cause effects on the following organs in animals: Kidney. Liver.

Chronic Toxicity and Carcinogenicity . Lung tumors have been observed in laboratory animals exposed to respirable aerosol droplets of MDI/Polymeric MDI (6 *mg/m3)* for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

Developmental Toxicity: In laboratory animals, MDI/polymeric MDI did not cause birth defects; other fetal effects occurred only at high doses which were toxic to the mother.

Reproductive Toxicity: No relevant data found.

Genetic Toxicology: In vitro genetic toxicity studies were negative for component(s} tested. Genetic toxicity data on MDI are inconclusive. MDI was weakly positive in some in vitro studies; other in vitro studies were negative. Animal mutagenicity studies were predominantly negative.

Section 12 – Ecological Information

Ecotoxicity:
The measured Ecotoxicity is that of the hydrolyzed product generally under conditions maximizing production of soluble species. Material is practically non-toxic to aquatic organisms on an acute basis. (LC50, EC50, El50, ll50 > 100 mg/L in the most sensitive species tested.

Fish Acute and Prolonged Toxicity:
Based on information for similar materials: LC50, Danio rerio (zebra fish) , static test, 96hr: 1000 mg/L

Aquatic Invertebrate Acute Toxicity:
Based on information for similar material: EC50, Daphnia magna (water flea) static test, 24hr >1000mg/L
Aquatic Plant Toxicity:
Based on information for similar material: NOEC, Desmodesmus subspicatus (green algae) static test, Growth rate inhibition, 72 h, 1,640 mg/L.

Toxicity to soil dwelling organism
EC50 , earthworm, 14 d >1000 mg/kg.

Bioaccumulative Potential:
In the aquatic and terrestrial environment materials react with water forming predominantly insoluble polyurea which appear to be stable. In the atmospheric environment material is expected to have a short tropospheric half life based on calculations and by analogy with related Diisocyanate.

Section 13 – Disposal Consideration

Waste disposal: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND OR INTO ANY BODY OF WATER.

Dispose of in a responsible manner. Follow local, state and federal guidelines. Do not discharge into sewers or waterways. Incineration is the preferred method of disposal, although it may be land filled at an approved facility.

Section 14- Transport Information

DOT Proper Shipping Name: Aerosols
DOT Technical Name: None
DOT Hazard Class: 2.1
UN Number: UN1950
DOT Labels Required (49CFR172.101): LTD QTY

IMDG Shipping Description: Aerosols
ID Number: UN1950
Hazard Class: 2.1
Packing Group: None
Marking Required: Limited Quantity Mark
Placards Required: Limited

ICAO/IATA
Proper shipping name: Aerosol, Flammable
Hazard Class: 2.1
Identification Number: UN 1950
Packing Group: None

Section 15 – Regulatory Information

OSHA Hazard Communication Standard:
This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard 29 CFR 1910-1200.

TASCA Inventory Status: All Chemical components listed on the TSCA inventory except as exempted.

SARA 311 , 312
Acute health hazard
Chronic Health Hazard
Fire Hazard
Pressure
Reactive
SARA 313:

4,4'-Diphenylmethane Diisocyanate (MDI)	101-68-8
Polymethylene Polyphenyl isocyanate (PMDI)	9016-87-9

California Prop 65: No listed Chemicals

State Substance List: This product contains a listed substances that appears on one or more of the Substance Lists for Pennsylvania,

Isobutane	75-28-5
methyl Ether	115-10-6
Propane	74-98-6

California Proposition 65 List: None

Section 16 – Other Information:

The information contained herein is based on data considered accurate, however, no warranty is expressed or implied regarding the accuracy of the data or the results obtained from the use of his product. Therefore, because the product may be used under conditions beyond our control, we assume no liability for its use.