

Material Safety Data Sheet

VERSIGRIP INSULATION ADHESIVE

**MSDS No. 303290 1 gal (4/carton)
303291 2.5 gal pail**

Date of Preparation: 07/20/07

Revision: 002

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: VERSIGRIP INSULATION ADHESIVE

Chemical Formula: Mixture

General Use: Adhesive

Manufacturer: Versico, 1285 Ritner Highway, Carlisle, PA 17013, Phone: 800-992-7663

24-Hour Emergency Phone Number: CHEMTREC (USA) 800-424-9300

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number	% wt or % vol
Urethane Prepolymer	Trade Secret	60.0-64.0
Methylene Diphenylene Diisocyanate	101-68-8	22.0
Polymeric MDI	9016-87-9	8.0
Diphenylmethane Diisocyanate Homopolymer	25686-28-6	3.0-7.0
Methylene Diphenylisocyanate	26447-40-5	1.0-4.0
Para Toluenesulfonyl Isocyanate	4083-64-1	1.0-3.0

Trace Impurities:

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
Urethane Prepolymer	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.
Methylene Phenylene Isocyanate	0.020 ppm	0.020 ppm	0.005 ppm	none estab.	0.005 ppm 0.05 mg/m ³	0.020 ppm 0.20 mg/m ³	75 mg/m ³
Polymeric MDI	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.
MDI Homopolymer	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.
Methylene Diphenylisocyanate	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.
Para Toluenesulfonyl Isocyanate	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.

Section 3 - Hazards Identification

☆☆☆☆☆ **Emergency Overview** ☆☆☆☆☆

HMIS

H 2

F 1

R 1

PPE†

†Sec. 8

Potential Health Effects

Primary Entry Routes: Inhalation, skin contact, ingestion.

Target Organs: Nose, throat, and lungs

Acute Effects: Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), cough, tight feeling in the chest, headache, shortness of breath, allergic reaction (causes narrowing of the air passages of the lungs, sweating, flushing, hives, rapid heart rate, and lowered blood pressure).

Inhalation: Breathing of vapor or mist is possible. Breathing aerosol and/or mist is possible when material is sprayed. Aerosol and mist may present a greater risk of injury because more material may be present in the air than from vapor alone. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful.

Eye: May cause mild eye irritation. Symptoms include stinging, tearing, and redness.

Skin: Can cause skin irritation. Symptoms may include redness and burning of skin, and other skin damage. May cause mild skin irritation. Symptoms may include redness and burning of skin. Additional symptoms of skin contact may include: allergic skin reaction (delayed skin rash which may be followed by blistering, scaling and other skin effects.)

Ingestion: Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

Carcinogenicity: IARC, NTP, and OSHA do not list MDI as a carcinogen.

Medical Conditions Aggravated by Long-Term Exposure: Preexisting disorders of the following organs (or organ system) may be aggravated by exposure to this material: respiratory tract, skin, lung (for example, asthma-like conditions).

Chronic Effects: Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans: skin sensitization, respiratory sensitization.

In a two-year study in rats, exposure to polymeric methylene bisphenylisocyanate (MDI) aerosol caused a significant increase in benign (noncarcinogenic) lung tumors, along with a single carcinogenic lung tumor, at the highest dose only (6 mg/m³). The tumors occurred along with irritation of the respiratory tract and the accumulation of a yellow material in the lungs. There was irritation only at 1.0 mg/m³ and no effect at 0.2 mg/m³. Current exposure guidelines are expected to protect against these effects.

Section 4 - First Aid Measures

Inhalation: If symptoms (irritation of the nose, throat or airways; cough; tightness in chest; headache; shortness of breath; or allergic reaction including sweating, flushing, hives, rapid heart rate, and lowered blood pressure) develop, move individual away from exposure and into fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. If symptoms persist, seek medical attention.

Eye Contact: If symptoms (stinging, tearing, redness or blurred vision) develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

Skin Contact: Remove contaminated clothing. Wash exposed area with soap and water. If symptoms (redness, burning or itching) persist, seek medical attention. Launder clothing before reuse.

Ingestion: Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians: Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: respiratory tract, skin, lung (for example, asthma-like conditions).

Section 5 - Fire-Fighting Measures

Flash Point: >200.0°F (93.3°C)

Flash Point Method:

Autoignition Temperature: No data.

LEL: No data.

UEL: No data.

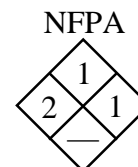
Extinguishing Media: Regular foam (such as AFFF), water fog, carbon dioxide, dry chemical.

Unusual Fire or Explosion Hazards: Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

Hazardous Combustion Products: May form: carbon dioxide and carbon monoxide, hydrogen cyanide, nitrogen compounds, various hydrocarbons.

Fire-Fighting Instructions: Water or foam may cause frothing which can be violent and possibly endanger the life of the firefighter. Wear a self-contained breathing apparatus with a full face-piece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of the MSDS.

Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.



Section 6 - Accidental Release Measures

Spill /Leak Procedures:

Small Spills: Absorb liquid on vermiculite, floor absorbent or other absorbent material and transfer to a metal waste container.

Large Spills: Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank. Neutralize spill with an aqueous solution of ammonia. Remaining liquid may be taken up on sand, clay, earth, floor absorbent, or other absorbent material and shoveled into containers.

Containment: For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers, waterways or other bodies of water. If run-off occurs, notify proper authorities, as required, that a spill has occurred.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Storage Requirements: When stored between 15°C and 27°C (60°F and 80°F) in sealed containers, typical shelf life is six months from the date of manufacture. Consult technical data sheet for shelf life requirements affecting performance quality. Opened containers must be handled to prevent moisture pickup.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA STELs (Sec. 2).

Administrative Controls:

Respiratory Protection: If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines) a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

Protective Clothing/Equipment:

Eyewear: Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

Gloves: Wear resistant gloves such as: nitrile rubber, butyl rubber, Viton.

Clothing: To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

Physical State: Liquid.

Appearance and Odor: tan color

Density: 9.589 lbs/gal @ 77.0F (1.150 kg/l @ 25.00C)

Specific Gravity (H₂O=1, at 4 °C): 1.151 @ 77.00F

Boiling Point(°C): 143.8°C (291.0F)

Viscosity: 5000-15000 cps @ rvt #5 @20

% Volatile: Negligible

Vapor Pressure: 1.000 mmHg

VOC (gpl): Negligible

Section 10 - Stability and Reactivity

Stability: Stable.

Polymerization: Product can undergo hazardous polymerization. Avoid contact with strong alkalis, strong mineral acids, and water.

Chemical Incompatibilities: Alcohols, strong alkalis, strong mineral acids and water

Conditions to Avoid: Avoid conditions with excessive heat

Hazardous Decomposition Products: May form: carbon dioxide and carbon monoxide, hydrogen cyanide, nitrogen compounds, various hydrocarbons.

Section 11- Toxicological Information

Toxicity Data:

Eye Effects: No data

Acute Inhalation Effects: No data.

Skin Effects: No data

Acute Oral Effects: No data.

Chronic Effects: May cause skin sensitization and respiratory sensitization.

Carcinogenicity: No data.

Mutagenicity: No data.

Teratogenicity: No data.

Section 12 - Ecological Information

Ecotoxicity: No data.
Environmental Fate: No data.
Environmental Degradation: No data.
Soil Absorption/Mobility: No data.

Section 13 - Disposal Considerations

Disposal: Destroy by liquid incineration in accordance with applicable local, state, provincial and federal regulations.
Disposal Regulatory Requirements: Dispose of in accordance with all local, state, provincial and federal regulations

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):

Shipping Name: Not Regulated	Packaging Authorizations	Quantity Limitations
Shipping Symbols:	a) Exceptions: N/A	a) Passenger, Aircraft, or Railcar: N/A
Hazard Class:	b) Non-bulk Packaging: N/A	b) Cargo Aircraft Only: N/A
ID No.:	c) Bulk Packaging: N/A	
Packing Group:		Vessel Stowage Requirements
Label:		a) Vessel Stowage: N/A
Special Provisions (172.102):		b) Other: N/A

Section 15 - Regulatory Information

EPA Regulations:

TSCA (United States): The intentional ingredients of this product are listed on the TSCA inventory

RCRA Hazardous Waste Number (40 CFR 261.33): Not listed

RCRA Hazardous Waste Classification (40 CFR 261.11): MDI is not listed as a hazardous waste. However, under RCRA, it is the responsibility of the user of products to determine, at any time of disposal, whether a product meets any of the criteria for hazardous waste.

CERCLA Hazardous Substance (40 CFR 302.4):

Materials without a "listed" RQ may be reportable as an "unlisted hazardous substance". See 40 CFR 302.5(b).

CERCLA Reportable Quantity (RQ):

Methylene Bisphenol Isocyanate (MDI) RQ: 5000 lbs

SARA Toxic Chemical (40 CFR 372.65):

Methylenebis (Phenylisocyanate) (MDI),	CAS# 101-68-8,	21.61%
Polymeric Diphenylmethane Diisocyanate,	CAS# 9016-87-9,	7.51%

SARA 302 Components (40 CFR 355 Appendix A): Not listed

SARA 311/312 Hazard Class – 40 CFR 370.2

Immediate (X)	Delayed ()	Fire ()	Reactive (X)
Sudden Release of Pressure ()			

EPA Accidental Release Prevention (40 CFR 68): None Listed

OSHA Regulations:

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed

OSHA Specifically Regulated Substance (29 CFR 1910): None listed

International Regulations:

AICS (Australia): The intentional ingredients of this product are listed.

DSL (Canada): The intentional ingredients of this product are listed.

ECL (South Korea): The intentional ingredients of this product are listed.

ENCS (Japan): The intentional ingredients of this product are listed.

IECSC (China): The intentional ingredients of this product are listed.

State Regulations:**California Proposition 65:**

This product contains the following chemical(s) known to the state of California to cause birth defects or other reproductive harm: None

Delaware Air Quality Management List

<u>Chemical Name</u>	<u>CAS Number</u>	<u>DRQ</u>
Methylenebis(phenylisocyanate)	101-68-8	5000

Note: Must be reported to the DRQ

Polymeric diphenylmethane diisocyanate	9016-87-9	100
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Note: Does not agree with the federal reportable quantity requirements to report

Florida Toxic Substances List:

<u>Chemical Name</u>	<u>CAS Number</u>
Diphenylmethane diisocyanate	101-68-8
Methylene bisphenyl isocyanate	101-68-8

Massachusetts Hazardous Substance List

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Code</u>
Methylene bisphenyl isocyanate	101-68-8	2, 4, F8, F9

Minnesota Hazardous Substance List

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Codes</u>	<u>Hazards</u>	<u>Carcinogen</u>
Diphenylmethane diisocyanate	101-68-8	ANO	--	False
Methylene bisphenyl isocyanate	101-68-8	ANO	--	False

New Jersey Right To Know Hazardous Substance List

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Substance Number</u>	<u>DOT Number</u>	<u>TPQ <500lbs</u>	<u>EHS</u>
Mehtylene Bisphenyl Isocyanate	101-68-8				

New York List of Hazardous Substances

<u>Chemical Name</u>	<u>CAS Number</u>	<u>RQ Air</u>	<u>RQ Land</u>	<u>Note</u>
Methylene bisphenyl isocyanate	101-68-8	1	1	--

Pennsylvania Hazardous Substances List

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Code</u>
1,1'-methylenebis[4-isocyanato] benzene	101-68-8	Environmental Hazard

Washington Permissible Exposure Limits for Air Contaminants

Methylene bisphenyl isocyanate		
Ceiling	0.02 ppm	0.2 mg/m ³

Section 16 - Other Information

Prepared By: Research and Development

Revision Notes: Added VOC content to Section 9.

Additional Hazard Rating Systems:

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