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DATE OF PREPARATION:
PREPARED BY:

April 1,2010
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MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT IDENTIFICATION

Name of Product: **VERSI-TITE 16 lb. Cylinder**

SECTION 2 - CHEMICAL COMPOSITION

<u>CHEMICAL</u>	<u>CAS #</u>	<u>% of TOTAL WEIGHT</u>
1,1,1,2 Tetrafluoroethane (134a)	811-97—2	10-30
4,4 Diphenylmethane-Diisocyanate (MDI)	101-68-8	5-10
Higher Oligomers of MDI (Polymeric MDI)	9016-87-9	5-10
Urethane Polymer Preblend	Mixture (Proprietary Information)	60-100

SECTION 3 - HAZARDS IDENTIFICATION

Physical Hazards: Since the containers are pressurized, storage temperature should not exceed 120°F (49°C) in order to avoid excessive pressure buildup and possible container rupture. Also, the foam has strong adhesive-like characteristics and will adhere aggressively to skin and other surfaces. If accidental foam contact occurs, follow the appropriate first-aid procedure described in Section 4 of this MSDS.

Potential Health Effects: The primary adverse health effects of this product are related to the Polymeric Isocyanate (MDI) component, and to a lesser degree, the Fluorocarbon (134a) component. Therefore, adequate ventilation should be provided to avoid exceeding the exposure limits of these components (see Section 8). The likelihood of exceeding these limits is low due to the low concentration of vapor produced during normal use. However, if used indoors, mechanical ventilation or exhaust should be provided during use and until the product is cured.

Entry Route: Effects of Overexposure:

INHALATION:

May irritate mucous membranes with tightness in chest, coughing or allergic asthma-like sensitivity . Extensive overexposure can lead to respiratory symptoms like bronchitis and pulmonary edema. These effects are usually reversible.

Overexposure to 1,1,1,2 Tetrafluoroethane (134a) may cause lightheadedness, headaches, or lethargy. Persons with cardiac arrhythmia may be at increased risk in severe exposure.

EYES:

May be irritating to eyes. Foam contact can cause physical damage due to adhesive characteristics.

SKIN:

May cause localized irritation, reddening or swelling. Prolonged or repeated exposure may lead to sensitization and/or contact dermatitis.

INGESTION:

May cause irritation of mucous membranes in the mouth and digestive tract.

SECTION 4 - FIRST AID PROCEDURES

INHALATION:

If breathing difficulty is experienced, move to an area free of exposure. Provide fresh air. If necessary, provide oxygen or artificial respiration by trained personnel and obtain medical attention.

EYE CONTACT:

Flush with clean water for at least 15 minutes and obtain medical attention.

SKIN CONTACT:

Use a rag to remove excess foam from skin and remove contaminated clothing. Use of a solvent, such as acetone (nail polish remover) or mineral spirits, may help in removing uncured foam residue from clothing or other surfaces (avoid eye contact). Cured foam may be physically removed by persistent washing with soap and water. If irritation develops, use mild skin cream. If irritation develops, use mild skin cream. If irritation persists, obtain medical attention.

INGESTION:

Drink 1 to 3 glasses of water and seek immediate medical attention. Never give anything orally to an unconscious person.

SECTION 5 - FIRE FIGHTING MEASURES

High temperatures will raise the pressure in the cans, which may lead to rupturing. Extinguishing media include: Dry chemical, carbon dioxide, Halon 1211, chemical foam, or water spray if used in large quantities (water contamination will produce carbon dioxide). Wear self-contained breathing apparatus to protect against toxic decomposition by-products including CO, CO₂, NO and traces of HCN. Cured foam is organic and ,therefore, will burn in the presence of sufficient heat, oxygen and an ignition source. Main

hazards associated with burning foam are similar to burning of other organic materials (wood, paper, cotton, etc.) and precautions against exposure should be taken accordingly. Avoid welding or other "hot work" in the vicinity of exposed cured foam.

SECTION 6 - ACCIDENTAL RELEASE MEASURES AND DISPOSAL CONSIDERATIONS

Read all product instructions before using. Personal protective equipment should include chemically impervious gloves (e.g. nitrile), protective eye wear and suitable work clothes. Uncured product is very sticky, so carefully remove the bulk of the foam by scraping it up and then immediately remove the residue with a rag and solvent (such as polyurethane cleaner, mineral spirits, acetone – nail polish remover – paint thinner, etc. Once the product has cured, it can only be removed physically by scraping, buffing, etc. Dispose of as plastic waste (foam plastic) in accordance with all applicable guidelines and regulations.

Before disposing of cans, relieve of any remaining foam and pressure. Allow product to fully cure before disposing. Never discard of in a liquid state.

SECTION 7 – HANDLING AND STORAGE

Store in a cool, dry place. Ideal storage temperature is 60°F to 80°F (15.5°C to 26.6°C). Storage above 90°F (32.2°C) will shorten the shelf life. Storage below 55°F (12.7°C) may affect foam quality if chemicals are not warmed before using. Protect cans from physical abuse. Product unused product from freezing.

SECTION 8 – EXPOSURE CONTROL/PERSONAL PROTECTION

Read all product instructions before using. Personal protective equipment should include chemically impervious gloves (e.g. nitrile) protective eye wear and suitable work clothes. Adequate ventilation should also be employed so that the vapor levels do not exceed recommended guidelines. If vapor levels are expected to exceed these guidelines, use NIOSH approved, positive pressure supplied air respirator or a negative pressure half mask with organic cartridges and dust/mist prefilters. Exercise good personal hygiene and wash thoroughly after each use.

EXPOSURE GUIDELINES:

	OSHA	ACGIH
4,4 Diphenylmethanediisocyanate (MDI)	0.02 ppm ceiling	0.005 ppm TWA
Higher Oligomers of MDI	None established	None established
Polyether Polyol	None established	None established
1,1,1,2 – Tetrafluoroethane (Nonflammable Compressed Gas HFC Fluorocarbon, 134a)	None established	None established

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical Appearance:	Viscous liquid which forms upon release from can as an off-white to yellowish froth
Odor:	Slight hydrocarbon odor during curing stage.
Specific Gravity:	Approximately 1.1 (H2O = 1)
Boiling Point:	1,1,1,2 – Tetrafluoroethane (134a) boils at -15°F (-26.1°C) Other components boil at temperatures greater than 200°F (93.3°C).
Flash Point:	Product flash point has been tested at approximately 800°F (426.6°C)
Vapor Pressure:	Contents under pressure have vapor pressure greater than 50 psig/345 kPa. After release from container, vapor pressure is very low (not determined)
Solubility in Water:	Insoluble, reacts slowly with water during cure liberating traces of CO2.
Explosion Data:	Contents are not known to be sensitive to mechanical impact or static discharge.

SECTION 10 - REACTIVITY AND STABILITY

This product is considered stable under normal and anticipated storage and handling conditions. Do not store above 120°F (49°C). For longest shelf life, avoid storage above 90°F (32.2°C). Avoid alcohols, strong bases, amines and metal compounds (such as small particle metal catalysts).

SECTION 11 - TOXICOLOGICAL INFORMATION

	<u>LD50</u>	<u>LC50</u>
1,1,1,2-Tetrafluoroethane (134a)	N/A	N/A
4,4 Diphenylmethane Diisocyanate (MDI)	N/A	N/A
Higher Oligomers of MDI	N/A	N/A
Urethane Pre-Polymer Blend	N/A	N/A

SECTION 12 – ECOLOGICAL INFORMATION

Not established

SECTION 13 - DISPOSAL INFORMATION

Before disposing of containers, relieve of any remaining foam and pressure. Allow product to fully cure before disposing. Never discard of in a liquid state.

SECTION 14 – TRANSPORTATION INFORMATION

DOT (Ground)	UN1956, Compressed Gas n.o.s. (Fluorocarbon), Class 2.2
Air	UN1956, Compressed Gas n.o.s. (Fluorocarbon) Class 2.2, (NonFlammable Gas Label)
Ocean	UN1956, Compressed Gas n.o.s. (Fluorocarbon) Class 2.2

SECTION 15 - REGULATORY INFORMATION

TSCA	All ingredients are listed in the TSCA inventory, as well as the Canadian Domestic Substance List.
SARA Title III	Contains Diphenylmethane Diisocyanate (CAS #101-68-8) subject
Proposition 65	Contains no detectable amounts of chemicals listed under California Proposition 65
VOC Content:	Based on current definition of volatile organic compound, this product does not have any VOC content.

SECTION 16 – OTHER INFORMATION

NFPA:	Fire 1
	Health 2
	Reactivity 1
HMIS:	Flammability 1
	Health 2
	Reactivity 1

WHILE THE INFORMATION AND RECOMMENDATIONS SET FORTH HEREIN ARE BELIEVED TO BE ACCURATE AS OF THE DATE HEREOF, RHH FOAM SYSTEMS INC. MAKES NO WARRANTY WITH RESPECT THERETO AND DISCLAIMS ANY LIABILITY FROM RELIANCE THEREON.