SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

1.1 Product Identifier: VersiFoam Systems 1HD, 10, 33 & 2.8 pcf Refillable – High Density, HFO – **Component A**

1.2 Relevant identified uses of the substance or mixture and uses advised against:
General Use: Component in low pressure polyurethane foam, Component A, for professional use only.
Uses Advised Against: No further information available.

1.3 Details of the supplier of the Safety Data Sheet:
Manufacturer/Supplier: RHH Foam Systems, Inc.
5500 South Westridge Drive
New Berlin, WI 53151-7900 USA
1-800-657-0702 / 262-754-8088

1.4 Emergency telephone numbers:
Within the USA, Canada, Puerto Rico and the US Virgin Islands: ChemTel (contract #MIS2000665) (24 hours) 1-800-255-3924
Australia: ChemTel (contract #MIS2000665) (24 hours) 1-300-954-583
Brazil: ChemTel (contract #MIS2000665) (24 hours) 0-800-591-6042
China: ChemTel (contract #MIS2000665) (24 hours) 400-120-0751
India: ChemTel (contract #MIS2000665) (24 hours) 000-800-100-4086
Mexico: ChemTel (contract #MIS2000665) (24 hours) 01-800-099-0731
All other International countries: ChemTel (contract # MIS2000665) (24 hours) 001-813-248-0585

SECTION 2 – HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture:
Product definition: Mixture
OSHA/GHS Classification: Gases Under Pressure – Compressed Gas
Respiratory Sensitizer Category 1 – H334
Skin Sensitizer Category 1 – H317
Acute Toxicity Inhalation Category 4 – H332
Eye Irritant Category 2A – H317
Skin Irritant Category 2 – H315
Specific Target Organ Single Exposure Category 3 (Respiratory Tract) – H335
Specific Target Organ Toxicity Repeated Exposure 2 (Respiratory Tract) – H373
Liquified Gas – H280

2.2 GHS Label elements: (Regulation (EC) No 1272/2008)
Hazard Symbols:

Signal Word: **DANGER**
Hazard Statement(s):
H332: Harmful if inhaled
H319: Causes serious eye irritation.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H334: May cause allergy or asthma like symptoms or breathing difficulties if inhaled.
H335: May cause respiratory irritation.
H373: May cause damage to organs through prolonged or repeated exposure (lungs).
H280: Contains gas under pressure; may explode if heated
Precautionary Statement(s):
P102: Keep out of reach of children.
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P260: Do not breathe dust, gas, mist, or vapors.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P251: Pressurized container: Do not pierce or burn, even after use.
P264: Wash hands thoroughly after handling.
P272: Contaminated work clothing must 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.
P308+P311: IF EXPOSED OR CONCERNED: Call physician.
P312: Call a physician if you feel unwell.
P302+P352: IF ON SKIN: Wash with plenty of water.
P332+P313: If skin irritation occurs: Get medical attention.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical attention.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P311: If experiencing respiratory symptoms: Call a physician.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P362+P364: Take off contaminated clothing and wash before reuse.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.
P410: Protect from sunlight.
P411: Store at temperatures not exceeding 120°F (48°C).
P412: Do not expose to temperatures exceeding 250°F (121°C).
P501: Dispose of contents/container in accordance with local, state, national, and international regulations.

Hazards Not Otherwise Classified:

Refer to Section 11 toxicological information for additional toxicity information.
Refer to Section 16 Other Information for HMIS and NFPA Codes

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substance:

Material does not meet the criteria of a substance according to United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

3.2 Mixtures:

Name	CAS #	% by Weight
Polymeric MDI	9016-87-9	25-95
4,4'- Diphenylmethane Diisocyanate (MDI)	101-68-8	26-60
Methylenedipheyl Diisocyanate	26447-40-5	3-7
2,4'- Diphenylmethane Diisocyanate (MDI)	5873-54-1	2-6
2,2'- Diphenylmethane Diisocyanate (MDI)	2536-05-2	0.1-1
1,3- Diazetidine-2,4-dione, 1,3-bis[4-[(4-isocyanatophenyl) methyl] Phenyl]-	17589-24-1	1-3
Isocyanic acid, polymethylenepolyphenylene ester, polymer with.alpha.-hydro-.omega.-hydroxypoly(oxy-1,2-ethanediyl)	**57636-09-6**	1-3
Trans-1,3,3,3-Tetrafluoroprop-1-ene	29118-24-9	5-10%

SECTION 4 – FIRST-AID MEASURES

4.1 Description of First Aid Measures:

By route of inhalation: Remove victim to fresh air. If breathing is difficult, oxygen may be beneficial if administered by trained personnel. Seek medical attention immediately.
By route of dermal contact: Remove contaminated clothing and shoes. Wash thoroughly with soap and water. Seek medical attention if irritation develops.
By route of eye contact: Flush eyes with plenty of water for at least 15 minutes while holding eyelid(s) open. Seek medical attention.
By route of ingestion: If swallowed, DO NOT INDUCE VOMITING. If victim is conscious, wash out mouth with water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Seek medical attention immediately.

4.2 Most Important Symptoms and Effects, Acute and Chronic:

Exposure symptoms may include contact dermatitis (redness, itching, rash), respiratory tract irritation, cough, shortness of breath, wheezing, or chest tightness. Onset of symptoms may be delayed.

4.3 Indication of Immediate Medical Attention and Special Treatment If Needed:

Treatment should be supportive and based on the judgment of the physician in response to the reaction of the patient.

SECTION 5 – FIRE-FIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media: Carbon Dioxide, Dry Chemical, or Alcohol Foam are preferred. Water is not recommended but may be applied in large amounts as a fine spray or water fog if other extinguishing media are not available.
Unsuitable extinguishing media: Do not use direct water stream as it may spread fire. Product reacts with water. Reaction may be violent, producing heat and gases.

5.2 Special hazards arising from the substance or mixture:

May produce oxides of carbon and nitrogen, and traces of HCN on combustion. Sealed container may rupture from gases generated in a fire situation. Spills of these organic liquids on hot fibrous insulations may lead to lowering of the auto-ignition temperatures. This may result in spontaneous combustion.

5.3 Protective equipment / Precautions for fire-fighters:

Fire-fighters should wear full protective fire-fighting gear including a full face piece, positive-pressure self-contained breathing apparatus (SCBA).

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Avoid any skin contact and avoid breathing vapors, mists or dusts. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Provide protective equipment appropriate for the size of the spill. Keep unauthorized personnel away. Stay upwind. Do not walk through spilled material. Spilled material may be slippery. Ensure adequate ventilation and eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do it without risk.

6.2 Environmental precautions:

Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.

6.3 Methods and materials for containment and cleaning up:

Methods

- Stop leak and dam spill.
- Cover spill with absorbent and neutralize with decontaminant.
- Transfer waste into open-top drums and keep drum lid loose for about 48hrs to allow escape of carbon dioxide.
- Clean spill area additionally with decontaminant. Allow solution to stand for at least 10 minutes.
- LARGE SPILLS: Dike spillage. A blanket of protein foam may be placed over the spill. Pump or vacuum material into containers.

Materials

- Absorbent, neutralizing agent (90% water, 8% ammonia, 2% liquid detergent), and a drum with lid (to collect waste)
- Inert absorbent (sand, earth or similar).
- Use appropriate Personal Protective Equipment (PPE).

6.4 Reference to other sections:

Refer to Section 8 for exposure control and personal protective equipment information.
Refer to Section 12 for ecological information.

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling:

- Protect against moisture
- Do not breathe (dust, vapor, or spray mist)
- Wear respiratory protection when spraying
- Ensure thorough ventilation of storage and work areas
- Keep away from direct sunlight
- Avoid generating mist to prevent the release of aerosols

7.2 Conditions for safe storage, including any incompatibilities:

Storage

- Store materials in a cool (65°to 90°F/18° to 32°C), well-ventilated, dry place away from direct sunlight. Keep container tightly closed and store locked up in an upright position. Do not expose to moisture. MDI reacts with water producing carbon dioxide gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Closed containers may develop pressure and rupture on prolonged exposure to heat or if contaminated with water. Do not allow to freeze. **Keep out of reach of children.**

Incompatibilities

- Keep away from water, amines, strong bases and acids, alcohols, and copper alloys.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

Exposure Limits/Guidelines

Ingredient	OSHA PEL (ppm)	ACGIH TLV (ppm)	WEEL OARS (ppm)
Polymeric MDI	0.2 Ceiling	0.005 TWA	Not established
4,4'- Diphenylmethane Diisocyanate (MDI)	0.2 Ceiling	0.005 TWA	Not established
Trans-1,3,3,3-Tetrafluoroprop-1-ene	Not established	Not established	800 TWA

8.2 Exposure controls:

Engineering controls:

Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Eye/Face protection: Chemical goggles or depending on the splash risk, chemical goggles with a face shield may be needed.

Respiratory protection: If exposure concentrations may exceed applicable exposure limits or are unknown, use an appropriate NIOSH/MSHS approved respirator. Respirators should be selected in accordance with OSHA 1910.134.

Skin protection: Wear suitable working clothes. Wear chemical resistant gloves appropriate for the intended use. Consult glove manufacturers for assistance in choosing appropriate gloves.

Additional Protection Measures: Use near eyewash station and safety shower.

If concentration levels exceed exposure limits, use a NIOSH approved air-purifying respirator equipped with an organic vapor cartridge and particle filter (P100). Employers are required to implement a cartridge change-out schedule for such respirators. If concentration levels are unknown or extremely high use a positive-pressure self-contained breathing apparatus.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Material Description			
Physical Form	• Liquid	Odor	• Slight musty odor
Appearance/Color	• Amber	Odor Threshold	• No data available
General Properties			
Boiling Point	• 200 °C @5 mmHg	Melting Point	• No data available
Decomposition Temperature	• No data available	pH	• No data available
Density	• No data available	Water Solubility	• Low
Solvent Solubility	• No data available	Viscosity	• 130 cPs
Explosive Properties	• No data available	Specific Gravity/Relative Density	•1.23-1.25 (H2O=1)
Volatility			
Vapor Pressure	• <.0001 mmHg	Vapor Density	• No data available
Evaporation Rate	• No data available	VOC (Vol.)	• No data available
Volatiles (Vol.)	• No data available		
Flammability			
Flash Point	• >200ºF (PMCC)	LEL	• No data available
UEL	• No data available	Flammability (solid, gas)	• No data available
Auto-ignition Temperature	• No data available		
Environmental			
Octanol/Water Partition Coefficient	• No data available		

9.2 Other information: No additional information

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity:
No dangerous reaction known under conditions of normal use.

10.2 Chemical stability:
Stable under recommended storage conditions (per section 7).

10.3 Possibility of hazardous reactions:
Reacts with water, with formation of carbon dioxide (risk of container bursting). Reacts with alcohols, acids, alkalis, and amines. Risk of exothermic reaction. Risk of polymerization. Contact with certain rubbers and plastics can cause brittleness of the substance/product with subsequent loss in strength.

10.4 Conditions to avoid:
Avoid moisture.

10.5 Incompatible materials:
Acids, amines, alcohols, water, alkalis, strong bases, substances/products that react with isocyanates.

10.6 Hazardous decomposition products:
Hazardous decomposition products: carbon monoxide, carbon dioxide, nitrogen oxide, hydrogen cyanide, nitrogen oxides, aromatic isocyanates, gases/vapors.

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Most likely routes of exposure are skin, eye and inhalation.

Acute Toxicity

Chemical	CAS #	LD50 oral rat	LD50 dermal rabbit	LC50 inhalation rat
Polymeric MDI	9016-87-9	>2,000 mg/kg	> 9,400 mg/kg	0.49 mg/l, 4hr[1]
4,4'- Diphenylmethane Diisocyanate (MDI)	101-68-8	>7,000 mg/kg	> 9,400 mg/kg	0.368 mg/l, 4hr[1]
trans-1,3,3,3-	29118-24-9	Not applicable	Not applicable	>207000 ppm 4hr

[1]The test atmosphere generated in the animal study is not representative of workplace environments, how the substance is placed on the market, and how it can be reasonably be expected to be used. Therefore, the test results cannot be directly applied for the purpose of assessing hazard. Based on the weight of the evidence, a modified classification for acute inhalation toxicity is justified.

Skin Corrosion / Irritation
Skin Irritation Category 2 – Causes skin irritation.
MDI – Species: rabbit. Result: Irritating. Method: Draize test

Serious Eye Damage / Irritation
Eye Irritation Category 2 – Causes serious eye damage.
MDI – Species: rabbit. Result: Irritating. Method: Draize test

Respiratory or Skin Sensitization
Skin Sensitization Category 1 – May cause an allergic skin reaction.
Respiratory Sensitization Category 1 – May cause allergy or asthma symptoms or breathing difficulties if inhaled.
MDI – Species: guinea pig. Result: sensitizing. Method: Buehler test.

Germ Cell Mutagenicity
Available studies have not indicated this material to be a mutagen.

Carcinogenicity
This product does not contain any component that is considered a human carcinogen by IARC, ACGIH, OSHA, or NTP.

Reproductive Toxicity
No data available

Specific Target Organ Toxicity (single exposure) (STOT-SE)
STOT-RE Category 3 (respiratory tract) – May cause respiratory irritation.

Specific Target Organ Toxicity (repeated exposure) (STOT-RE)
STOT-RE Category 2 (respiratory tract) – May cause damage to organs through prolonged or repeated exposure (respiratory tract)

Aspiration Hazard
No data available

11.2 Potential Health Effects:

Inhalation
Acute: Can irritate the mucous membranes in the respiratory tract causing runny nose, sore throat, coughing, chest discomfort, and shortness of breath.
Chronic: Repeated overexposure or a single large dose may cause sensitization (asthma or asthma-like symptoms) that may cause some individuals to react later to diisocyanate exposure at levels well below the TLV or PEL.

Skin
Acute: Can cause irritation with symptoms of reddening, itching and swelling.
Chronic: Prolonged contact can cause reddening, swelling, rash, and in some cases, skin sensitization.

Eye
Acute: Can cause irritation with symptoms of reddening, tearing, stinging, and swelling.
Chronic: Prolonged vapor contact may cause conjunctivitis.

Ingestion
Acute: May cause gastrointestinal discomfort, including abdominal pain, nausea, vomiting and diarrhea. Corrosion of the mouth, throat, and digestive tract may also occur.
Chronic: None known.

Other Information:
- Symptoms of exposure can range from having a cold to a possible asthma attack.
- Sensitized individuals react to very low levels of MDI.
- Skin exposure may aggravate existing dermatitis conditions.
- There are reports that chronic exposure to diisocyanates by inhalation may result in a permanent decrease in lung function.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Ecotoxicity:
Toxicity to fish: LC50 (24 h) > 500 mg/l, Brachydanio rerio (static)
Aquatic invertebrates: EC50 (24 h) > 500 mg/l, Daphnia magna
Aquatic plants: EC0 (72 h) 1,640 mg/l (growth rate), Scenedesmus subspicatus (OECD Guideline 201, static)

12.2 Persistence and degradability:
This mixture is not readily biodegradable.
0 % BOD of the ThOD (28 d) (OECD Guideline 302 C) (aerobic, activated sludge)

12.3 Bioaccumulative potential:
Significant accumulation on organisms is not to be expected.
12.4 Mobility in soil:
The substance will not evaporate into the atmosphere from the water surface. Adsorption to solid soil phase is not expected.
12.5 Other adverse effects:
No data available.

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Procedure for handling empty or partially used disposable cylinders:
Versi-Foam® is best disposed of as solid material as opposed to the liquid chemicals. To that end, we recommend the following:

Empty remaining chemicals, if any, into a waste container. Make sure that the waste container contains both "A" and "B" chemicals. They do not have to be on ratio, but they both must be present. Mix the waste chemical blend with a stick so that it becomes a solid substance. This substance can then be disposed of as solid industrial waste.

VENTING OF THE TANKS: Turn the tanks upside down. Open tank valves. Leave in this position for 24 hours. Any remaining pressure should be evacuated from the tanks within this period of time.

If only one of the chemicals remains within the container, the chemical must be absorbed and possibly neutralized before disposal. **For "A" chemical remaining, follow this procedure:** Always wear respiratory protection. After venting tanks, empty "A" chemical into a waste container. Absorb chemical with a dry oil-absorbent material (for example sawdust or vermiculite). Remove to an outdoor or extremely well ventilated area. Decontaminate with solution of 90-95 parts water, 2–8 parts aqueous ammonia solution and .03-.05 parts liquid detergent. Be sure to add 10%-20% of this decontamination solution to the absorbed chemical. DO NOT SEAL THE CONTAINER. Allow to stand for 72 to 96 hours. Dispose of as solid industrial waste.

Waste, Residue, or Chemical: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. The preferred option for disposal is sending waste to a licensed and permitted recycler, reclaimer, incinerator, or other thermal destruction device. All disposal methods must be in compliance with local, state, national, and international regulations. Compliance with these regulations is the sole responsibility of the waste generator. RHH FOAM SYSTEMS, INC. HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION.

Container: Containers may contain residue and should be treated with the same considerations as the product itself. Dispose of vented empty tanks as ordinary industrial waste. Check with your City Department of Public Works for more information.

Procedure for handling empty refillable tanks:
Refillable tanks, measuring in 9 gallons or larger, should be returned to RHH Foam Systems Inc., where they will be cleaned, refilled and re-distributed.

SECTION 14 – TRANSPORT INFORMATION

Note: The U.S. Department of Transportation requires that any person preparing a hazardous material for shipping, including packing, marking, labeling and preparation of documents must be trained in accordance with 49 CFR Parts 100 – 185. Contact the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration online at www.phmsa.dot.gov, by phone at 1-800-467-4922 or email phmsa.pipelinesafety@dot.gov.

	VersiFoam Systems 10, 33, and 2.8 pcf Refillable	VersiFoam System I HD
DOT (Ground)	**UN #:** UN3500 **Shipping Name:** Chemical Under Pressure, N.O.S. (Nitrogen) **Shipping Class:** 110 **Hazard Class:** 2.2 **Packing Group:** N/A	**UN #:** UN3500 **Shipping Name:** Chemical Under Pressure, N.O.S. (Nitrogen), LTD QTY **Shipping Class:** 55 **Hazard Class:** 2.2 **Packing Group:** N/A
IMDG (Ocean)	**UN #:** UN3500 **Shipping Name:** Chemical Under Pressure, N.O.S. (Nitrogen) **Hazard Class:** 2.2 **Packing Group:** N/A **Marine Pollutant:** No	**UN #:** UN1950 **Shipping Name:** Aerosols **Hazard Class:** 2.2 **Packing Group:** N/A **Marine Pollutant:** No
IATA (Air)	**UN #:** UN3500 **Shipping Name:** Chemical Under Pressure, N.O.S. (Nitrogen) **Hazard Class:** 2.2 **Packing Group:** N/A **Packing Instructions:** 218	**UN #:** UN1950 **Shipping Name:** Aerosols, non-flammable **Hazard Class:** 2.2 **Packing Group:** N/A **Packing Instructions:** 203
Bulk Transport (>5000 lb)	**UN #:** UN3500 **Shipping Name:** Chemical Under Pressure, N.O.S. (Nitrogen), RQ (Methylene Diphenyl Diisocyanate) **Hazard Class:** 2.2 **Packing Group:** N/A **Special Precautions:** None known	***Note:*** *Additional certifications are required to ship hazardous material by ocean (IMDG) and air (IATA).*

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, health, and environmental regulations/legislations specific for the substance or mixture:

CERCLA Hazardous Substances (40 CFR 302):
Methylene Diphenyl Diisocyanate (CAS# 101-68-8) RQ = 5,000 lbs

SARA 311/312:

Polymeric MDI	Acute health hazard. Chronic health hazard.
4,4'- Diphenylmethane Diisocyanate (MDI)	Acute health hazard. Chronic health hazard.
Trans-1,3,3,3-Tetrafluoroprop-1-ene	Acute health hazard. Sudden release of pressure hazard.

SARA 313:
Methylene Diphenyl Diisocyanate (CAS# 101-68-8)
Polymeric MDI (CAS# 9016-87-9)

15.2 US State Regulations:

STATE RIGHT-TO-KNOW: To the best of our knowledge, this product does not contain any of the listed chemical known to the State of California to cause cancer, birth defects, or other reproductive harm. (California Health and Safety Code Section 25249.6).

15.3 Canadian Regulations :

DSL: All components of this product are listed on, or exempt from the DSL.

15.4 International Inventories:*

United States: All components of this product are listed on the TSCA inventory.
*=Although a chemical may be listed on a country's inventory, it may not indicate a hazard or regulatory control for use.

SECTION 16 – OTHER INFORMATION

16.1 HMIS and NFPA RATINGS:

HMIS Classification	**NFPA Ratings**
Health: 2*	Health: 2
Flammability: 1	Flammability: 1
Reactivity: 1	Instability: 1
	Special: None

*= Chronic

16.2 EU CLP Relevant Phrases:
Available on request.

16.3 Preparation By:
I.H. Department

16.4 Preparation Date
June 10, 2022

16.5 Last Revision Date
August 22, 2024

16.6 Disclaimer/Statement of Liability

The data in this Safety Data Sheet are offered for your consideration, investigation and verification. The data is presented in good faith and was obtained from sources RHH Foam Systems believes to be reliable. RHH Foam Systems, however, makes no representation as to the completeness or accuracy. RHH Foam Systems makes no warranty, express or implied, with respect to the data contained herein. RHH Foam Systems cannot anticipate all conditions under which this data and the product may be used. The conditions of handling, storage, use, and disposal of the product are beyond RHH Foam Systems control. Thus, we expressly disclaim responsibility or liability for any loss, damage or expense arising out of reliance on the information contained herein. You are advised to make your own determination as to safety, suitability and appropriate manner of handling, storage, use and disposal.

SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

1.1 Product Identifier: VersiFoam Systems 10, 33, System I HD, & 2.8 pcf Refillable – High Density, HFO – **Component B**

1.2 Relevant identified uses of the substance or mixture and uses advised against:
General Use: Component in low pressure polyurethane foam, Component B, for professional use only.
Uses Advised Against: No further information available.

1.3 Details of the supplier of the Safety Data Sheet:
Manufacturer/Supplier: RHH Foam Systems, Inc.
5500 South Westridge Drive
New Berlin, WI 53151-7900 USA
1-800-657-0702 / 262-754-8088

1.4 Emergency telephone numbers:
Within the USA, Canada, Puerto Rico and the US Virgin Islands: ChemTel (contract #MIS2000665) (24 hours) 1-800-255-3924
Australia: ChemTel (contract #MIS2000665) (24 hours) 1-300-954-583
Brazil: ChemTel (contract #MIS2000665) (24 hours) 0-800-591-6042
China: ChemTel (contract #MIS2000665) (24 hours) 400-120-0751
India: ChemTel (contract #MIS2000665) (24 hours) 000-800-100-4086
Mexico: ChemTel (contract #MIS2000665) (24 hours) 01-800-099-0731
All other International countries: ChemTel (contract # MIS2000665) (24 hours) 001-813-248-0585

SECTION 2 – HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture:
Product definition: Mixture
OSHA/GHS Classification: Gases Under Pressure – Compressed Gas
Skin Irritant Category 2
Skin Irritant Category 2B
Specific Target Organ Toxicity – Single Exposure Category 3

2.2 Label elements: (Regulation (EC) No 1272/2008)
Hazard Symbols:

Signal Word: DANGER
Hazard Statement(s):
H280: Contains gas under pressure; may explode if heated
H315: Causes skin irritation.
H320: Causes eye irritation.
H335: May cause respiratory irritation.
Precautionary Statement(s):
P102: Keep out of reach of children.
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P251: Pressurized container: Do not pierce or burn, even after use.
P261: Avoid breathing vapor, mist, or spray.
P264: Wash hands thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P281: Wear protective gloves/protective clothing/eye protection/ face protection.
P285: In case of inadequate ventilation: wear respiratory protection.
P302+P352+P332+P313: IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical attention.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical attention.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P312: If experiencing respiratory symptoms or feel unwell: Call a POISON CENTER or doctor.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P362: Take off contaminated clothing and wash it before reuse.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.

P410: Protect from sunlight.
P411: Store at temperatures not exceeding 120°F (48°C).
P412: Do not expose to temperatures exceeding 250°F (121°C).
P501: Dispose of contents/container in accordance with local, state, national, and international regulations.

Hazards Not Otherwise Classified:

Contains substances that can displace oxygen in the air.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components	CAS #	% by Weight
Catalyst Blend	Proprietary	<4%
Tetrafluoropropene,	28118-24-9	15-25%

SECTION 4 – FIRST-AID PROCEDURES

4.1 Description of first aid measures:

Eyes: Flush eyes with large amounts of water for at least 15 minutes. Get medical attention.

Skin: Wash skin thoroughly with large amounts of water. Consult a physician if irritation develops or persists. Remove contaminated clothing and wash before re-use.

Inhalation: If affected by vapors, remove patient to fresh air and get medical attention. Give oxygen or artificial respiration if necessary. Do not give stimulants. Epinephrine and similar drugs may adversely affect the heart due to a possible risk of eliciting cardiac dysrhythmias.

Ingestion: If swallowed, do not induce vomiting. Get medical attention immediately. The hazard of aspirating material into the lungs is greater than the hazard associated with allowing material to progress through the intestinal tract.

SECTION 5 – FIRE-FIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media: Carbon Dioxide, Dry Chemical, or Alcohol Foam are preferred. Water is not recommended but may be applied in large amounts as a fine spray if other extinguishing media are not available.
Unsuitable extinguishing media: Do not use direct water stream as it may spread fire.

5.2 Special hazards arising from the substance or mixture:

May emit toxic or irritation fumes if burned. Sealed containers may build pressure if exposed to high temperatures as experienced in a fire. If safe to do, spray containers exposed to fire and heat with water to keep cool.

5.3 Protective equipment / Precautions for fire-fighters:

Fire-fighters should wear full protective fire-fighting gear including a full face piece, positive-pressure self-contained breathing apparatus (SCBA). Avoid contact with this material during fire-fighting operations. Consider fighting fire from a remote location with unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from area if you hear rising sound from a venting safety device or the container discolors.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Always clear area and use protective equipment (as recommended in Section 8) before attempting to stop spill. Wear suitable chemical resistant clothing including foot protection. Always wear eye protection and gloves when handling this product. Avoid any contact. Barricade area. Clear non-emergency personnel from area. Keep upwind of spill. Ventilate area of leak or spill. The area must be evacuated and reentered by persons equipped for decontamination.

6.2 Environmental precautions:

Contain liquid to prevent contamination of soil, surface water or ground water. Keep out of ditches, sewers, and water supplies.

6.3 Methods and materials for containment and cleaning up:

Contain and absorb spill with inert absorbent material. Shovel material into properly labeled containers for disposal.

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling:

Wear proper protective equipment (as recommended in Section 8) and provide proper ventilation during and after application. Avoid contact of this product with water at all times during handling and storage. Do not eat, drink, or smoke where this product is used. Keep equipment clean and use disposable containers and tools whenever possible.

7.2 Conditions for safe storage, including any incompatibilities:

Store in a cool, covered, well-ventilated place away from direct sunlight. Keep container tightly closed and store locked up in an upright position. Do not expose to moisture. Do not expose to excessive heat. Do not allow to freeze. Ideal storage temperatures are 65° to 90°F (18° to 32°C). **Keep out of reach of children.**

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

Ingredient	CAS #	OSHA PEL	ACGIH TLV	WEEL TWA
Tetrafluoropropene	29118-24-9			800 ppm

8.2 Exposure controls:

Engineering controls:
Mechanical or local exhaust is required to keep airborne concentrations at safe levels. Exhaust systems should be monitored regularly in case of obstruction.

Protective equipment:

Eye protection: Wear chemical resistant safety goggles.

Hand protection: Wear chemically resistant gloves such as: nitrile/butadiene (NBR), neoprene, butyl rubber or PVC (vinyl). An individual's body reaction to specific glove materials should be considered during the selection process and verified prior to the application. The break through time of the selected glove must be greater than the intended period of use.

Other protective equipment: Wear chemical resistant clothing such that no skin is exposed.

Respiratory protection: If concentration levels exceed exposure limits, use a NIOSH approved air-purifying respirator equipped with an organic vapor cartridge and particle filter (P100). Employers are required to implement a cartridge change-out schedule for such respirators. If concentration levels are unknown or extremely high use a positive-pressure self-contained breathing apparatus.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance: Clear to Dark Amber liquid.
Odor: Faint ethereal odor.
Odor Threshold: No Data.
pH: 10.05.
Melting Point: No Data.
Freezing Point: No Data.
Boiling Point: No Data.
Flash Point: >300°F (149°C)
Evaporation Rate: Faster than n-butyl acetate.
LFL/UFL: No Data
Vapor Pressure: <25 psia @ 25°C (77°F)
Vapor Density: Heavier than air
Relative Density: 1.16 @ 25°C (77°F)
Solubility: Negligibly soluble in water (<0.1%)
Partition Coefficient: No Data
Auto-Ignition Temp.: No Data
Viscosity: No Data

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity:
Polyols react with isocyanates generating heat and gases. If product is contaminated pressure may build to hazardous levels in sealed containers.

10.2 Chemical stability:
Stable under recommended storage conditions (per section 7).

10.3 Possibility of hazardous reactions:
Hazardous polymerization will not occur.

10.4 Conditions to avoid:
Open flames, welding arcs, and other high temperature source can induce thermal decomposition.

10.5 Incompatible materials:
Avoid long storage in aluminum, other alkali or alkaline earth metals, or their alloys.

10.6 Hazardous decomposition products:
Carbon monoxide, carbon dioxide, hydrogen chloride and/or hydrogen fluoride, traces of phosphorous oxides, and traces of carbonyl halides such as phosgene.

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Likely Routes of Exposure: Inhalation, ingestion, skin, and eye contact.

Toxicity Data:
Oral – LD50 (Estimated) = >3900 mg/kg
Dermal – LD50 (Estimated) = >2300 mg/kg

Effects and Symptoms:

Immediate: Liquid contact can cause eye damage. Vapors may be irritating to eyes. Skin contact may cause irritation. Excessive inhalation of Tetrafluoropropene vapors can cause respiratory irritation, dizziness, and drowsiness. They may even cause unconsciousness or asphyxiation.

Delayed: If not properly cared for areas of skin exposure may develop serious irritation and drying.

Chronic: Ingestion may be damaging to fertility and the unborn child. Consult a physician if exposed. . Overexposure to Tetrafluoropropene can cause cardiac sensitization to epinephrine.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Ecotoxicity:
No data available

12.2 Persistence and degradability:
No data available

12.3 Bioaccumulative potential:
No data available.

12.4 Mobility in soil:
No data available

12.5 Results of PBT and vPvB assessment:
No data available.

12.6 Other adverse effects:
This product contains a substance that may be toxic to fish and aquatic organisms.

Note: While there is no data on the ecotoxicity of this product it is always best practice, when handling any chemical, to prevent it from entering drains, sewers, soil, or any bodies of water.

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Procedure for handling empty or partially used disposable cylinders:
Versi-Foam® is best disposed of as solid material as opposed to the liquid chemicals. To that end, we recommend the following:

Empty remaining chemicals, if any, into a waste container. Make sure that the waste container contains both "A" and "B" chemicals. They do not have to be on ratio, but they both must be present. Mix the waste chemical blend with a stick so that it becomes a solid substance. This substance can then be disposed of as solid industrial waste.

VENTING OF THE TANKS: Turn the tanks upside down. Open tank valves. Leave in this position for 24 hours. Any remaining pressure should be evacuated from the tanks within this period of time.

If only one of the chemicals remains within the container, the chemical must be absorbed and possibly neutralized before disposal. **For "B" chemical remaining, follow this procedure:** After venting tanks, empty "B" chemical into waste container. Absorb with dry oil-absorbent material (for example sawdust or vermiculite). Dispose of as ordinary industrial waste.

Waste, Residue, or Chemical: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. The preferred option for disposal is sending waste to a licensed and permitted recycler, reclaimer, incinerator, or other thermal destruction device. All disposal methods must be in compliance with local, state, national, and international regulations. Compliance with these regulations is the sole responsibility of the waste generator. RHH FOAM SYSTEMS, INC. HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION.

Container: Containers may contain residue and should be treated with the same considerations as the product itself. Dispose of vented empty tanks as ordinary industrial waste. Check with your City Department of Public Works for more information.

Procedure for handling empty refillable tanks:
Refillable tanks, measuring in 9 gallons or larger, should be returned to RHH Foam Systems Inc., where they will be cleaned, refilled and re-distributed.

SECTION 14 – TRANSPORT INFORMATION

Note: The U.S. Department of Transportation requires that any person preparing a hazardous material for shipping, including packing, marking, labeling and preparation of documents must be trained in accordance with 49 CFR Parts 100 – 185. Contact the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration online at www.phmsa.dot.gov, by phone at 1-800-467-4922 or email phmsa.pipelinesafety@dot.gov.

	VersiFoam Systems 10, 33, and 2.8 pcf Refillable	VersiFoam System I HD
DOT (Ground)	**UN #:** UN3500 **Shipping Name:** Chemical Under Pressure, N.O.S. (Nitrogen) **Shipping Class:** 110 **Hazard Class:** 2.2 **Packing Group:** N/A	**UN #:** UN3500 **Shipping Name:** Chemical Under Pressure, N.O.S. (Nitrogen), LTD QTY **Shipping Class:** 55 **Hazard Class:** 2.2 **Packing Group:** N/A
IMDG (Ocean)	**UN #:** UN3500 **Shipping Name:** Chemical Under Pressure, N.O.S. (Nitrogen) **Hazard Class:** 2.2 **Packing Group:** N/A **Marine Pollutant:** No	**UN #:** UN1950 **Shipping Name:** Aerosols **Hazard Class:** 2.2 **Packing Group:** N/A **Marine Pollutant:** No
IATA (Air)	**UN #:** UN3500 **Shipping Name:** Chemical Under Pressure, N.O.S. (Nitrogen) **Hazard Class:** 2.2 **Packing Group:** N/A **Packing Instructions:** 218	**UN #:** UN1950 **Shipping Name:** Aerosols, non-flammable **Hazard Class:** 2.2 **Packing Group:** N/A **Packing Instructions:** 203
Bulk Transport (>5000 lb)	**UN #:** UN3500 **Shipping Name:** Chemical Under Pressure, N.O.S. (Nitrogen), RQ (Methylene Diphenyl Diisocyanate) **Hazard Class:** 2.2 **Packing Group:** N/A **Special Precautions:** None known	

Note: Additional certifications are required to ship hazardous material by ocean (IMDG) and air (IATA).

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, health, and environmental regulations/legislations specific for the substance or mixture:
(Not meant to be all-inclusive – selected regulations represented)

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown below. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure that its activities comply with federal, state, provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state, provincial, and local laws and regulations.

U.S. Federal Regulations:

SARA Hazard Category: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1984 (SARA Title III) and is considered, under applicable definitions, to meet the following categories

An immediate health hazard
A delayed health hazard

TSCA (Toxic Substances Control Act): Regulations 40 CFR 710 – All ingredients are on the TSCA Section 8 (b) Inventory.

Canadian Regulations:

The Workplace Hazardous Materials Information System (WHMIS) Classifications for this product are:

D1B
D2A
D2B

SECTION 16 – OTHER INFORMATION

NFPA Ratings:

Health	2
Flammability	1
Reactivity	0

Other Information: The reaction of polyols and isocyanates generate heat. Contact of the reacting materials with skin or eyes can cause severe burns and may be difficult to remove from the affected areas. In addition, such contact increases the risk of isocyanate vapors.

Date of Preparation/Last Revision: August 22, 2024
Prepared by: RHH Foam Systems, Inc.

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.