

# SAFETY DATA SHEET



## Section 1. Identification

**Product Name: HM 45 (A-Side)**  
**VersaFlex Incorporated**  
**686 S. Adams Street**  
**Kansas City, KS 66105**  
**913.321.9000**

Spill, leak, fire, exposure, or accident, call  
CHEMTREC day or night  
Domestic North America **800.424.9300**  
International **703.527.3887**  
**e-mail: ehs@versaflex.com**

## Section 2. Hazards Identification

### GHS Ratings:

|                             |              |  |
|-----------------------------|--------------|--|
| Inhalation Toxicity         | Acute Tox. 3 | Gases>500+<=2500ppm, Vapors>2+<=10mg/l,<br>Dusts&mists>0.5+<=1mg/l                                 |
| Skin corrosive              | 2            | Reversible adverse effects in dermal tissue, Draize score: >= 2.3 < 4.0 or persistent inflammation |
| Eye corrosive               | 2A           | Eye irritant: Subcategory 2A, Reversible in 21 days  |
| Respiratory sensitizer      | 1            | Respiratory sensitizer   |
| Skin sensitizer             | 1            | Skin sensitizer  |
| Organ toxin single exposure | 3            | Transient target organ effects- Narcotic effects- Respiratory tract irritation                     |

### GHS Hazards

|      |   |
|------|---|
| H315 | Causes skin irritation  |
| H317 | May cause an allergic skin reaction                                       |
| H319 | Causes serious eye irritation   |
| H331 | Toxic if inhaled  |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled |
| H335 | May cause respiratory irritation  |
| H336 | May cause drowsiness or dizziness   |

### GHS Precautions

|      |   |
|------|---|
| P261 | Avoid breathing dust/fume/gas/mist/vapours/spray                          |
| P264 | Wash exposed skin thoroughly after handling                               |
| P271 | Use only outdoors or in a well-ventilated area                            |
| P272 | Contaminated work clothing should not be allowed out of the workplace     |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection |
| P285 | In case of inadequate ventilation wear respiratory protection             |
| P311 | Call a POISON CENTER or doctor/physician                                  |
| P312 | Call a POISON CENTER or doctor/physician if you feel unwell               |
| P321 | Specific treatment (as detailed on this label)                            |

|                        |   |
|------------------------|---|
| P362                   | Take off contaminated clothing and wash before reuse  |
| P363                   | Wash contaminated clothing before reuse   |
| P302+P352<br>P304+P340 | IF ON SKIN: Wash with soap and water<br>IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing |
| P304+P341              | IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing              |
| P305+P351+P338         | IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing       |
| P332+P313              | If skin irritation occurs: Get medical advice/attention   |
| P333+P313              | If skin irritation or a rash occurs: Get medical advice/attention   |
| P337+P313<br>P342+P311 | Get medical advice/attention<br>Call a POISON CENTER or doctor/physician  |
| P405                   | Store locked up   |
| P403+P233              | Store in a well ventilated place. Keep container tightly closed   |
| P501                   | Dispose of contents/container in accordance with applicable regional, national and local laws and regulations.                          |

Danger



### Section 3. Composites/Information on Ingredients

| Chemical Name / CAS No.  | OSHA Exposure Limits   | ACGIH Exposure Limits | Other Exposure Limits |
|--|--|-----------------------|-----------------------|
| Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane<br>39323-37-0<br>70 to 80% | OELs not established   | OELs not established  |                       |
| Isophorone diisocyanate<br>4098-71-9<br>20 to 30%  | vacated PELs - 0.02 ppm<br>STEL vacated PELs - 0.005 ppm TWA | TLV - 0.005 ppm TWA   |                       |

## Section 4. First-aid Measures

Move exposed person to fresh air. Get medical attention immediately. Treatment is symptomatic for primary irritation or bronchospasm. If breathing is labored, oxygen should be administered by qualified personnel.

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

After contact with skin, wash immediately with plenty of warm, soapy water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. A poly-glycol based skin cleanser or corn oil may be more effective than soap and water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Provided the patient is conscious, wash out mouth with water. Get medical attention if symptoms appear.

## Section 5. Fire-fighting Measures

**Extinguishing Media:** Foam, CO<sub>2</sub> or dry powder. (**Note:** Water may be used if no other available media is available **AND** used in copious quantities. Reaction between water and hot material may be vigorous. Prevent washings from entering water courses, keep fire exposed containers cool by spraying with water.)

**Caution:**

Due to reaction with water producing CO<sub>2</sub> gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Containers may burst if overheated.

**Hazardous decomposition products:**

Combustion products may include: carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons and HCN.

**Special protective actions for fire-fighters:**

Promptly isolate the scene by removing all persons from the vicinity of the incident, if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters:**

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. PVC boots, gloves, safety helmet and protective clothing should be worn.

## Section 6. Accidental Release Measures

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. Do not breathe vapor or mist. Provide adequate ventilation.

Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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 (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and Storage

Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing.

Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and may be hazardous.

Material is to be stored in accordance with local regulations. Store in original container protected from direct sunlight in a dry and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. 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 reseal contaminated containers. Uncontaminated containers, free of moisture, may be resealed only after placing under a nitrogen blanket. Do not store in unlabeled containers.

Use appropriate containment to avoid environmental contamination.

Unsuitable containers: Do not store in containers made of copper, copper alloys or galvanized surfaces.

## Section 8. Exposure Controls/Personal Protection

| Chemical Name / CAS No.   | OSHA Exposure Limits   | ACGIH Exposure Limits | Other Exposure Limits |
|---|--|-----------------------|-----------------------|
| Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane<br>39323-37-0 | OELs not established   | OELs not established  |                       |
| Isophorone diisocyanate<br>4098-71-9  | vacated PELs - 0.02 ppm<br>STEL vacated PELs - 0.005 ppm TWA | TLV - 0.005 ppm TWA   |                       |

**Engineering Controls:** Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Smell is not an adequate indicator of hazard.

Medical supervision of all employees who handle or come in contact with respiratory sensitizers is recommended. Personnel with a history of asthma-type conditions, bronchitis or skin sensitization conditions should not work with this material.

**Ventilation:** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Protective Gear:** In case of inadequate ventilation, wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

## Section 9. Physical and Chemical Properties

|   |   |
|---|---|
| <b>Appearance:</b> Pale yellow to amber   | <b>Odor:</b> Faint odor                                 |
| <b>Vapor Pressure:</b> No Data            | <b>Odor threshold:</b> No Data                          |
| <b>pH:</b> No Data                        | <b>Melting point:</b> No Data                           |
| <b>Freezing point:</b> No Data            | <b>Flash point:</b> 311°F, 155°C                        |
| <b>Evaporation rate:</b> No Data          | <b>Flammability:</b> No Data                            |
| <b>Explosive Limits:</b> No Data          | <b>Vapor pressure:</b> No Data                          |
| <b>Vapor Density:</b> No Data             | <b>Specific Gravity:</b> 1.03                           |
| <b>Solubility:</b> No Data                | <b>Partition coefficient (n-octanol/water):</b> No Data |
| <b>Boiling range:</b> No Data             | <b>Autoignition temperature:</b> No Data                |
| <b>Decomposition temperature:</b> No Data | <b>Viscosity:</b> N/A                                   |
| <b>% Weight Volatile (VOC):</b> 0.00      |   |

## Section 10. Stability and Reactivity

**Chemical Stability:** Stable at room temperature. No specific test data related to reactivity is available for this product or its ingredients.

**Hazardous reactions:** Reaction with water (moisture) produces CO<sub>2</sub> gas. An exothermic reaction with materials containing active hydrogen groups can occur. The reaction becomes progressively more vigorous and can be violent at higher temperatures if the miscibility of the reaction partners is good or is supported by stirring or by the presence of solvents. This material is insoluble with, and heavier than, water and sinks to the bottom, but reacts slowly at the interface. A solid water-insoluble layer of polyurea is formed at the interface by liberating carbon dioxide. The material will react with water, alcohols, amines, bases and acids.

## Section 11. Toxicological Information

Inhalation Toxicity LC50: 1mg/L

### Routes of Entry

Inhalation      Skin Contact      Eye Contact

### Target Organs

Eyes      Skin      Respiratory System

### Effects of Overexposure

## Carcinogenicity

| <u>CAS Number</u> | <u>Description</u> | <u>% Weight</u> | <u>Carcinogen Rating</u> |
|-------------------|--------------------|-----------------|--------------------------|
| None              |                    |                 | No Data                  |

## Section 12. Ecological Information

Only component information is listed, if any. No testing has been performed on this mixture as it relates to ecological impact.

### Component Ecotoxicity

Isophorone diisocyanate 72 Hr EC50 Desmodemus subspicatus: 118.7 mg/L

## Section 13. Disposal Considerations

The generation of waste should be avoided or minimized by using excess product in an alternate, beneficial application wherever possible.

Empty containers may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material, runoff and contact with soil, waterways, drains and sewers.

**Disposal should be in accordance with applicable regional, national and local laws and regulations.**

## Section 14. Transport Information

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

| <u>Agency</u> | <u>Proper Shipping Name</u> | <u>UN Number</u> | <u>Packing Group</u> | <u>Hazard Class</u> |
|---------------|-----------------------------|------------------|----------------------|---------------------|
| DOT           | Not Regulated               |                  |                      |                     |
| IATA          | Not Regulated               |                  |                      |                     |
| IMDG          | Not Regulated               |                  |                      |                     |

## Section 15. Regulatory Information

**State of California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): WARNING!**

This product contains the following chemicals which are listed by the State of California as carcinogenic or a reproductive toxin:

- None

### SARA Title III Section 313 Reportable Substances

If listed below, components are subject to the reporting requirements of Section 313 of Title II of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372:

4098-71-9 Isophorone diisocyanate 20 to 30 %

**Toxic Substances Control Act (TSCA)**

If listed below, non-proprietary substances are subject to export notification under Section 12 (b) of TSCA:

- None



WHMIS Symbol(s)

**Section 16. Other Information**

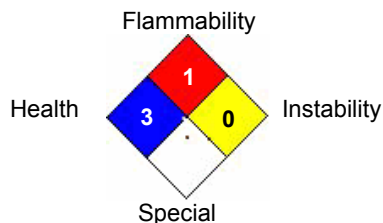
The customer is responsible for determining the proper PPE code for this material within their respective process.

**Hazardous Material Information System (HMIS)**

|                            |   |          |
|----------------------------|---|----------|
| <b>HEALTH</b>              | * | <b>3</b> |
| <b>FLAMMABILITY</b>        |   | <b>1</b> |
| <b>PHYSICAL HAZARD</b>     |   | <b>0</b> |
| <b>PERSONAL PROTECTION</b> |   | <b>X</b> |

**HMIS & NFPA Hazard Rating Legend**  
 \* = Chronic Health Hazard  
 0 = INSIGNIFICANT  
 1 = SLIGHT  
 2 = MODERATE  
 3 = HIGH

**National Fire Protection Association (NFPA)**



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Reviewer Revision 3

**Notice to reader:**

While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PUPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behavior of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behavior should be determined by the user and made known to handlers, processors and end users.