

# SAFETY DATA SHEET



## Section 1. Identification

**Product Name: TC-H41 (Hardener)**  
**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:

Oral Toxicity	Acute Tox. 4	Oral>300+<=2000mg/kg
Skin corrosive	1C	Destruction of dermal tissue: Exposure < 4 hours Observation < 14 days, visible necrosis in at least one animal
Eye corrosive	1	Serious eye damage: Irreversible damage 21 days after exposure, Draize score: Corneal opacity >= 3, Iritis > 1.5
Organ toxin single exposure	3	Transient target organ effects- Narcotic effects- Respiratory tract irritation

### GHS Hazards

H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H335	May cause respiratory irritation

### GHS Precautions

P260	Do not breathe dust/fume/gas/mist/vapours/spray
P261	Avoid breathing dust/fume/gas/mist/vapours/spray
P264	Wash exposed skin thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P271	Use only outdoors or in a well-ventilated area
P280	Wear protective gloves/protective clothing/eye protection/face protection
P310	Immediately 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)
P330	Rinse mouth
P363	Wash contaminated clothing before reuse

P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340	IF INHALED: 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
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
Diethyltoluenediamine 68479-98-1 80 to 90%	OELs not established	OELs not established	
1,2-Cyclohexanediamine 694-83-7 10 to 20%	OELs not established	OELs not established	

### Section 4. First-aid Measures

Move exposed person to fresh air. 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. 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:** Water, Foam, CO2 or dry powder.

**Caution:**

Heating or fire can release toxic gas.

**Hazardous decomposition products:**

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

**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 into eyes.

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 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
Diethyltoluenediamine 68479-98-1	OELs not established	OELs not established	
1,2-Cyclohexanediamine 694-83-7	OELs not established	OELs not established	

**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.

**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

<p><b>Appearance:</b> Pale yellow to amber</p> <p><b>Vapor Pressure:</b> No Data</p> <p><b>pH:</b> No Data</p> <p><b>Freezing point:</b> No Data</p> <p><b>Evaporation rate:</b> No Data</p> <p><b>Explosive Limits:</b> No Data</p> <p><b>Vapor Density:</b> No Data</p> <p><b>Solubility:</b> No Data</p> <p><b>Boiling range:</b> No Data</p> <p><b>Decomposition temperature:</b> No Data</p> <p><b>% Weight Volatile (VOC)</b> 0.00</p>	<p><b>Odor:</b> Amine-like</p> <p><b>Odor threshold:</b> No Data</p> <p><b>Melting point:</b> No Data</p> <p><b>Flash point:</b> &gt; 200 F, 93 C</p> <p><b>Flammability:</b> No Data</p> <p><b>Vapor pressure:</b> No Data</p> <p><b>Specific Gravity</b> 1.008</p> <p><b>Partition coefficient (n- octanol/water):</b> No Data</p> <p><b>Autoignition temperature:</b> No Data</p> <p><b>Viscosity:</b> N/A</p>
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## 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:** None known. Stable under normal conditions.

## Section 11. Toxicological Information

Oral Toxicity LD50: 767mg/kg  
Dermal Toxicity LD50: 2,001mg/kg  
Inhalation Toxicity LC50: 116mg/L

### Routes of Entry

Inhalation      Skin Contact      Eye Contact      Ingestion

### 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

## 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	Corrosive liquids, n.o.s. "Amine Hardener"	UN1760	III	8
IMDG	Corrosive liquids, n.o.s. "Amine Hardener"	UN1760	III	8
IATA	Corrosive liquids, n.o.s. "Amine Hardener"	UN1760	III	8

## 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

### WHMIS Symbol(s)

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30, unless listed below:

- None

This product contains the following substance(s), which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372:

- None

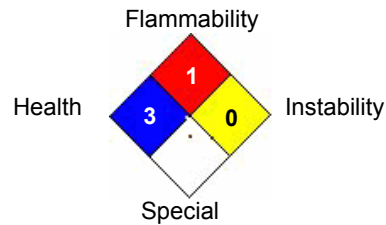
## Section 16. Other Information

**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>	<input type="text" value="3"/>	<b>HMIS &amp; NFPA Hazard Rating Legend</b> * = Chronic Health Hazard <b>0 = INSIGNIFICANT</b> <b>1 = SLIGHT</b> <b>2 = MODERATE</b> <b>3 = HIGH</b>
<b>FLAMMABILITY</b>	<input type="text" value="1"/>	
<b>PHYSICAL HAZARD</b>	<input type="text" value="0"/>	
<b>PERSONAL PROTECTION</b>	<input checked="" type="checkbox"/>	

**National Fire Protection Association (NFPA)**



Date Prepared: 6/15/2015

Date revised: 2015-06-15

Reviewer Revision 2

### **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.