



**SAFETY DATA SHEET**  
According to the Hazard Communication Standard, 29 CFR 1910.1200

SDS # : 084026

**VULCAN 46**

Date of the previous version: 2015-06-02

Revision Date: 2015-10-13

Version 1.01

**1. IDENTIFICATION**Product identifier

Product name VULCAN 46

Other means of identification

Product Code(s) 084026

Number 8CU  
Substance/mixture MixtureRecommended use of the chemical and restrictions on use

Identified uses Heat transfer medium.

Uses advised against Do not use for any purpose other than the one for which it is intended

Details of the supplier of the safety data sheetSupplier Address TOTAL Specialties USA Inc  
1201 Louisiana Street, Suite 1800  
Houston, TX 77002  
Phone: +1 800 323 3198

Contact Point Technical/ HSEQ

E-mail Address USRMLIN-info@total.com

Emergency telephone numberCompany Phone Number +1 (908) 862-9300  
Emergency telephone CHEMTREC: +1 800 424 9300 (24h)**2. HAZARDS IDENTIFICATION**Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

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**Unknown Acute Toxicity**

Not applicable

**Hazards not otherwise classified (HNOC)**

None known

**Other information****Physical-Chemical Properties** Contaminated surfaces will be extremely slippery.**Environmental properties** Should not be released into the environment.**3. COMPOSITION/INFORMATION ON INGREDIENTS**

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). The product contains no substances which at their given concentration, are considered to be hazardous to health.

**4. FIRST AID MEASURES****First aid measures for different exposure routes**

<b>General advice</b>	IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.
<b>Eye contact</b>	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.
<b>Skin contact</b>	Remove contaminated clothing and shoes. Wash off with soap and water. Wash contaminated clothing before reuse. Get medical attention if irritation develops and persists.
<b>Inhalation</b>	Inhalation of high concentrations of vapor or aerosols may cause irritation of the upper respiratory tract. Get medical attention immediately if symptoms occur.
<b>Ingestion</b>	If swallowed, do not induce vomiting - seek medical advice. Clean mouth with water. Remove from exposure, lie down. Get medical attention immediately if symptoms occur. Never give anything by mouth to an unconscious person.

**Most important symptoms/effects, acute and delayed**

<b>Skin contact</b>	Not classified.
<b>Eye contact</b>	Not classified.
<b>Inhalation</b>	Not classified. Inhalation of vapors in high concentration may cause irritation of respiratory system.

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<b>Ingestion</b>	Not classified. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
<b>Symptoms</b>	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
<b>Indication of immediate medical attention and special treatment needed, if necessary</b>	
<b>Notes to physician</b>	Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

<b><u>Suitable Extinguishing Media</u></b>	Foam. Carbon dioxide (CO <sub>2</sub> ). ABC powder.
<b><u>Unsuitable Extinguishing Media</u></b>	Do not use a solid water stream as it may scatter and spread fire.
<b><u>Special Hazard</u></b>	Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration.
<b><u>Explosion Data</u></b>	
<b><u>Sensitivity to Mechanical Impact</u></b>	None.
<b><u>Sensitivity to Static Discharge</u></b>	None.
<b><u>Protective Equipment and Precautions for Firefighters</u></b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate non-essential personnel.

**6. ACCIDENTAL RELEASE MEASURES**

<b><u>Personal precautions, protective equipment and emergency procedures</u></b>	
<b><u>General Information</u></b>	Do not touch or walk through spilled material. Contaminated surfaces will be extremely slippery. Use personal protective equipment.
<b><u>Other information</u></b>	See Section 12 for additional information.
<b><u>Environmental precautions</u></b>	
<b><u>General Information</u></b>	Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained. Try to prevent the material from entering drains or water courses. See Section 12 for additional Ecological Information.
<b><u>Methods and materials for containment and cleaning up</u></b>	
<b><u>Methods for cleaning up</u></b>	Dam up. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Use mechanical means such as pumps, skimmers and absorbent materials.

**7. HANDLING AND STORAGE**

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### Precautions for safe handling

<b>Advice on safe handling</b>	Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice.
<b>Hygiene measures</b>	Regular cleaning of equipment, work area and clothing is recommended. Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. When using, do not eat, drink or smoke. Use personal protective equipment as required. Wash hands before breaks and at the end of workday. Avoid breathing vapors, mist or gas. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.

### Conditions for safe storage, including any incompatibilities

<b>Technical measures/Storage conditions</b>	Keep container tightly closed in a dry and well-ventilated place. Store in original container.
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<b>Materials to Avoid</b>	Strong oxidizing agents.
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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

<b>Exposure limits</b>	Mineral oil mist: USA: OSHA (PEL) TWA 5 mg/m <sup>3</sup> , NIOSH (REL) TWA 5 mg/m <sup>3</sup> , STEL 10 mg/m <sup>3</sup> , ACGIH (TLV) TWA 5 mg/m <sup>3</sup> (highly refined).
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### Exposure controls

<b>Engineering Measures</b>	Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.
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### Individual protection measures, such as personal protective equipment

<b>General Information</b>	If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.
<b>Eye/Face Protection</b>	If splashes are likely to occur, wear: Safety glasses with side-shields.
<b>Skin and body protection</b>	Wear suitable protective clothing. Protective shoes or boots.

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### Hand Protection

Protective gloves. Impervious gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

### Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

### Hygiene measures

Regular cleaning of equipment, work area and clothing is recommended. Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. When using, do not eat, drink or smoke. Use personal protective equipment as required. Wash hands before breaks and at the end of workday. Avoid breathing vapors, mist or gas. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical and chemical properties

Color amber  
 Physical State @20°C liquid  
 Odor Petroleum distillates  
 Odor Threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH		Not applicable	
Melting point/range		No information available	
Boiling point/boiling range		Not applicable	
Flash point	213 °C 415 °F		Cleveland Open Cup (COC) ASTM D 92 Cleveland Open Cup (COC). ASTM D 92.
Evaporation rate		No information available	
Flammability Limits in Air		No information available	
upper	-	No information available	
Lower	-	No information available	
Vapor Pressure		No information available	
Vapor density	> 8	(Air = 1)	
Relative density	0.870	@ 15 °C	ASTM D 1298
Density	870 kg/m <sup>3</sup>	@ 15 °C	ASTM D 1298
Water solubility		Not applicable	
Solubility in other solvents		No information available	

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<b>logPow</b>		No information available	
<b>Autoignition temperature</b>		No information available	
<b>Decomposition temperature</b>		No information available	
<b>Viscosity, kinematic</b>	47.0 mm <sup>2</sup> /s	@ 40 °C	ASTM D 445
<b>Explosive properties</b>	Not explosive		
<b>Oxidizing Properties</b>	Not applicable		
<b>Possibility of hazardous reactions</b>	Not applicable		
<b><u>Other information</u></b>			
<b>Specific Gravity</b>	0.870	@ 15 °C	ASTM D 1298
<b>Freezing Point</b>		No information available	
<b>Pour point</b>	-26		ASTM D 97

**10. STABILITY AND REACTIVITY**

<b><u>Reactivity</u></b>	No information available.
<b><u>Chemical stability</u></b>	Stable under recommended storage conditions.
<b><u>Possibility of hazardous reactions</u></b>	None under normal processing.
<b><u>Conditions to Avoid</u></b>	Heat, flames and sparks. Take precautionary measures against static discharges. Heat (temperatures above flash point), sparks, ignition points, flames, static electricity. Strong oxidizing agents.
<b><u>Incompatible Materials</u></b>	Strong oxidizing agents.
<b><u>Hazardous Decomposition Products</u></b>	Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot.

**11. TOXICOLOGICAL INFORMATION****Acute toxicity**

**Product Information** Product does not present an acute toxicity hazard based on known or supplied information.

**Information on likely routes of exposure**

**Principle Routes of Exposure** Inhalation, Ingestion, Eye contact, Skin contact.

**Numerical measures of toxicity****Information on toxicological effects**

**Symptoms** Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

**Skin contact** Not classified.

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<b>Eye contact</b>	Not classified.
<b>Inhalation</b>	Not classified. Inhalation of vapors in high concentration may cause irritation of respiratory system.
<b>Ingestion</b>	Not classified. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Sensitization</b>	Not classified as a sensitizer.
<b>Carcinogenicity</b>	This product is not classified carcinogenic.

<b>Mutagenicity</b>	This product is not classified as mutagenic.
<b>Reproductive toxicity</b>	This product does not present any known or suspected reproductive hazards.
<b>Aspiration Hazard</b>	Not classified.

**12. ECOLOGICAL INFORMATION****Ecotoxicity****Acute aquatic toxicity - Product Information**

No experimental data available

**Acute aquatic toxicity - Component Information**

No information available

**Chronic aquatic toxicity - Product Information**

No experimental data available

**Chronic aquatic toxicity - Component Information**

No information available

**Effects on terrestrial organisms** No experimental data available .**Persistence and degradability****General Information** No information available.**Bioaccumulative potential**

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**Product Information** No information available.**logPow** No information available**Component Information** No information available.**Mobility****Soil** No information available**Other adverse effects****General Information** No information available**13. DISPOSAL CONSIDERATIONS****Waste treatment****Waste Disposal Methods** Dispose of in accordance with local regulations.**Contaminated packaging** Dispose of in accordance with local regulations.**14. TRANSPORT INFORMATION****DOT** Not regulated**TDG** Not regulated**MEX** Not regulated**ICAO/IATA** Not regulated**IMDG/IMO** Not regulated**ADR/RID** Not regulated**ADN** Not regulated**15. REGULATORY INFORMATION**

**International Inventories** All the substances contained in this product are listed or exempted from listing in the following inventories:  
U.S.A. (TSCA)

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**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

Acute Health Hazard	no
Chronic Health Hazard	no
Fire Hazard	no
Sudden Release of Pressure Hazard	no
Reactive Hazard	no

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**U.S. State Regulations****California Proposition 65**

Unknown

**U.S. State Right-to-Know Regulations**

No information available

**16. OTHER INFORMATION**

<u>NFPA</u>	Health Hazard 0	Flammability 1	Instability 0	Physical and chemical hazards -
<u>HMIS</u>	Health Hazard 0	Flammability 1	Physical Hazard 0	Personal protection X

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NFPA (National Fire Protection Association)

HMIS (Hazardous Material Information System)

Hazards are split into categories each with a 0 to 4 rating, 0 meaning no hazard and 4 meaning high hazard

Revision Date: 2015-10-13  
 Revision Note: \*\*\* Indicates updated section  
 Abbreviations, acronyms

**Legend**

Section 8

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH - National Institute for Occupational Safety and Health

TLV - Threshold Limit Values

PEL - Permissible Exposure Limits

IDLH - Immediately Dangerous to Life or Health concentrations

TWA - Time Weight Average

STEL - Short Term Exposure Limits

S\* - Skin notation

TSCA - Toxic Substance Control Act

This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The regulatory texts indicated herein are intended to aid the user to fulfil his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.

End of the safety data sheet