

# Safety Data Sheet

According to OSHA HCS 2012 (29 CFR 1910.1200), Health Canada HPR (SOR/2015-17), and Mexico NOM-018-STPS-2015



## SECTION 1: Identification

**Product Identifier** **Mighty VS7 Cooling System Rapid Flush (CL103)**  
**Code** **831693**  
**Issue date** 30-Jan-2019  
**Relevant identified uses** Radiator Cleaner  
**Uses advised against** All others  
**24 Hour Emergency Phone Number** CHEMTREC: 1-800-424-9300  
CHEMTREC México 01-800-681-9531  
CHEMTREC Global +1 703 527 3887

Manufacturer/Supplier	SDS Information	Technical Information
Phillips 66 Spectrum Corporation 500 Industrial Park Drive Selmer, TN 38375-3276 United States of America	Phone: 800-762-0942 Email: SDS@P66.com URL: www.phillips66.com/SDS	1-800-264-6457 or +1-731-645-4972

## SECTION 2: Hazard identification

Classified Hazards	Hazards Not Otherwise Classified (HNOC)
H319 -- Eye damage/irritation -- Category 2A	PHNOC: None known  HHNOC: None known

### Label elements



#### WARNING

Causes serious eye irritation

Wash skin thoroughly after handling; Wear protective gloves/protective clothing and eye/face protection; IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing; If eye irritation persists: Get medical advice/attention

## SECTION 3: Composition/information on ingredients

Chemical Name	CASRN	Concentration
Diethylene glycol monobutyl ether	112-34-5	1-10
Ethanolamine	141-43-5	0.1-1
Sodium nitrite	7632-00-0	0.1-1

<sup>1</sup> All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## SECTION 4: First aid measures

**Eye Contact:** For direct contact, remove contact lenses if present and easy to do. Immediately hold eyelids apart and flush the affected eye(s) with clean water for at least 20 minutes. Seek immediate medical attention.

**Skin Contact:** Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops and persists, seek medical attention.

**Inhalation:** First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. Seek immediate medical attention.

**Ingestion:** First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

**Most important symptoms and effects, both acute and delayed:** Effects of overexposure may include nausea, vomiting, diarrhea, abdominal pain, signs of nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue), sweating, breathing difficulties, irregular heartbeats (arrhythmias), hypotension (low blood pressure), cyanosis (bluish discoloration of the skin), visual disturbances (including blindness), respiratory failure.

## SECTION 5: Firefighting measures

### NFPA 704: National Fire Protection Association

Health: 1 Flammability: 0 Instability: 0



0 = minimal hazard  
1 = slight hazard  
2 = moderate hazard  
3 = severe hazard  
4 = extreme hazard

**Extinguishing Media:** Use extinguishing agent suitable for type of surrounding fire

### Specific hazards arising from the chemical

**Unusual Fire & Explosion Hazards:** No unusual fire or explosion hazards are expected. If container is not properly cooled, it can rupture in the heat of a fire.

**Hazardous Combustion Products:** None anticipated.

**Special protective actions for fire-fighters:** For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self-contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading burning liquid with water used for cooling purposes.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

## SECTION 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

**Environmental Precautions:** Stop and contain spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard.

**Methods and material for containment and cleaning up:** Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and

regulations may influence or limit the choice of appropriate actions to be taken. See Section 13 for information on appropriate disposal.

## SECTION 7: Handling and storage

**Precautions for safe handling:** Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8). Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes.

**Conditions for safe storage:** Keep container(s) tightly closed and properly labeled. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations. Use and store this material in cool, dry, well-ventilated areas.

## SECTION 8: Exposure controls/personal protection

### Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Chemical Name	ACGIH	OSHA	Mexico	Phillips 66
Diethylene glycol monobutyl ether	TWA-8hr: 10 ppm inhalable fraction and vapor	---	---	---
Ethanolamine	TWA-8hr: 3 ppm STEL: 6 ppm	TWA-8hr: 3 ppm TWA-8hr: 6 mg/m <sup>3</sup>	TWA-8hr: 3 ppm (VLE-PPT) TWA-8hr: 8 mg/m <sup>3</sup> (VLE-PPT) STEL: 6 ppm (PPT-CT) STEL: 15 mg/m <sup>3</sup> (PPT-CT)	---

**Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.**

### Biological occupational exposure limits

**Note: None**

**Engineering controls:** If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

**Eye/Face Protection:** The use of eye protection (such as splash goggles) that meets or exceeds ANSI Z.87.1 is recommended when there is potential liquid contact to the eye. Depending on conditions of use, a face shield may be necessary.

**Skin/Hand Protection:** The use of gloves impervious to the specific material handled is advised to prevent skin contact. Users should check with manufacturers to confirm the breakthrough performance of their products. Suggested protective materials: Nitrile rubber

**Respiratory Protection:** Where there is potential for airborne exposure above the exposure limit a NIOSH certified air purifying respirator equipped with organic vapor cartridges/canisters with R or P95 filters may be used. A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use.

**Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.**

## SECTION 9: Physical and chemical properties

**Note:** Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm). Data represent typical values and are not intended to be specifications.

**Appearance:** Clear, colorless  
**Physical Form:** Liquid  
**Odor:** Solvent  
**Odor Threshold:** No data  
**pH:** 10  
**Vapor Density (air=1):** >1  
**Upper Explosive Limits (vol % in air):** No data  
**Lower Explosive Limits (vol % in air):** No data  
**Evaporation Rate (nBuAc=1):** No data  
**Particle Size:** Not applicable  
**Percent Volatile:** No data  
**Flammability (solid, gas):** Not applicable  
**Solubility in Water:** Negligible

**Flash Point:** > 199.4 °F / > 93 °C  
**Test Method:** (estimate)  
**Initial Boiling Point/Range:** No data  
**Vapor Pressure:** No data  
**Partition Coefficient (n-octanol/water) (Kow):** No data  
**Melting/Freezing Point:** No data  
**Auto-ignition Temperature:** No data  
**Decomposition Temperature:** No data  
**Specific Gravity (water=1):** 0.999 @ 60°F (15.6°C)  
**Bulk Density:** 8.34 lbs/gal  
**Viscosity:** No data  
**Pour Point:** No data  
**VOC Content (%):** 3.5

## SECTION 10: Stability and reactivity

**Reactivity:** Not chemically reactive.

**Chemical stability:** Stable under normal ambient and anticipated conditions of use.

**Possibility of hazardous reactions:** Hazardous reactions not anticipated.

**Conditions to avoid:** Stable under normal ambient and anticipated conditions of use.

**Incompatible materials:** Avoid contact with strong oxidizing agents.

**Hazardous decomposition products:** Not anticipated under normal conditions of use.

## SECTION 11: Toxicological information

### Information on Toxicological Effects

#### Substance / Mixture

Acute Toxicity	Hazard	Additional Information	LC50/LD50 Data
Inhalation	Unlikely to be harmful		>5 mg/L (mist, estimated)
Dermal	Unlikely to be harmful		> 2 g/kg (estimated)
Oral	Unlikely to be harmful		> 5 g/kg (estimated)

**Likely Routes of Exposure:** Inhalation, eye contact, skin contact

**Aspiration Hazard:** Not expected to be an aspiration hazard

**Skin Corrosion/Irritation:** Causes mild skin irritation. Repeated exposure may cause skin dryness or cracking.

**Serious Eye Damage/Irritation:** Causes serious eye irritation.

**Skin Sensitization:** No information available on the mixture, however none of the components have been classified for skin sensitization (or are below the concentration threshold for classification).

**Respiratory Sensitization:** No information available.

**Specific Target Organ Toxicity (Single Exposure):** No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

**Specific Target Organ Toxicity (Repeated Exposure):** No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

**Carcinogenicity:** No information available on the mixture, however none of the components have been classified for carcinogenicity (or are below the concentration threshold for classification).

**Germ Cell Mutagenicity:** No information available on the mixture, however none of the components have been classified for germ cell mutagenicity (or are below the concentration threshold for classification).

**Reproductive Toxicity:** No information available on the mixture, however none of the components have been classified for reproductive toxicity (or are below the concentration threshold for classification).

**Information on Toxicological Effects of Components**

**Sodium nitrite**

*Carcinogenicity:* There is limited evidence in humans for the carcinogenicity for nitrite in food. Nitrite in food is associated with an increased incidence of stomach cancer. Ingested nitrate or nitrite under conditions that result in endogenous nitrosation is listed as Group 2A carcinogen by IARC.

**SECTION 12: Ecological information**

**GHS Classification:**  
**No classified hazards**

**Toxicity:** Not expected to be harmful to aquatic life

**Persistence and Degradability:** Not expected to persist in the environment if spilled or released.

**Bioaccumulative Potential:** Not expected to bioaccumulate in the environment based on its physical properties.

**Mobility in Soil:** If released into the soil, this chemical is expected to have high mobility based upon its estimated Koc.

**Other adverse effects:** None anticipated.

**SECTION 13: Disposal considerations**

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations. This material, if discarded as produced, would not be a federally regulated RCRA "listed" hazardous waste and is not believed to exhibit characteristics of hazardous waste. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the SDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste. Container contents should be completely used and containers should be emptied prior to discard.

**SECTION 14: Transport information**

**UN Number:** Not regulated

**UN proper shipping name:** None

**Transport hazard class(es):** None

**Packing Group:** None

**Environmental Hazards:** This product does not meet the DOT/UN/IMDG/IMO criteria of a marine pollutant

**Special precautions for user:** None

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable

**SECTION 15: Regulatory information**

**CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds)**

This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

**CERCLA/SARA - Section 311/312 (Title III Hazard Categories)**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CERCLA/SARA - Section 313 and 40 CFR 372**

This material does not contain any chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372.

Chemical Name	Concentration	de minimis
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Diethylene glycol monobutyl ether	1-10	1.0%
Sodium nitrite	0.1-1	1.0%

**EPA (CERCLA) Reportable Quantity (in pounds)**

This material does not contain any chemicals with CERCLA Reportable Quantities.

Chemical Name	RQ
Sodium nitrite	100 lb

**California Proposition 65**

This material does not contain any chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65.

**International Inventories**

All components are either listed on the US TSCA Inventory, or are not regulated under TSCA.

All components are either on the DSL, or are exempt from DSL listing requirements.

**SECTION 16: Other information**

Issue date	Previous Issue Date:	SDS Number	Status:
30-Jan-2019	None	831693	FINAL

**Revised Sections or Basis for Revision:**

New SDS

**Mexican NOM-018-STPS-2015:**

The information within is considered correct but is not exhaustive and will be used for guidance only, which is based on the current knowledge of the substance or mixture and is applicable to the appropriate safety precautions for the product.

**Precautionary Statements:**

P264 - Wash skin thoroughly after handling

P280 - Wear protective gloves/protective clothing/eye protection/face protection

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 advice/attention

**Guide to Abbreviations:**

ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; GHS = Globally Harmonized System; HPR = Hazardous Products Regulations; IARC = International Agency for Research on Cancer; INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

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