



To Our Customers:

The attached Safety Data Sheet (SDS) was prepared by the vendor of the product you purchased through one of our divisions. We used the manufacturer's electronic document directly or scanned a paper copy and generated a file for our automated SDS delivery system.

All statements, technical information, and recommendations contained therein are solely that of the manufacturer of the product. We at Zep Inc. did not verify the accuracy and completeness of the statements and do not warrant or guarantee the information. We provide vendor SDSs in accordance with the requirements of the OSHA Hazard Communication Standard in order to assist our customers in their compliance efforts. We made every effort to deliver all of the information prepared by the manufacturer. We cannot anticipate all conditions under which this information will be used. If you have any questions about the statements on the SDS, please contact the company shown on the document.

Zep Inc. assumes no liability or responsibility for loss or damage resulting from the improper use or handling of this product, from incompatible product combinations, or from the failure to follow instructions, warnings, and advisories in the manufacturer's product label and Safety Data Sheet.

Sincerely,

Compliance Services

Zep Inc.

# Safety Data Sheet

According to OSHA HCS 2012 (29 CFR 1910.1200)



## SECTION 1: Identification

**Product Identifier** Subaru Automatic Transmission Cooler Flush  
**SDS Number** 830374  
**Uses advised against** All others  
**24 Hour Emergency Phone Number** CHEMTREC 1-800-424-9300  
CHEMTREC Mexico 01-800-681-9531

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	1-800-264-6457 or +1-731-645-4972

## SECTION 2: Hazard identification

Classified Hazards	Hazards Not Otherwise Classified (HNOC)
H222 - Extremely flammable aerosol -- Category 1 H280 -- Gases under pressure -- Compressed gas H304 -- Aspiration Hazard -- Category 1 H319 -- Eye damage/irritation -- Category 2A H336 -- Specific target organ toxicity (single exposure) -- Category 3 H411 -- Hazardous to the aquatic environment, chronic toxicity -- Category 2	PHNOC: None known  HHNOC: None known

### Label Elements



#### DANGER

Extremely flammable aerosol  
Contains gas under pressure. May explode if heated.  
May be fatal if swallowed and enters airways  
Causes serious eye irritation  
May cause drowsiness or dizziness  
Toxic to aquatic life with long lasting effects



Keep away from heat/sparks/open flames/hot surfaces. - No smoking; Do not spray on an open flame or other ignition source; Pressurized container: Do not pierce or burn, even after use; Avoid breathing dust/fume/gas/mist/vapours/spray; Wash skin thoroughly after handling; Use only outdoors or in a well-ventilated area; Avoid release to the environment; Wear protective gloves/protective clothing and eye/face protection; IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician; Do NOT induce vomiting; IF INHALED: Remove person to fresh air and keep comfortable for breathing; 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; Call a POISON CENTER or doctor/physician if you feel unwell; Collect spillage; Do not expose to temperatures exceeding 50 °C/122°F; Protect from sunlight. Store in a well-ventilated place; Dispose of contents/container to an approved waste disposal plant

### SECTION 3: Composition/information on ingredients

Chemical Name	CASRN	Concentration <sup>1</sup>
Naphtha, petroleum, heavy alkylate	64741-65-7	80-90
Isopropyl alcohol	67-63-0	1-10
Acetone	67-64-1	1-10
Carbon dioxide	124-38-9	1-10

<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:** If respiratory symptoms or other symptoms of exposure develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. If symptoms persist, seek immediate medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

**Ingestion:** Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If victim is drowsy or unconscious and vomiting, place on the left side with the head down. If possible, do not leave victim unattended and observe closely for adequacy of breathing. Seek medical attention.

**Most important symptoms and effects, both acute and delayed:** Prolonged or repeated contact may dry skin and cause irritation. Contains gas(es) which can cause asphyxiation at high concentrations by displacing oxygen. Symptoms of overexposure may include headache, fatigue, weakness, mental confusion, mood disturbances, and decreased coordination and judgment. Continued exposure can lead to hypoxia (inadequate oxygen), rapid breathing, impaired vision, ringing in the ears, cyanosis (bluish discoloration of skin), numbness of the extremities, unconsciousness and death.

### SECTION 5: Firefighting measures

#### NFPA 704 Hazard Class

Health: 2    Flammability: 4    Instability: 0



0 (Minimal)  
1 (Slight)  
2 (Moderate)  
3 (Serious)  
4 (Severe)

**Extinguishing Media:** Dry chemical, carbon dioxide, or foam is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Water may be ineffective for extinguishment, unless used under favorable conditions by experienced fire fighters.

#### Specific hazards arising from the chemical

**Unusual Fire & Explosion Hazards:** Contents under pressure. Extremely flammable. This material can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe) Vapors may travel considerable distances to a source of ignition where they can ignite, flash back, or explode. May create vapor/air explosion hazard indoors, in confined spaces, outdoors, or in sewers. This product will float and can be reignited on surface water. Vapors are heavier than air and can accumulate in low areas. If container is not properly cooled, it can rupture in the heat of a fire. Liquid hydrocarbons may be present in sufficient quantity to create fire hazard.

**Hazardous Combustion Products:** Combustion may yield smoke, carbon monoxide, aldehydes and other products of incomplete combustion. Oxides of nitrogen and sulfur may also be formed.

**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. Avoid spreading burning liquid with water used for cooling purposes. Cool equipment exposed to fire with water, if it can be done safely. Use shielding to protect fire-fighters from bursting containers.

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:** Extremely flammable. Spillages of liquid product will create a fire hazard and may form an explosive atmosphere. Keep all sources of ignition and hot metal surfaces away from spill/release if safe to do so. The use of explosion-proof electrical equipment is recommended. 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 foam on spills to minimize vapors. 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.

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.

## SECTION 7: Handling and storage

**Precautions for safe handling:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Do not puncture or incinerate cans. Do not stick pin or any other sharp object into opening on top of can. Use only with adequate ventilation. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with eyes. Avoid breathing vapors or mists. Avoid contact with skin. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8). Extremely Flammable. Use only with adequate ventilation Contents under pressure May vaporize easily at ambient temperatures. The vapor is heavier than air and may create an explosive mixture of vapor and air. Beware of accumulation in confined spaces and low lying areas. The use of explosion-proof electrical equipment is recommended and may be required (see appropriate fire codes). Refer to NFPA-70 and/or API RP 2003 for specific bonding/grounding requirements. Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames.

**Conditions for safe storage:** Avoid exposing any part of a compressed-gas cylinder to temperatures above 125F(51.6C). Gas cylinders should be stored outdoors or in well ventilated storerooms at no lower than ground level and should be quickly removable in an emergency. Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Store only in approved containers. Post area "No Smoking or Open Flame." Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

"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. Keep container tightly closed in a dry and well-ventilated place. Keep out of reach of children Store locked up

## SECTION 8: Exposure controls/personal protection

Chemical Name	ACGIH	OSHA	Phillips 66
Carbon dioxide	TWA-8hr: 5000 ppm STEL: 30000 ppm	TWA-8hr: 5000 ppm TWA-8hr: 9000 mg/m <sup>3</sup>	---
Isopropyl alcohol	TWA-8hr: 200 ppm STEL: 400 ppm	TWA-8hr: 400 ppm TWA-8hr: 980 mg/m <sup>3</sup>	---

Acetone	TWA-8hr: 250 ppm STEL: 500 ppm	TWA-8hr: 1000 ppm TWA-8hr: 2400 mg/m <sup>3</sup>	---
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**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.**

**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:** Depending on exposure and use conditions, additional protection may be necessary to prevent skin contact including use of items such as chemical resistant boots, aprons, arm covers, hoods, coveralls, or encapsulated suits. Suggested protective materials: Butyl rubber

**Respiratory Protection:** 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. 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 NIOSH approved, self-contained breathing apparatus (SCBA) or equivalent operated in a pressure demand or other positive pressure mode should be used in situations of oxygen deficiency (oxygen content less than 19.5 percent), unknown exposure concentrations, or situations that are immediately dangerous to life or health (IDLH).

**Other Protective Equipment:** Eye wash and quick-drench shower facilities should be available in the work area. Thoroughly clean shoes and wash contaminated clothing before reuse.

**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:** Colorless, Transparent

**Physical Form:** Aerosol

**Odor:** Solvent

**Odor Threshold:** No data

**pH:** Not applicable

**Vapor Density (air=1):** No data

**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

**VOC Content (%):** 91.49

**Flash Point:** -4 °F / -20 °C

**Test Method:** Pensky-Martens Closed Cup (PMCC), ASTM D93, EPA 1010

**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):** 0.754 @ 60°F (15.6°C)

**Bulk Density:** No data

**Viscosity:** No data

**Solubility in Water:** Insoluble

## 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:** Avoid all possible sources of ignition. Extremes of temperature and direct sunlight. Prevent vapor accumulation.

**Incompatible materials:** Avoid contact with strong oxidizing agents, strong acids, alkali metals.

**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		>5.2 mg/L (vapor)
Dermal	Unlikely to be harmful		> 2 g/kg (estimated)
Oral	Unlikely to be harmful		> 5 g/kg (estimated)

**Aspiration Hazard:** May be fatal if swallowed and enters airways

**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:** Not expected to be a skin sensitizer.

**Respiratory Sensitization:** No information available.

**Specific Target Organ Toxicity (Single Exposure):** May cause drowsiness and dizziness.

**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).

**Other Comments:** Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage (sometimes referred to as Solvent or Painters' Syndrome). Intentional misuse by deliberately concentrating and inhaling this material may be harmful or fatal.

**SECTION 12: Ecological information**



**GHS Classification:**  
**H411 -- Hazardous to the aquatic environment, chronic toxicity -- Category 2**  
Toxic to aquatic life with long lasting effects.

**Toxicity:** Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

**Persistence and Degradability:** The hydrocarbons in this material are expected to be inherently biodegradable. In practice, hydrocarbon gases are not likely to remain in solution long enough for biodegradation to be a significant loss process.

**Bioaccumulative Potential:** Substance is expected to possess low bioaccumulation potential.

**Mobility in Soil:** Substance is expected to possess low mobility in soil.

**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 be a federally regulated RCRA "listed" hazardous waste, and identified as the EPA hazardous waste number shown below. 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. Container residues and rinseates could be considered to be hazardous wastes.

**EPA Waste Number(s)**

- D001 - Ignitability characteristic

**SECTION 14: Transport information**

**U.S. Department of Transportation (DOT)**

**UN Number:** UN1950

**UN proper shipping name:** Aerosols, flammable, LTD. QTY

**Transport hazard class(es):** 2.1

**Packing Group:** None

**Environmental Hazards:** Marine pollutant - Environmentally Hazardous

**Special precautions for user:** Container(s) greater than 5 liters (liquids) or 5 kilograms (solids), shipped by water mode and ALL bulk shipments may require the shipping description to contain the "Marine Pollutant" notation [49 CFR 172.203(I)] and the container(s) to display the [Marine Pollutant Mark] [49 CFR 172.322].

**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)**

<b>Acute Health Hazard:</b>	Yes
<b>Chronic Health Hazard:</b>	Yes
<b>Fire Hazard:</b>	Yes
<b>Pressure Hazard:</b>	yes
<b>Reactive Hazard:</b>	No

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

This material contains the following chemicals subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR 372:

Chemical Name	Concentration <sup>1</sup>	de minimis
Isopropyl alcohol	1-10	1.0%

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

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

This material contains the following chemicals subject to the reporting requirements of 40 CFR 302.4:

Chemical Name	RQ
Acetone	5000 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 Hazard Classification**

**Canada:**

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (SOR/2015-17) and the SDS contains all the information required by the Regulations.

**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:
04-Nov-2016	25-Sep-2015	830374	FINAL

**Revised Sections or Basis for Revision:**

New SDS

**Precautionary Statements:**

- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
- P211 - Do not spray on an open flame or other ignition source
- P251 - Pressurized container: Do not pierce or burn, even after use
- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
- P264 - Wash skin thoroughly after handling
- P271 - Use only outdoors or in a well-ventilated area
- P273 - Avoid release to the environment
- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
- P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
- P331 - Do NOT induce vomiting
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P312 - Call a POISON CENTER or doctor if you feel unwell
- P337 + P313 - If eye irritation persists: Get medical advice/attention
- P391 - Collect spillage
- P410 + P403 - Protect from sunlight. Store in a well-ventilated place
- P412 - Do not expose to temperatures exceeding 50 °C/122 °F
- P501 - Dispose of contents/ container to an approved waste disposal plant

**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; 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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