Pitstop Antifreeze/Coolant Concentrate

Material Safety Data Sheet

1. Product and Company Identification

Product Name:	Pitstop Antifreeze/Coolant Concentrate
MSDS Number:	720740
Synonyms/Other Means of Identification:	76 Pitstop Antifreeze/Coolant Concentrate
Intended Use:	Antifreeze/Coolant
Manufacturer:	ConocoPhillips Lubricants 600 N. Dairy Ashford, 2W900 Houston, Texas 77079-1175
Emergency Health and Safety Number:	Chemtrec: 800-424-9300 (24 Hours)
Customer Service:	U.S.: 1-800-822-6457 or International: +1-83-2486-3363
Technical Information:	1-877-445-9198
MSDS Information:	Phone: 800-762-0942 Email: MSDS@conocophillips.com www.conocophillips.com

2. Hazards Identification

Emergency Overview

WARNING

Harmful if swallowed
Aspiration hazard
Probable reproductive hazard
Target organ hazard

NFPA

Appearance: Green
Physical Form: Liquid
Odor: Mild glycol

Potential Health Effects

Eye: Contact may cause mild eye irritation including stinging, watering, and redness.

Skin: Contact may cause mild skin irritation including redness and a burning sensation. Repeated exposure may cause skin dryness or cracking. No information available on skin absorption.

Inhalation (Breathing): No information available on acute toxicity.

Ingestion (Swallowing): Toxic. May be harmful if swallowed. Aspiration Hazard - May be fatal if swallowed and enters airways.

Signs and Symptoms: Effects of overexposure may include irritation of the respiratory tract, irritation of the digestive tract, coughing, pulmonary edema (accumulation of fluids in the lungs), nausea, vomiting, diarrhea, abdominal pain, irregular heartbeats (arrhythmias), visual disturbances, signs of nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue), convulsions and coma.

Pre-Existing Medical Conditions: Conditions which may be aggravated by exposure include skin disorders, kidney disorders and pregnancy.

See Section 11 for additional Toxicity Information.

3. Composition / Information on Ingredients

Component	CASRN	Concentration[1]
Ethylene Glycol	107-21-1	>95
Diethylene Glycol	111-46-6	0 - 5
Dipotassium Phosphate	7758-11-4	1 - 2

[1] All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First Aid Measures

Eye Contact: If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek 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 (Breathing): If respiratory symptoms develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. If breathing is difficult, oxygen or artificial respiration should be administered by qualified personnel. If symptoms persist, seek medical attention.

Ingestion (Swallowing): Seek emergency medical attention. This material is a potential aspiration hazard. If victim is drowsy or unconscious, place on the left side with the head down and do not give anything by mouth. Because of potential toxicity and the hazard of aspiration, vomiting should be induced only under direction from a physician or poison center. Do not leave victim unattended and observe closely for adequacy of breathing.

Notes to Physician: Toxic metabolites of ethylene glycol may cause acidosis, coma, convulsions, renal failure, or circulatory collapse. The monitoring of urine output, serum creatinine, electrolytes, acid base balance, urine hemoglobin and serium calcium is recommended following significant exposures. Ethanol blocks the formation of glycolic acid and therefore is the antidote of choice. Because of the rapid onversion (3-hour elimination half-life) of the ethylene glycol, ethanol should be administered as soon as possible in cases of severe poisoning. If medical care will be delayed several hours, use 3-4 one-ounce oral (shots) of 86-proof whiskey before or during transport to the hospital.

5. Fire-Fighting Measures

NFPA 704 Hazard Class

Health: 2 **Flammability:** 1 **Instability:** 0 (0-Minimal, 1-Slight, 2-Moderate, 3-Serious, 4-Severe)

Unusual Fire & Explosion Hazards: This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire.

Extinguishing Media: Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F / 100°C. 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.

Fire Fighting Instructions: 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 immediate hazard area and keep unauthorized personnel out. 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.

Hazardous Combustion Products: Combustion may yield carbon monoxide.
See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

6. Accidental Release Measures

6. Accidental Release Measures

Personal Precautions: This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Avoid direct contact with material. For larges 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 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 for Containment and Clean-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.

7. Handling and Storage

Precautions for safe handling: Keep away from flames and hot surfaces. Do not eat, drink, or smoke when using this product. Wash thoroughly after handling. Do not breathe vapors or mists. Use good personal hygiene practices and wear appropriate personal protective equipment.

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. Use and store this material in cool, dry, well-ventilated area away from heat and all sources of ignition. 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.

8. Exposure Controls / Personal Protection

Component	US-ACGIH	OSHA	Other
Ethylene Glycol	CEIL: 100 mg/m^3 Aerosol	---	---

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 that meets or exceeds ANSI Z.87.1 is recommended to protect against potential eye contact, irritation, or injury. 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, Butyl rubber, Viton (fluoroelastomers).

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. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health (IDLH).

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.

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:	Green
Physical Form:	Liquid
Odor:	Mild glycol
Odor Threshold:	No data
pH:	10.5-11.0 (50% water solution)
Vapor Pressure:	<0.1 mm Hg
Vapor Density (air=1):	2.1
Initial Boiling Point/Range:	339-348°F / 171-176°C
Melting/Freezing Point:	0°F / -18°C
Solubility in Water:	Complete
Partition Coefficient (n-octanol/water) (Kow):	No data
Specific Gravity (water=1):	1.12 @ 60ºF (15.6ºC)
Bulk Density:	9.3 lbs/gal
Percent Volatile:	97%
Evaporation Rate (nBuAc=1):	Nil
Flash Point:	247°F / 119°C
Test Method:	Cleveland Open Cup (COC), ASTM D92
Lower Explosive Limits (vol % in air):	3.2
Upper Explosive Limits (vol % in air):	15.3
Auto-ignition Temperature:	No data

10. Stability and Reactivity

Stability: Stable under normal ambient and anticipated conditions of use.

Conditions to Avoid: Avoid all possible sources of ignition.

Materials to Avoid (Incompatible Materials): Avoid contact with strong oxidizing agents and strong reducing agents.

Hazardous Decomposition Products: Not anticipated under normal conditions of use.

Hazardous Polymerization: Not known to occur.

11. Toxicological Information

Chronic Toxicity:

Ethylene Glycol

Target Organs: Ingestion of ethylene glycol by humans results in kidney damage (renal epithelial damage and oxalate crystals in the tubules). Administration of ethylene glycol resulted in hepatocellular hyaline degeneration in male mice fed diets containing 12,500 or 25,000 ppm ethylene glycol and female mice fed diets containing 50,000 ppm ethylene glycol.

Reproductive Toxicity: Ethylene glycol induces developmental effects in rats and mice by all routes of exposure. Ethylene glycol is teratogenic, inducing primarily skeletal and external malformations in rodents, sometimes at doses less than those that are maternally toxic. In repeated-dose toxicity studies, there has been no evidence of adverse impact on reproductive organs; in specialized studies, including a three-generation study in rats and continuous-breeding protocols in mice, evidence of reproductive effects has been restricted to mice (but not rats or rabbits) exposed to doses considerably greater than those associated with developmental effects in this species or renal effects in rats. It is believed that developmental and teratogenic toxicity occurs in rodents only at doses that exceed saturation of glycolic acid metabolism. Based on human metabolism data, the National Toxicology Program Center for the Evaluation of Risks to Human Reproduction reviewed the ethylene glycol literature and concluded that there is negligible concern for reproductive or developmental toxicity in humans at typical exposure levels.

Ethylene Glycol

Germ Cell Mutagenicity: In in vivo genotoxicity studies, results have been negative for dominant lethal mutations in F344 rats following administration in F2 males (from a multigeneration study) of up to 1000 mg ethylene glycol/kg body weight per day for 155 days. Results have also been negative for chromosomal aberrations in bone marrow cells of male Swiss mice exposed (by intraperitoneal injection) to 638 mg ethylene glycol/kg body weight per day for 2 days. There was only a slight increase in the incidence of micronuclei in the erythrocytes of Swiss mice administered >1250 mg ethylene glycol/kg body weight by gavage (or by intraperitoneal injection). However, it should be noted that the magnitude of the effect was small, was not dose related, and was based on pooled data for treated groups.

Diethylene Glycol

Target Organs: Accidental human ingestion of diethylene glycol resulted in kidney damage (severe renal epithelial damage, tubular necrosis, and anuria). Liver damage (vacuolation and hyaline degeneration) was also seen in rats fed diets containing 1 to 4% diethylene glycol for 2 years.

Acute Toxicity:

Component	Oral LD50	Dermal LD50	Inhalation LC50
Ethylene Glycol	1.5 g/kg (est. human)	9,530 mg/kg(rabbit)	No data
Diethylene Glycol	1.2 g/kg (human)	11.9 g/kg (rabbit)	No data
Dipotassium Phosphate	1.70 g/kg	No data	No data

12. Ecological Information

Ecological Information: Not evaluated.

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 MSDS 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.

14. Transportation Information

U.S. Department of Transportation (DOT)
Shipping Description:

Non-Bulk Package Marking:	None
Non-Bulk Package Labeling:	None
Bulk Package/Placard Marking:	None / 3082 ***or*** Class 9 / 3082
Packaging - References:	None; None; 49 CFR 173.241
Hazardous Substance:	See Section 15 for RQ`s
Emergency Response Guide:	171

International Maritime Dangerous Goods (IMDG)
Shipping Description:

Note: ***U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 25.***

International Civil Aviation Org. / International Air Transport Assoc. (ICAO/IATA)

UN/ID #: ***Not regulated***
Note: ***U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 24.***

14. Transportation Information

	LTD. QTY	Passenger Aircraft	Cargo Aircraft Only
Packaging Instruction #:	---	---	---
Max. Net Qty. Per Package:	---	---	---
Packaging Instruction # after 12/31/2010:	---	---	---

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)

Acute Health:	Yes
Chronic Health:	Yes
Fire Hazard:	No
Pressure Hazard:	No
Reactive Hazard:	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:

Component	Concentration[1]	de minimis
Ethylene Glycol	>95	1.0%

EPA (CERCLA) Reportable Quantity (in pounds):
This material contains the following chemicals subject to the reporting requirements of 40 CFR 302.4:

Component	RQ
Ethylene Glycol	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.

Canadian Regulations:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the Regulations.

WHMIS Hazard Class
D1B
D2A

National Chemical 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.

U.S. Export Control Classification Number: EAR99

16. Other Information

Date of Issue:	30-Aug-2010
Status:	FINAL
Previous Issue Date:	29-Nov-2007
Revised Sections or Basis for Revision:	Periodic review and update
MSDS Number:	720740

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; IARC = International Agency for Research on Cancer; 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)

Disclaimer of Expressed and Implied Warranties:
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