Manufacturer: SOPUS PRODUCTS

HMCS ID: 1182565

SUC: 04 - Metal Working Fluids and Lubricants

MATERIAL SAFETY DATA SHEET

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1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT INFORMATION

Product Name: SHELLZONE ANTIFREEZE/COOLANT

Product Synonyms:

Dex-Cool Antifreeze Extended Life Coolant **Product Code:** MSDS Number: 80070E - 16

External Keys:

10-125 Distributable Material (Part #) 10-101 Distributable Material (Part #) 12346290 Distributable Material (Part #) 12377910 Distributable Material (Part #) 12377912 Distributable Material (Part #) Distributable Material (Part #) 12377963 Distributable Material (Part #) 12378464 Distributable Material (Part #) 21030365 Distributable Material (Part #) 21031164 Distributable Material (Part #) 21031328 Distributable Material (Part #) 21031334 27002485 Distributable Material (Part #)

Dex-Cool Primary Tradename - Distributable Material

Antifreeze Extended Life Coolant

MANUFACTURER INFORMATION

Manufacturer: SOPUS PRODUCTS

Address:

P.O. BOX 4427 USA TEXAS 77210-4 HOUSTON MAILING

427

Communication Lines:

Phone 877-242-7400 Spill information
Phone 877-504-9351 Health information
Phone 877-276-7285 MSDS Assistance

2 INGREDIENT INFORMATION

Chemical Family: Ethylene Glycols.

FORMULATION

Ingredients:

Chemical Name	CAS Number	<u>Prefix</u>	<u>Value</u>	<u>Unit</u>	Exposure
					<u>Limits</u>
ETHYLENE GLYCOL	107-21-1	Range	90 - 97.99	%Wt	Yes
WATER	7732-18-5	Range	1 - 2.99	%Wt	No
PHOSPHORIC ACID	7664-38-2	Range	1 - 2.99	%Wt	Yes

3 HAZARDS IDENTIFICATION

Hazards Overview:

EMERGENCY OVERVIEW: Appearance & Odor: Fluorescent green liquid. Mild odor. Health Hazards: May be harmful or fatal if swallowed. May cause acidosis, cardiopulmonary and kidney effects. May cause CNS depression.

Specific Hazards:

PRIMARY TARGET ORGANS: The following organs and/or organ systems may be damaged by overexposure to this material and/or its components: Cardiovascular System, Kidney, Liver, Lungs.

SIGNS AND SYMPTOMS: May cause cardiopulmonary effects including rapid respiration and heartbeat, cyanosis and in severe cases, pulmonary edema and pneumonia. Early to moderate CNS depression may be evidenced by giddiness, headache, dizziness and nausea. In extreme cases, unconsciousness and death may occur. Kidney damage may be indicated by changes in urine output or appearance, pain upon urination or in the lower back or general edema (swelling from fluid retention). Liver damage may be indicated by loss of appetite, jaundice (yellowish skin and eye color), fatigue and sometimes pain and swelling in the upper right abdomen.

Specific Hazards (Routes Of Exposure):

<u>Exposure Routes</u> <u>Observation</u>

Inhalation In applications where vapors (caused by high temperature)

or mists (caused by mixing or spraying) are created,

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Exposure Routes Observation

breathing may cause a mild burning sensation in the nose,

throat and lungs.

Eye Contact May cause slight irritation of the eyes. If irritation occurs, a

temporary burning sensation, minor redness, swelling,

and/or blurred vision may result.

Skin Contact May cause slight irritation of the skin. If irritation occurs, a

> temporary burning sensation and minor redness and/or swelling may result. Other adverse effects not expected

from brief skin contact.

Ingestion May be harmful or fatal if swallowed. Contains ethylene

> glycol and/or diethylene glycol which are toxic when swallowed. A lethal dose for an adult is 1 ml per kilogram or about 4 ounces (1/2 cup). Severe kidney damage can occur as a result of ingestion. Ingestion may result in nausea, vomiting and abdominal cramps. Metabolic acidosis and cardiopulmonary effects can occur following ingestion. May cause Central Nervous System (CNS) depression.

Medical Conditions Aggravated By Exposure:

Pre-existing eye, skin, respiratory, liver and kidney disorders and may be aggravated by exposure to this product. For additional health information, refer to section 11.

Additional Health Hazard Data:

Other Health Effects: Refer to Section 11, Toxicological Information, for specific information on the following effects: Developmental Toxicity.

FIRST AID MEASURES

First Aid By::

Move victim to fresh air and provide oxygen if breathing is difficult. Get medical attention. Inhalation

Skin Contact Flush exposed area with water and follow by washing with soap if available. If skin irritation persists after washing,

get medical advice.

Flush eyes with plenty of water while holding eyelids open. Rest eyes for 30 minutes. If eye irritation persists, seek Eye Contact

medical advice.

DO NOT take internally. If swallowed, IMMEDIATELY contact a poison control center, emergency treatment Ingestion

center, or physician. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the

lungs.

Notes To Physician:

IMMEDIATE TREATMENT IS EXTREMELY IMPORTANT! Ethylene Glycol (EG) and Diethylene Glycol (DEG) intoxication may initially produce behavioral changes, drowsiness, vomiting, diarrhea, thirst, and convulsions. EG and DEG are nephrotoxic. End stages of poisoning may include renal damage or failure with acidosis. Supportive measures, supplemented with hemodialysis if indicated, may limit the progression and severity of toxic effects. May cause cardiopulmonary effects. For ETHYLENE GLYCOL POISONING, intravenous ethanol is a recognized antidotal treatment; other antidotal treatments also exist for ethylene glycol poisoning.

FIRE FIGHTING MEASURES

Flash Point:

260 Pensky-Martens Closed Cup \mathbf{C} Pensky-Martens Closed Cup 126.67

Extinguishing Media:

Prevent run off from fire control or dilution from entering streams, sewers or drinking water supply. Use water fog, 'alcohol foam', dry chemical or carbon dioxide (CO2) to extinguish flames. Do not use a direct stream of water.

Special Fire Fighting Procedures:

Material will not burn unless preheated. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure, NIOSH approved, self-contained breathing apparatus.

ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES

Recovery:

PROTECTIVE MEASURES: May burn although not readily ignitable. Wear appropriate personal protective equipment when cleaning up spills. Refer to Section 8.

SPILL MANAGEMENT: Shut off source of leak if safe to do so. Dike and contain spill.

FOR LARGE SPILLS: Remove with vacuum truck or pump to storage/salvage vessels.

FOR SMALL SPILLS: Soak up residue with an absorbent such as clay, sand or other suitable material. Place in non-leaking container and seal tightly for proper disposal.

REPORTING: U.S. regulations require reporting releases of this material to the environment which exceed the reportable quantity to the

National Response Center at (800)424-8802.

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7 HANDLING AND STORAGE

HANDLING

Safe Handling Procedures:

PRECAUTIONARY MEASURES: Do not ingest. Avoid prolonged or repeated contact with eyes, skin or clothing. Avoid breathing of vapors, fumes or mists. Use with adequate ventilation. Wash thoroughly after handling. CONTAINER WARNINGS: Keep containers closed when not in use. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.

STORAGE

Storage Conditions:

Do not store in open or unlabeled containers. Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures:

EXPOSURE CONTROLS: Provide adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Eye washes and showers for emergency use.

EXPOSURE LIMITS

Limit Values:

Chemical Name	CAS Number	<u>Type</u>	<u>Value</u>	<u>Specificati</u>	<u>Source</u>
ETHYLENE GLYCOL	107-21-1	GM OEG- Ceilin g	50ppm	<u>on</u> -	GM Occupational Exposure Guidelines (OEG)
ETHYLENE GLYCOL	107-21-1	TLV- Ceilin g	100ppm	-	Threshold Limit Values (TLVs) - ACGIH
ETHYLENE GLYCOL	107-21-1	State- Ceilin	50ppm	-	MICHIGAN
ETHYLENE GLYCOL	107-21-1	g State- Ceilin	50ppm	-	NEW YORK
ETHYLENE GLYCOL	107-21-1	g State- Ceilin	50ppm	-	TENNESSEE
PHOSPHORIC ACID	7664-38-2	g PEL-T WA	1mg/m3	-	OSHA - Permissible Exposure Limits (PELs)
PHOSPHORIC ACID	7664-38-2	GM OEG- TWA	1mg/m3	-	GM Occupational Exposure Guidelines (OEG)
PHOSPHORIC ACID	7664-38-2	GM OEG- STEL	3mg/m3	-	GM Occupational Exposure Guidelines (OEG)
PHOSPHORIC ACID	7664-38-2	TLV- TWA	1mg/m3	-	Threshold Limit Values (TLVs) - ACGIH
PHOSPHORIC ACID	7664-38-2	TLV- STEL	3mg/m3	-	Threshold Limit Values (TLVs) - ACGIH
PHOSPHORIC ACID	7664-38-2	State-	1mg/m3	-	MICHIGAN

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Chemical Name	CAS Number	<u>Type</u>	<u>Value</u>	Specificati on	Source
		TWA		_	
PHOSPHORIC ACID	7664-38-2	State-	3mg/m3	-	MICHIGAN
		STEL			
PHOSPHORIC ACID	7664-38-2	State-	1mg/m3	-	NEW YORK
		TWA			
PHOSPHORIC ACID	7664-38-2	State-	3mg/m3	-	NEW YORK
		STEL			
PHOSPHORIC ACID	7664-38-2	State-	1mg/m3	-	TENNESSEE
		TWA	•		
PHOSPHORIC ACID	7664-38-2	State-	3mg/m3	-	TENNESSEE
		STEL	-		

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment (PPE):

Eye Protection Chemical Goggles - If liquid contact is likely., or Safety

glasses with side shields.

Skin Protection Use protective clothing which is chemically resistant to this

material. Selection of protective clothing depends on potential exposure conditions and may include gloves, boots, suits and other items. The selection(s) should take into account such factors as job task, type of exposure and durability requirements. Published literature, test data and/or clothing manufacturers indicate the best protection is

provided by: Neoprene, or Nitrile Rubber.

Hand Protection Published literature, test data and/or glove manufacturers

indicate the best protection is provided by: Neoprene, or

Nitrile Rubber.

Respiratory If engineering controls do not maintain airborne Protection concentrations to a level which is adequate to protect

worker health, an approved respirator must be worn.
Respirator selection, use and maintenance should be in accordance with the requirements of the OSHA Respiratory

Protection Standard, 29 CFR 1910.134. Types of respirator(s) to be considered in the selection process include: For Mist: Air Purifying, R or P style NIOSH approved respirator. For Vapors: Air Purifying, R or P style prefilter & organic cartridge, NIOSH approved respirator. Self-contained breathing apparatus for use in environments with unknown concentrations or emergency situations. Personal protective equipment (PPE) selections vary based

on potential exposure conditions such as handling practices, concentration and ventilation. Information on the selection of eye, skin and respiratory protection for use with this

material is provided below.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

General

Protection

Physical State: Liquid Color: Fluorescent green.

Odor: Mild odor. Comment:

APPEARANCE: Fluorescent green liquid.

PHYSICAL PROPERTIES

pH Value:

Range 10.2 - 11

Changes of State:

Boiling Point = 226 F NOTE: The freezing and boiling point values reflect a 50% solution in water at

values reflect a 50% solution in water at

atmospheric pressure.

Melting/Freezing Point = -34 F NOTÊ: The freezing and boiling point

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values reflect a 50% solution in water at atmospheric pressure.

Specific Gravity:

Range 1.12 - 1.14

10 STABILITY AND REACTIVITY

STABILITY INFORMATION

Stability Under Normal Conditions: Stable

Comment:

STABILITY: Material is stable under normal conditions.

HAZARDOUS DECOMPOSITION

Reactions:

Type of Reaction Reaction Products

Thermal Decomposition Thermal decomposition products are highly dependent on combustion conditions, A complex

mixture of airborne solids, liquids and gases will evolve when this material undergoes pyrolysis or combustion. Acids, Aldehydes, Carbon Monoxide, Carbon Dioxide, ketones and other

unidentified organic compounds may be formed upon combustion.

11 TOXICOLOGICAL INFORMATION

OCCUPATIONAL EXPERIENCES

Health Effects:

CARDIOVASCULAR SYSTEM: Ingestion of large doses can cause metabolic acidosis that results in cardiopulmonary effects. LUNGS: Ingestion of large doses can cause metabolic acidosis that results in cardiopulmonary effects.

SCIENTIFIC OBSERVATIONS

TOXICOLOGICAL EFFECTS

Data By Chemical:

Chemical Name CAS Number Comment 107-21-1

ETHYLENE GLYCOL KIDNEY: Ingestion of ethylene glycol can cause bladder stones and

kidney damage which can be fatal.

ETHYLENE GLYCOL 107-21-1 LIVER: Prolonged and repeated

ingestion of ethylene glycol has produced liver damage in rats.

ETHYLENE GLYCOL 107-21-1 WHOLE ANIMAL: Orally, humans

are more sensitive to ethylene glycol than rodents. The reported lethal dose range for an adult human is 1-2 ml/kg, or 1/4 to 1/2 cup. Ingestion can

result in metabolic acidosis.

LETHAL LIMIT VALUES

Product Data:

Exposure Routes <u>Type</u> <u>Prefix</u> <u>Value</u> <u>Unit</u> Species 5 Comment Skin Contact LD50 OSHA: g/kg Rabbit

> Non-Toxic Based on components(s).

CLASSIFICATION OF INGREDIENTS

Carcingenicity:

CARCINOGENICITY CLASSIFICATION: Antifreeze/Coolant: NTP: No. IARC: Not Reviewed. ACGIH: No. OSHA: No.

Reproductive Effects:

ETHYLENE GLYCOL (107-21-1): DEVELOPMENTAL TOXICITY: Oral exposure of pregnant rats and mice to ethylene glycol has produced birth defects in the offspring.

12 ECOLOGICAL INFORMATION

ENVIRONMENTAL IMPACT

Comment:

ENVIRONMENTAL FATE: The toxicity of this material to aquatic organisms has not been fully evaluated. This material must not be discharged or allowed to come into contact with sewage and drainage systems and any surface water body.

13 DISPOSAL CONSIDERATIONS

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Waste Disposal Information:

Under RCRA, it is the responsibility of the user of the material to determine, at the time of the disposal, whether the material meets RCRA criteria for hazardous waste. This is because material uses, transformations, mixtures, processes, etc. may affect the classification. Refer to the latest EPA, state and local regulations regarding proper disposal. Follow all applicable laws and regulations. Used antifreeze recycling is recommended. Do not drain on the ground or into storm drainage systems. Do not dispose in sanitary sewer systems except where permitted by law.

14 TRANSPORT INFORMATION

DOT Information:

US DEPARTMENT OF TRANSPORTATION CLASSIFICATION: This material is not regulated under 49 CFR if in a container of 119 gallon capacity or less. If shipped in a container of over 119 gallon capacity then the DOT information must be accompanied with RQ notation, or, an otherwise 'Not Regulated' product will be classified as Environmentally Hazardous (solid/liquid) N.O.S., Class 9, Packing group III unless the product qualifies for the petroleum exemption (49 CFR 171.8).

Comment:

Hazardous Substance/Material RQ:Ethylene glycol / 5209.3481 lbs

International Air Transport Association: Hazard Class/Division: 9 (Miscellaneous)

Identification Number: UN3082

Packing Group: III

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S.

Technical Name(s): Ethylene Glycol

International Maritime Organization Classification:

Hazard Class/Division: 9 (Miscellaneous)

Identification Number: UN3082

Packing Group: III

Proper Shipping Name: Environmentally Hazardous Substances, Liquid, N.O.S.

Technical Name(s): Ethylene Glycol

15 REGULATORY INFORMATION

LABELLING

Hazard Codes:

NFPA Health 2 NFPA Flammability 1 NFPA Reactivity 0

NATIONAL REGULATIONS

SARA 311/312: Yes **SARA 313:** Yes

Immediate Health: Yes Delayed Health: Yes

Fire: No

Sudden Pressure Release: No

Reactive: No
Other Regulation:
OSHA Classification:

Comprehensive Environmental Release, Compensation & Liability Act (CERCLA):

Ozone Depleting Substances (40 CFR 82 Clean Air Act):

Superfund Amendment & Reauthorization Act (SARA) Title III:

SARA Toxic Release Inventory (TRI) (313): Toxic Substances Control Act (TSCA) Status:

Other Chemical Inventories:

Product is hazardous according to the OSHA Hazard Communication Standard, 29 CFR

1910.1200.

Ethylene Glycol: RQ 5000 lbs Reportable Spill => 5209 lbs or 625 gal. Potassium hydroxide: RQ 1000 lbs Reportable Spill => 139665 lbs or 16752 gal.

This material does not contain nor was it directly manufactured with any Class I or Class II ozone depleting substances.

There are no components in this product on the SARA 302 list.

Ethylene Glycol.

All component(s) of this material is(are) listed on the EPA/TSCA Inventory of Chemical Substances. Component(s) of this material is (are) listed on the Australian AICS, Canadian DSL, Chinese Inventory, European EINECS, Korean Inventory,

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Philippines PICCS.

STATE/LOCAL REGULATIONS

Comment:

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

New Jersey Right-To-Know Chemical List:

Ethylene Glycol (0878) 90 - 97.99 % weight Special Hazard.

Phosphoric acid 1 - 2.99 % weight Environmental Hazard.

Pennsylvania Right-To-Know Chemical List:

1.2-Ethanediol (107-21-1) 90 - 97.99 % weight Environmental Hazard.

Phosphoric acid 1 - 2.99 % weight Environmental Hazard.

16 OTHER INFORMATION

Comments:

ADDITIONAL EXPOSURE LIMITS: GM Occupational Exposure Guidelines (OEG) and State-TWA's were provided by General Motors. Additional Comments:

LABEL INFORMATION: READ AND UNDERSTAND MATERIAL SAFETY DATA SHEET BEFORE HANDLING OR DISPOSING OF PRODUCT. THIS LABEL COMPLIES WITH THE REQUIREMENTS OF THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200) FOR USE IN THE WORKPLACE. THIS LABEL IS NOT INTENDED TO BE USED WITH PACKAGING INTENDED FOR SALE TO CONSUMERS AND MAY NOT CONFORM WITH THE REQUIREMENTS OF THE CONSUMER PRODUCT SAFETY ACT OR OTHER RELATED REGULATORY REQUIREMENTS.

PRODUCT CODE(S): 94010, 9401000001, 9401000055, 9401006021, 9401012031.

SHELLZONE® Antifreeze/Coolant.

WARNING!

MAYBE HARMFUL OR FATAL IF SWALLOWED. MAY CAUSE ACIDOSIS, CARDIOPULMONARY AND KIDNEY EFFECTS. MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION. The following organs and/or organ systems may be damaged by overexposure to this material and/or its components.

MAY CAUSE DAMAGE TO: Cardiovascular System, Kidney, Liver, Lungs Refer to Section 11, Toxicological Information, for specific information on the following effects: Developmental Toxicity.

Precautionary Measures:

Avoid prolonged or repeated contact with eyes, skin and clothing. Avoid breathing of vapors, fumes, or mist. Use only with adequate ventilation. Keep container closed when not in use. Wash thoroughly after handling.

FIRST AID:

Inhalation: Move victim to fresh air and provide oxygen if breathing is difficult. Get medical attention. Skin Contact: Flush exposed area with water and follow by washing with soap

if available. If skin irritation persists after washing, get medical advice. Eye Contact: Flush eyes with plenty of water while holding eyelids open. Rest eyes for 30 minutes. If eye irritation persists, seek medical advice. Ingestion: DO NOT take internally. If swallowed, IMMEDIATELY contact a poison control center, emergency treatment center, or physician. If vomiting occurs spontaneously, keep head

below hips to prevent aspiration of liquid into the lungs.

FIRE:

In case of fire, Use water fog, 'alcohol foam', dry chemical or carbon dioxide (CO2) to extinguish flames. Do not use a direct stream of water.

SPILL OR LEAK:

Dike and contain spill.

FOR LARGE SPILLS: Remove with vacuum truck or pump to storage/salvage vessels.

FOR SMALL SPILLS: Soak up residue with an absorbent such as clay, sand or other suitable material. Place in non-leaking container and seal tightly for proper disposal.

CONTAINS: Ethylene Glycol, 107-21-1; Deionized Water, 7732-18-5; Phosphoric acid, 7664-38-2

NFPA Rating (Health, Fire, Reactivity): 2, 1, 0.

TRANSPORTATION:

US Department of Transportation Classification: This material is not regulated under 49 CFR if in a container of 119 gallon capacity or less. If shipped in a container of over 119 gallon capacity then the DOT information must be accompanied with RQ notation, or, an otherwise 'Not Regulated' product will be classified as Environmentally Hazardous

(solid/liquid) N.O.S., Class 9, Packing group III unless the product qualifies for the petroleum exemption (49 CFR 171.8).

Hazardous Substance/Material RQ: Ethylene glycol / 5209.3481 lbs.

CAUTION: Misuse of empty containers can be hazardous. Empty containers can be hazardous if used to store toxic, flammable, or reactive materials. Cutting or welding of empty containers might cause fire, explosion or toxic fumes from residues. Do not pressurize or expose to open flames or heat. Keep container closed and drum bungs in place.