



MATERIAL SAFETY DATA SHEET

Review Date: 10/19/2005

SECTION 1

PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: CARDIUM® Fluid EP

MSDS NUMBER: 402971L - 0

PRODUCT CODE(S): 5067991, 5067993, 5068004, 5068005

PRODUCT USE: Lubricating Grease

MANUFACTURER

SOPUS Products
P.O. Box 4427
Houston, TX. 77210-4427

TELEPHONE NUMBERS

Spill Information: (877) 242-7400
Health Information: (877) 504-9351
MSDS Assistance Number: (877) 276-7285

SECTION 2

PRODUCT/INGREDIENTS

INGREDIENTS

	CAS#	CONCENTRATION
Lubricating Compound		
Oxidized Asphalt	64742-93-4	65 - 75 %weight
Highly refined petroleum oils	Mixture	15 - 25 %weight
Additives	Mixture	5 - 10 %weight

SECTION 3

HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance & Odor: Black viscous liquid. Hydrocarbon odor.

Health Hazards: May cause skin irritation. May cause CNS depression. High-pressure injection under the skin may cause serious damage.

Physical Hazards: No known physical hazards.

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

Hazard Rating: Least - 0 Slight - 1 Moderate - 2 High - 3 Extreme - 4

Route(s) of Exposure: Eye, Skin

Inhalation:

Inhalation of vapors (generated at high temperatures only) or oil mist may cause mild irritation of the nose, throat, and respiratory tract. Breathing of high vapor concentrations may cause CNS depression, evidenced by dizziness, light-headedness, headache, nausea, drowsiness, and loss of coordination. Continued inhalation may result in unconsciousness.

Eye Irritation:

If irritation occurs, a temporary burning sensation, minor redness, swelling, and/or blurred vision may result. May cause slight irritation of the eyes.

Skin Contact:

May be irritating to the skin causing a burning sensation, redness and/or swelling. Release of the material during high-pressure applications may result in injection under the skin causing possible extensive tissue damage which is difficult to heal. Other adverse effects not expected from brief skin contact.

Ingestion:

Lubricating greases are generally no more than slightly toxic if swallowed.

Signs and Symptoms:

Irritation as noted above. Local necrosis is evidenced by delayed onset of pain and tissue damage a few hours following injection.

Aggravated Medical Conditions:

Pre-existing eye, skin and respiratory disorders may be aggravated by exposure to this product.

For additional health information, refer to section 11.

SECTION 4	FIRST AID MEASURES
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Inhalation:

If the victim has difficulty breathing or tightness of the chest, is dizzy, vomiting or unresponsive, give 100% oxygen with rescue breathing or CPR as required and transport to the nearest medical facility.

Skin:

Remove contaminated clothing and shoes and wipe excess from skin. Flush skin with water, then wash with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned. If material is injected under the skin, transport to the nearest medical facility for additional treatment. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment.

Eye:

Flush eyes with plenty of water while holding eyelids open. Rest eyes for 30 minutes. If redness, burning, blurred vision or swelling occur, transport to nearest medical facility for additional treatment.

Ingestion:

DO NOT induce vomiting. In general no treatment is necessary unless large quantities are swallowed, however, get medical advice. Have victim rinse mouth out with water, then drink sips of water to remove taste from mouth. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Note to Physician:

In general, emesis induction is unnecessary in high viscosity, low volatility products such as oils and greases.

SECTION 5	FIRE FIGHTING MEASURES
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Flash Point [Method]: >400 °F/>204.44 °C [Cleveland Open Cup]

Upper Flammability Limit: Not Determined

Lower Flammability Limit: Not Determined

Extinguishing Media:

Material will float and can be re-ignited on surface of water. Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames. Do not use a direct stream of water.

Fire Fighting Instructions:

This material is non-flammable. 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.

Unusual Fire Hazards:

Material may ignite when preheated.

SECTION 6	ACCIDENTAL RELEASE MEASURES
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Protective Measures:

May burn although not readily ignitable.

Spill Management:

Scoop up excess grease. Clean area with appropriate cleaner. 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. Remove contaminated soil to remove contaminated trace residues. Dispose of in same manner as material.

Reporting:

CERCLA: Product is covered by EPA's Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) petroleum exclusion. Releases to air, land, or water are not reportable under CERCLA (Superfund).

CWA: This product is an oil as defined under Section 311 of EPA's Clean Water Act (CWA). Spills into or leading to surface waters that cause a sheen must be reported to the National Response Center, 1-800-424-8802.

SECTION 7	HANDLING AND STORAGE
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Precautionary Measures:

Avoid heat, open flames, including pilot lights, and strong oxidizing agents. Use explosion-proof ventilation to prevent vapor accumulation. Ground all handling equipment to prevent sparking. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Handling:

Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet. Launder contaminated clothing before reuse. Properly dispose of contaminated leather articles such as shoes or belts that cannot be decontaminated. Contaminated leather articles including shoes cannot be decontaminated and should be destroyed to prevent reuse.

Storage:

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.

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.

SECTION 8	EXPOSURE CONTROLS/PERSONAL PROTECTION
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Chemical	Limit	TWA	STEL	Ceiling	Notation
Oxidized Asphalt	ACGIH TLV	5 mg/m3			Fume

Decomposition Product	Limit	TWA	STEL	Ceiling	Notation
Hydrogen sulfide	ACGIH - TLV	10 ppm	15 ppm		
Hydrogen sulfide	OSHA - PEL_IS	10 ppm	15 ppm		

Decomposition Product	Method	Condition
Hydrogen sulfide	Elevated Temperatures	> 180 Degrees F.

Exposure Controls

Provide adequate ventilation to control airborne concentrations below the exposure guidelines/limits.

Personal Protection

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.

Eye Protection:

Chemical Goggles, 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 glove and clothing manufacturers indicate the best protection is provided by:
Neoprene, or Nitrile Rubber

Respiratory Protection:

If engineering controls do not maintain airborne 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.

SECTION 9	PHYSICAL AND CHEMICAL PROPERTIES
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Appearance & Odor: Black viscous liquid. Hydrocarbon odor.

Substance Chemical Family: Lubricants

Physical State: Liquid

Flash Point	> 400 °F [Cleveland Open Cup]	Odor	Hydrocarbon odor.
Solubility (in Water)	Insoluble	Specific Gravity	0.9 - 0.91
Viscosity	> 1000 cSt @ 40 °C		

Odor Threshold: Not Determined

Partition Coefficient: Not Determined

pH: Not Determined

SECTION 10	REACTIVITY AND STABILITY
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Stability:

Material is stable under normal conditions.

Conditions to Avoid:

Avoid heat and open flames.

Materials to Avoid:

Avoid contact with strong oxidizing agents.

Hazardous Decomposition Products:

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. Carbon Monoxide, Carbon Dioxide, Hydrogen Sulfide and other unidentified organic compounds may be formed upon combustion.

SECTION 11	TOXICOLOGICAL INFORMATION
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Acute Toxicity

TEST	Result	OSHA Classification	Material Tested
Dermal LD50	> 3.0 g/kg(Rabbit)	Non-Toxic	Based on components(s)
Inhalation LC50	>5 mg/l(Rat)	Non-Toxic	Based on components(s)
Oral LD50	> 5.0 g/kg(Rat)	Non-Toxic	Based on components(s)

Carcinogenicity Classification

Chemical Name	NTP	IARC	ACGIH	OSHA
Lubricating Compound	No	Not Reviewed	No	No

SECTION 12	ECOLOGICAL INFORMATION
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Environmental Impact Summary:

There is no ecological data available for this product. However, this product is an oil. It is persistent and does not readily biodegrade. However, it does not bioaccumulate.

SECTION 13 DISPOSAL CONSIDERATIONS

RCRA 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.

SECTION 14 TRANSPORT INFORMATION

US Department of Transportation Classification

This material is not subject to DOT regulations under 49 CFR Parts 171-180.

Oil: This product is an oil under 49CFR (DOT) Part 130. If shipped by rail or highway in a tank with a capacity of 3500 gallons or more, it is subject to these requirements. Mixtures or solutions containing 10% or more of this product may also be subject to this rule.

International Air Transport Association

Not regulated under IATA rules.

International Maritime Organization Classification

Not regulated under International Maritime Organization rules.

SECTION 15 REGULATORY INFORMATION

Federal Regulatory Status

OSHA Classification:

Product is hazardous according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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

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

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

Superfund Amendment & Reauthorization Act (SARA) Title III:

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

SARA Hazard Categories (311/312):

Immediate Health	Delayed Health	Fire	Pressure	Reactivity
NO	NO	NO	NO	NO

SARA Toxic Release Inventory (TRI) (313):

There are no components in this product on the SARA 313 list.

Toxic Substances Control Act (TSCA) Status:

All component(s) of this material is(are) listed on the EPA/TSCA Inventory of Chemical Substances.

Other Chemical Inventories:

Component(s) of this material is (are) listed on the Australian AICS, Canadian DSL, European EINECS, Korean Inventory, Philippines PICCS,

State Regulation

This material is not regulated by California Prop 65, New Jersey Right-to-Know Chemical List or Pennsylvania Right-To-Know Chemical List. However for details on your regulation requirements you should contact the appropriate agency in your state.

SECTION 16**OTHER INFORMATION**

Revision#: 0

Revision Date: 10/19/2005

Review Date: 10/19/2005

Revisions since last change (discussion): This Material Safety Data Sheet (MSDS) has been created to fully comply with the guidance contained in the ANSI MSDS standard (ANSI Z400.1-1998). We encourage you to take the opportunity to read the MSDS and review the information contained therein.

SECTION 17**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): 5067991, 5067993, 5068004, 5068005

CARDIUM® Fluid EP**ATTENTION!**

OVEREXPOSURE TO VAPORS CAN CAUSE CNS DEPRESSION. MAY CAUSE SKIN IRRITATION. PROLONGED OR REPEATED SKIN CONTACT MAY CAUSE OIL ACNE OR DERMATITIS. HIGH-PRESSURE INJECTION UNDER SKIN MAY CAUSE SERIOUS DAMAGE. The following organs and/or organ systems may be damaged by overexposure to this material and/or its components.

Precautionary Measures:

Avoid prolonged or repeated contact with eyes, skin and clothing. Avoid breathing of vapors, fumes, or mist. Use only with adequate ventilation. Wash thoroughly after handling.

FIRST AID

Inhalation: DO NOT attempt to rescue victim unless proper respiratory protection is worn. If the victim has difficulty

breathing or tightness of the chest, is dizzy, vomiting or unresponsive, give 100% oxygen with rescue breathing or CPR as required and transport to the nearest medical facility.

Skin Contact: Remove contaminated clothing and shoes and wipe excess from skin. Flush skin with water, then wash with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned. If material is injected under the skin, transport to the nearest medical facility for additional treatment. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment.

Eye Contact: Flush eyes with plenty of water while holding eyelids open. Rest eyes for 30 minutes. If redness, burning, blurred vision or swelling occur, transport to nearest medical facility for additional treatment.

Ingestion: DO NOT induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Have victim rinse mouth out with water, then drink sips of water to remove taste from mouth. In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.

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. Scoop up excess grease. Clean area with appropriate cleaner.

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: Oxidized Asphalt, 64742-93-4; Highly refined petroleum oils, Mixture; Additives, Mixture

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

TRANSPORTATION

US Department of Transportation Classification

This material is not subject to DOT regulations under 49 CFR Parts 171-180.

Oil: This product is an oil under 49CFR (DOT) Part 130. If shipped by rail or highway in a tank with a capacity of 3500 gallons or more, it is subject to these requirements. Mixtures or solutions containing 10% or more of this product may also be subject to this rule.

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.

Name and Address

SOPUS Products
P.O. Box 4427
Houston, TX 77210-4427

ADMINISTRATIVE INFORMATION	
MANUFACTURER ADDRESS:	SOPUS Products, P.O. Box 4427, Houston, TX. 77210-4427

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