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SECTION 1            PRODUCT AND COMPANY IDENTIFICATION  
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PRODUCT: AEROSHELL® Grease 33  
MSDS NUMBER: 56235E - 3  
PRODUCT CODE(S): 70024

MANUFACTURER ADDRESS: SOPUS Products, P.O. Box 4453, Houston, TX. 77210-4453

TELEPHONE NUMBERS

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

MILSPEC: MIL-PRF-23827C

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SECTION 2            PRODUCT/INGREDIENTS  
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CAS#	CONCENTRATION	INGREDIENTS
Mixture	50 - 59.99 %weight	Synthetic Aviation Grease
Mixture	10 - 19.99 %weight	Synthetic Hydrocarbon Base Stocks
Mixture	5 - 14.99 %weight	Synthetic esters
Mixture	3 - 8.99 %weight	Grease thickener
1317-33-5	3 - 8.99 %weight	Proprietary additives (contains <1% zinc) Molybdenum Disulfide

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SECTION 3            HAZARDS IDENTIFICATION  
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EMERGENCY OVERVIEW

Appearance & Odor: Semi-solid, blue-green. Mild Hydrocarbon Odor.  
Health Hazards: No known immediate health hazards. High-pressure injection under the skin may cause serious damage.  
Physical Hazards: No known physical hazards.  
NFPA Rating (Health, Fire, Reactivity): 0, 1, 0  
Hazard Rating: Least - 0    Slight - 1    Moderate - 2    High - 3  
Extreme - 4

Inhalation:

Inhalation of vapors (generated at high temperatures only) or oil mist may cause mild irritation of the nose, throat, and respiratory tract.

Eye Irritation:

Lubricating greases are generally considered no more than minimally irritating to the eyes.

Skin Contact:

Lubricating greases are generally considered no more than minimally irritating to the skin. Prolonged and repeated contact may result in defatting and drying of the skin that may cause various skin disorders such as dermatitis, folliculitis or oil acne. 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.

**Ingestion:**

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

**Other Health Effects:**

Material may release hydrogen sulfide (H<sub>2</sub>S), a highly toxic and extremely flammable gas, when heated to 180 Degrees F or higher. H<sub>2</sub>S can cause irritation of the eyes and respiratory tract, headache, dizziness, nausea, vomiting, diarrhea, and pulmonary edema. The odor ("rotten egg") threshold is 0.02 ppm. Do not depend on sense of smell for warning; H<sub>2</sub>S rapidly deadens the sense of smell.

**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.

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SECTION 4 FIRST AID MEASURES

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**Inhalation:**

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

**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.

**Eye:**

Flush with water. If irritation occurs, get medical attention.

**Ingestion:**

Do not induce vomiting. In general, no treatment is necessary unless large quantities of product are ingested. However, get medical attention.

**Note to Physician:**

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

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SECTION 5 FIRE FIGHTING MEASURES

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Flash Point [Method]: >425 °F/>218.33 °C

Extinguishing Media:

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

Fire Fighting Instructions:

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.

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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.

Place in container for proper disposal.

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.

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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.

Material may release hydrogen sulfide (H2S), a highly toxic and extremely flammable gas, when heated to 180 Degrees F or higher. H2S may collect in the headspace of the container.

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. Keep containers closed when not in use. Contaminated leather articles including shoes cannot be decontaminated and should be destroyed to prevent reuse.

Storage:

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.

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SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

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Molybdenum Disulfide ACGIH TLV TWA: 10 mg/m3  
Molybdenum Disulfide OSHA PEL TWA: 15 mg/m3

EXPOSURE CONTROLS

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 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.

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SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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Appearance & Odor: Semi-solid, blue-green. Mild Hydrocarbon Odor.  
Substance Chemical Family: Lubricants

Appearance: Semi-solid, blue-green.

Density: 7.5 lb/gal

Drop Point: 424 °F

Flash Point: > 425 °F

Specific Gravity: 1.17

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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, Nitrogen Oxides, Sulfur dioxide

and other unidentified organic compounds may be formed upon combustion.

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SECTION 11 TOXICOLOGICAL INFORMATION

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Acute Toxicity

Oral LD50 6.4-12.8 g/kg(Rat) OSHA: Non-Toxic Based on components(s)

Carcinogenicity Classification

Synthetic Aviation Grease

NTP: No IARC: Not Reviewed by IARC ACGIH: No OSHA: No

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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.

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SECTION 13 DISPOSAL CONSIDERATIONS

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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.

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SECTION 14      TRANSPORT INFORMATION

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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.

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SECTION 15      REGULATORY INFORMATION

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FEDERAL REGULATORY STATUS

OSHA Classification:

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

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:NO    Delayed Health:NO    Fire:NO    Pressure:NO  
Reactivity: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, Chinese Inventory, European EINECS, Korean Inventory,

Philippines PICCS,

State Regulation

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:

Molybdenum (IV) Sulfide 3 - 8.99 %weight

Pennsylvania Right-To-Know Chemical List:

Molybdenum 3 - 8.99 %weight

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SECTION 16 OTHER INFORMATION

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Revision#: 3

Revision Date: 05/20/2003

Revisions since last change (discussion): This Material Safety Data Sheet (MSDS) has been newly reviewed 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.

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SECTION 17 LABEL INFORMATION

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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): 70024

AEROSHELL® Grease 33

ATTENTION!

PROLONGED OR REPEATED SKIN CONTACT MAY CAUSE OIL ACNE OR DERMATITIS.  
HIGH-PRESSURE INJECTION UNDER SKIN MAY CAUSE SERIOUS DAMAGE.

Precautionary Measures:

Avoid prolonged or repeated contact with eyes, skin and clothing. Wash thoroughly after handling.

FIRST AID

Inhalation: Remove victim to fresh air and provide oxygen if breathing is

difficult. Get medical attention.  
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 4453  
Houston, TX 77210-4453

ADMINISTRATIVE INFORMATION  
MANUFACTURER ADDRESS: SOPUS Products, P.O. Box 4453, Houston, TX.

THE INFORMATION CONTAINED IN THIS DATA SHEET IS BASED ON THE DATA AVAILABLE TO US AT THIS TIME, AND IS BELIEVED TO BE ACCURATE BASED UPON THAT : IT IS PROVIDED INDEPENDENTLY OF ANY SALE OF THE PRODUCT, FOR PURPOSE OF HAZARD COMMUNICATION. IT IS NOT INTENDED TO CONSTITUTE PRODUCT PERFORMANCE INFORMATION, AND NO EXPRESS OR IMPLIED WARRANTY OF ANY KIND IS MADE WITH RESPECT TO THE PRODUCT, UNDERLYING DATA OR THE INFORMATION CONTAINED HEREIN.

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