MATERIAL SAFETY DATA SHEET
Revision Date: 07/14/2003

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: AEROSHELL™ Flight Jacket Oil & Exhaust Remover
MSDS NUMBER: 401260E - 2
PRODUCT CODE(S): 61242

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

SECTION 2 PRODUCT/INGREDIENTS

CAS#	CONCENTRATION	INGREDIENTS
		Carbon-Soot Remover
Mixture	80 - 89.99 %weight	Inert Ingredients
67-63-0	5 - 9.99 %weight	Isopropyl alcohol
111-42-2	1 - 2.99 %weight	Diethanolamine
Proprietary	1 - 2.99 %weight	Proprietary additives

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Appearance & Odor: Reddish brown liquid. Mild odor.
Health Hazards: Causes severe eye irritation. May be harmful or fatal if swallowed. Do not induce vomiting. May cause aspiration pneumonitis. May cause CNS depression.
Physical Hazards: Material is extremely flammable and heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger.
NFPA Rating (Health, Fire, Reactivity): 2, 3, 0
Hazard Rating:Least - 0 Slight - 1 Moderate - 2 High - 3
Extreme - 4

Inhalation:
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:
Severely irritating to the eyes causing pain, redness, swelling and blurred vision.

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:
This material may be harmful or fatal if swallowed. Ingestion may result in vomiting; aspiration (breathing) of vomitus into lungs must be avoided as even small quantities may result in aspiration pneumonitis.

Other Health Effects:
Carcinogenic in animal tests.

Refer to Section 11, Toxicological Information, for specific information on the following effects:
Reproductive Toxicity

Primary Target Organs:
The following organs and/or organ systems may be damaged by overexposure to

this material and/or its components:

Cardiovascular System, Endocrine System, Eye, Blood/Blood Forming Organs, Reproductive System

Signs and Symptoms:
Irritation as noted above. Aspiration pneumonitis may be evidenced by coughing, labored breathing and cyanosis (bluish skin); in severe cases death may occur. Damage to blood-forming organs may be evidenced by: a) easy fatigability and pallor (RBC effect), b) decreased resistance to infection (WBC effect), c) excessive bruising and bleeding (platelet effect).

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

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 redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment.

Eye:
Flush with water. If irritation occurs, get medical attention. Transport to nearest medical facility for additional treatment.

Ingestion:
DO NOT take internally. Do NOT induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs. Get medical attention.

SECTION 5 FIRE FIGHTING MEASURES

Flash Point [Method]: 107 °F/41.67 °C [Cleveland Open Cup]

Extinguishing Media:
Material will float and can be re-ignited on surface of water. 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:
CAUTION! COMBUSTIBLE. Clear fire area of all non-emergency personnel. 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. Container areas exposed to direct flame contact should be cooled with large quantities of water (500 gallons water per minute flame impingement exposure) to prevent weakening of container structure.

Unusual Fire Hazards:
Vapors are heavier than air accumulating in low areas and traveling along the ground away from the handling site. Do not weld, heat or drill on or near container. However , if emergency situations require drilling, only trained emergency personnel should drill.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures:

CAUTION! COMBUSTIBLE. May burn although not readily ignitable. Eliminate potential sources of ignition. Handling equipment must be bonded and grounded to prevent sparking.

Wear appropriate personal protective equipment when cleaning up spills. Refer to Section 8.

Spill Management:
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.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures:
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. CAUTION! COMBUSTIBLE. 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.

Handling:
Surfaces that are sufficiently hot may ignite liquid material. Material is extremely flammable and heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger.

Storage:

Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures.

Keep liquid and vapor away from heat, sparks and flame. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors have dissipated. Use explosion-proof ventilation indoors and in laboratory settings.

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

Diethanolamine	ACGIH TLV TWA: 2 mg/m3
Isopropyl Alcohol	ACGIH TLV TWA: 400 ppmv STEL: 500 ppmv
Isopropyl Alcohol	OSHA PEL TWA: 400 ppmv STEL: 500 ppmv
Isopropyl Alcohol	OSHA PEL - 1989(revoked) TWA: 400 ppmv

EXPOSURE CONTROLS
Adequate explosion-proof ventilation indoors and in laboratory settings to control airborne concentrations below the exposure guidelines/limits. Eye washes and showers for emergency use.

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:
Butyl, 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.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Odor: Reddish brown liquid. Mild odor.
Appearance: Reddish brown liquid.

Boiling Point: > 140 °F

Evaporation Rate: 1.6

Flash Point: 107 °F [Cleveland Open Cup]

Solubility (in Water): Completely Soluble

Specific Gravity: 0.991

Vapor Density: 2.2

Viscosity: < 10 cSt @ 40 °C

Volatility: 99.9 %volume

SECTION 10 REACTIVITY AND STABILITY

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 Oxides, Nitrogen Oxides and other unidentified organic compounds may be formed upon combustion.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Toxicity
Dermal LD50 > 2.0 g/kg(Rabbit) OSHA: Non-Toxic Based on components(s)
Oral LD50 > 2.0-5.0 g/kg(Rat) OSHA: Non-Toxic Based on components(s)

Carcinogenicity Classification
Carbon-Soot Remover
NTP: No IARC: No ACGIH: No OSHA: No

Toxic Effects - Exhaust Remover

Carcinogenicity

Contains diethanolamine. Clear evidence of carcinogenic activity of diethanolamine in male and female B6C3F1 mice was observed based on increased incidences of liver neoplasms in males and females and increased incidences of renal tubule neoplasms in males. No evidence of carcinogenicity was seen in similarly exposed rats.

Cardiovascular System
Repeated oral and dermal exposure to diethanolamine has been shown to produce microscopic evidence of damage to cardiac (heart) cells in mice.

Endocrine System
Two-year exposure of mice to diethanolamine produced microscopic changes in the thyroid gland (follicular cell hyperplasia).

Eye
Ingestion of this product can lead to blindness.

Blood/Blood Forming Organs
Rats exposed dermally or orally to diethanolamine may develop anemia (a decreased number of circulating red blood cells).

Neurotoxicity
Components of this product are rapidly absorbed when inhaled. Inhalation exposures can lead to severe intoxication, dizziness, visual impairment, nausea, headaches, narcosis, muscular incoordination and respiratory failure. Oral and dermal diethanolamine exposure to male and female rats resulted in microscopic changes in the central nervous system. Demyelinization (loss of nerve insulation) was observed in portions of the brain and spinal cord.

Reproductive System
Rats consuming drinking water containing diethanolamine for 2 or 13 weeks showed evidence of degeneration of the seminiferous tubules of the testis. Sperm count and motility were also decreased in the 13 week study.

Systemic Toxicity
Systemic effects are possible following extensive skin contact. Dermal and/or oral exposure to diethanolamine has produced a variety of liver and kidney effects in rats and mice. The most common reported liver effect has been

increased liver weight, which at high doses is sometimes associated with necrosis (liver cell death). Decreases in kidney function in rats, nephropathy and various microscopic changes have also been reported.

SECTION 12 ECOLOGICAL INFORMATION

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:

If this material, as it is originally purchased, were subsequently DISCARDED as a waste, the waste would be a RCRA hazardous waste.
D001 (Ignitable Hazardous Waste)

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

Proper Shipping Name: Consumer commodity
Technical Names (s): Contains Isopropyl Alcohol
Hazard Class/Division: ORM-D
Packing Group: III

International Air Transport Association

Hazard Class/Division: 3 (Flammable Liquid)
Identification Number: UN1993
Packing Group: III
Proper Shipping Name: Flammable Liquid, N.O.S.
Technical Name(s): Isopropyl Alcohol

International Maritime Organization Classification

Hazard Class/Division: 3.2 (Flammable Liquid)
Identification Number: UN1993
Packing Group: III
Proper Shipping Name: Flammable Liquid, N.O.S.
Technical Name(s): Isopropyl Alcohol

SECTION 15 REGULATORY INFORMATION

FEDERAL REGULATORY STATUS

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

Comprehensive Environmental Release, Compensation & Liability Act (CERCLA):
Isopropyl Alcohol RQ 100 lbs Reportable Spill => 1000 lbs or 121 gal

Clean Air Act (CAA):
This material is classified as a Hazardous Air Pollutant under the Clean Air

Act (CAA).

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:YES Delayed Health:NO Fire:YES Pressure:NO Reactivity:NO

SARA Toxic Release Inventory (TRI) (313):
Diethanolamine, Isopropyl Alcohol

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

This product may be subject to export notification under TSCA Section 12(b);
Contains: 4-Methylbenzenesulfonat

Other Chemical Inventories:
Component(s) of this material is (are) listed on the Australian AICS, Canadian DSL, European EINECS, Korean Inventory,

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:
Isopropyl Alcohol (67-63-0) 5 - 9.99 %weight

Pennsylvania Right-To-Know Chemical List:

2-Propanol (67-63-0) 5 - 9.99 %weight Environmental Hazard

SECTION 16 OTHER INFORMATION

Revision#: 2
Revision Date: 07/14/2003
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.

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): 61242

AEROSHELL™ Flight Jacket Oil & Exhaust Remover

WARNING!

CAUSES SEVERE EYE IRRITATION. OVEREXPOSURE TO VAPORS CAN CAUSE CNS DEPRESSION. MAYBE HARMFUL OR FATAL IF SWALLOWED. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE.

MAY CAUSE DAMAGE TO: Cardiovascular System, Endocrine System, Eye, Blood/Blood Forming Organs, Reproductive System

Refer to Section 11, Toxicological Information, for specific information on the following effects:
Reproductive Toxicity

Precautionary Measures:
Avoid prolonged or repeated contact with eyes, skin and clothing. Avoid heat and open flames. Avoid breathing of vapors, fumes, or mist. Do not take internally. Use only with adequate ventilation. Keep container closed when not in use. 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.

Eye Contact: Flush with water. If irritation occurs, get medical attention.

Ingestion: DO NOT take internally. Do NOT induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs. Get medical attention.

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. Material will float and can be re-ignited on surface 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: Inert Ingredients, Mixture; Isopropyl alcohol, 67-63-0; Diethanolamine, 111-42-2; Proprietary additives, Proprietary

NFPA Rating (Health, Fire, Reactivity): 2, 3, 0

TRANSPORTATION
US Department of Transportation Classification

Proper Shipping Name: Consumer commodity
Technical Names (s): Contains Isopropyl Alcohol
Hazard Class/Division: ORM-D
Packing Group: III

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. 77210-4453
Company Product Stewardship & Regulatory Compliance Contact: Timothy W Childs
Phone Number: (281) 874-7708

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