MATERIAL SAFETY DATA SHEET
Review Date: 04/14/2005

SECTION 1    PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: ROTELLA® ELC Prediluted 50/50

MSDS NUMBER: 11944-3
PRODUCT CODE(S): 94042, 9404200001, 9404200055, 9404200021

MANUFACTURER ADDRESS: SOFUS PRODUCTS, P.O. Box 4427, HOUSTON, TX. 77210-4427

TELEPHONE NUMBERS
Spill Information: (877) 242-7400
Health Information: (877) 504-9151
MSDS Assistance Number: (877) 276-7285

SECTION 2    PRODUCT/INGREDIENTS

CAS#    CONCENTRATION    INGREDIENTS
Extended Life Antifreeze/ coolant
107-21-1 45 - 54.99 % weight  Ethylene Glycol
7732-18-5 45 - 54.99 % weight  Deionized Water
Mixture 1 - 2.99 % weight Proprietary additives

SECTION 3    HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Health Hazards: May be harmful or fatal if swallowed. May cause acidosis, cardiopulmonary failure.
NHA Hazard Rating (Health, Fire, Reactivity): 2, 1, 0
Hazard Rating: Least - 0     Slight - 1     Moderate - 2     High - 3     Extreme

Inhalation:
in applications where vapors (caused by high temperature) or mists (caused by mixing)
Eye Irritation:
If irritation occurs, apply cold compresses to eyes.
Skin Contact:
May cause slight irritation of the skin. If irritation occurs, a temporary burning sensation.

Ingestion:
May be harmful or fatal if swallowed. Contains ethylene glycol and/or diethylene glycol.

Other Health Effects:
Material may adversely effect female reproductive performance based on testing in laboratory animals. Refer to Section 11, Toxicological Information, for specific information on the following:
Developmental Toxicity. Reproductive Toxicity

Primary Target Organs:

The following organs and/or organ systems may be damaged by overexposure to this material: Cardiovascular System, Kidney, Liver, Lungs

Signs and Symptoms: May cause cardiopulmonary effects including rapid respiration and heartbeat, cyanosis.

Aggravated Medical Conditions: Pre-existing eye, skin, respiratory, liver and kidney disorders and may be aggravating.

For additional health information, refer to section 11.

SECTION 4 FIRST AID MEASURES

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

Skin: Flush exposed area with water and follow by washing with soap if available. If required, consult a physician.

Eye: Flush eyes with plenty of water while holding eyelids open. Rest eyes for 30 minutes. Get medical attention.

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

Note to Physician: IMMEDIATE TREATMENT IS EXTREMELY IMPORTANT! Ethylene Glycol (EG) and Diethylene Glycol.

SECTION 5 FIRE FIGHTING MEASURES

Flash Point [Method]: >260 °F/126.67 °C [Pensky-Martens Closed Cup]

Extinguishing Media: Prevent run off from fire control or dilution from entering streams, sewers or drains.

Fire Fighting Instructions: Do not enter confined fire space without full bunker gear (helmet with face shield, self-contained breathing apparatus, fire retardant clothing).

Unusual Fire Hazards: Material may ignite when preheated.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: May burn although not readily ignitable.

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

Spill Management: flush area with water to remove trace residues; place flush solution in proper container.
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. Reporting: U.S. regulations require reporting releases of this material to the environment where applicable.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures:
Do not ingest. Avoid prolonged or repeated contact with eyes, skin or clothing.

Storage:
Do not store in open or unlabeled containers. Store in a cool, dry place with adequate ventilation.

Container Warnings:
Keep containers closed when not in use. Containers, even those that have been emptied, may be capable of holding a small amount of material.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE CONTROLS
Provide adequate ventilation to control airborne concentrations below the exposure limits.

PERSONAL PROTECTION
Personal protective equipment (PPE) selections vary based on potential exposure conditions.

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 should be guided by exposure levels.

Published literature, test data and/or glove and clothing manufacturers indicate that Neoprene, or Nitrile Rubber are recommended.

Respiratory Protection:
If engineering controls do not maintain airborne concentrations to a level which is safe, use of a respirator may be required. 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 prefilters & organic cartridge, NIOSH approved.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Substance Chemical Family: Ethylene Glycols
Appearance: Red liquid.
Boiling Point: 226 °F
Flash Point: > 260 °F [Pensky-Martens Closed Cup]
Freezing Point: -34 °F
Odor: Mild odor.

pH: 6 - 9.6
Physical State: Liquid
Specific Gravity: 1.06 - 1.09

NOTE: The freezing and boiling point values reflect a 50% solution in water at a

SECTION 10 FRACTIVITY AND STABILITY

Hazardous Decomposition Products:
Thermal decomposition products are highly dependent on combustion conditions. A co

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Toxicity
Dermal LD50 > 2 g/kg(Rabbit) OSHA: Non-Toxic Based on components[s]
Carcinogenicity Classification
Extended Life Antifreeze/Coolant
NTP: No IARC: Not Reviewed ACGIH: No OSHA: No
Cardiovascular System
Ingestion of large doses can cause metabolic acidosis that results in cardiopulmon:

Developmental Toxicity
Oral exposure of pregnant rats and mice to ethylene glycol has produced birth defi

Kidney
Ingestion of ethylene glycol can cause bladder stones and kidney damage which can

Liver
Prolonged and repeated ingestion of ethylene glycol has produced liver damage in r

Lungs
Ingestion of large doses can cause metabolic acidosis that results in cardiopulmon:

Reproductive Toxicity
Exposing rats to 2-ethylhexanoic acid salt in drinking water impaired female fertil

Whole Animal
Orally, humans are more sensitive to ethylene glycol than rodents. The reported le

SECTION 12 ECOLOGICAL INFORMATION
Environmental Impact Summary:
There is no ecological data available for this product.

Environmental Fate:
The toxicity of this material to aquatic organisms has not been fully evaluated.

SECTION 13  DISPOSAL CONSIDERATIONS

RCRA Information:
Under RCRA, it is the responsibility of the user of the material to determine, at the location of use, whether disposal is regulated as hazardous waste.

SECTION 14  TRANSPORT INFORMATION

US Department of Transportation Classification:
This material is not regulated under 49 CFR if in a container of 119 gallon capacity.

Hazardous Substance/Material NO:
Ethylene glycol / 10936.856

International Air Transport Association
Hazard Class/Division: 9 (Miscellaneous)
Identification Number: UN3082
Packing Group: III
Proper Shipping Name: Environmentally Hazardous Substances, Liquid
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 Substance, Liquid
Technical Name(s): Ethylene Glycol

SECTION 15  REGULATORY INFORMATION

FEDERAL REGULATORY STATUS

OSHA Classification:

Comprehensive Environmental Release, Compensation & Liability Act (CERCLA):
Ethylene Glycol
RQ 5000 lbs Reportable Spill => 10937 lbs or 1312

Ozone Depleting Substances (40 CFR 82 Clean Air Act):
This material does not contain nor was it directly manufactured with any Class I or II CFC, HCFC, or halon.

Superfund Amendment & Reauthorization Act (SARA) Title III:
There are no components in this product on the SARA 302 list.
Safety Data Sheet (SDS)

Shell-Lubricants.com MSDS product code: 94042

SAFETY DATA SHEET (SDS):
Immediate Health: YES  Delayed Health: YES  Fire: NO  Pressure: NO  Reactivity: NO

SARA Hazard Categories (311/312):
Ethylene Glycol

SARA Toxic Release Inventory (TRI) (313):
Component(s) of this material is (are) listed on the EPA/TSCA Inventory of Chem:

Toxic Substances Control Act (TSCA) Status:
This product may be subject to export notification under TSCA Section 12(b);

Other Chemical Inventories:
Component(s) of this material is (are) listed on the Australian AIChE, Canadian DSI

State Regulation:
The following chemicals are specifically listed by individual states; other product

New Jersey Right-To-Know Chemical List:
Ethylene Glycol (6078) 45 - 54.99 %weight Special Hazard

Pennsylvania Right-To-Know Chemical List:
1,2-Ethanediol (107-21-1) 45 - 54.99 %weight Environmental Hazard

SECTION 16  OTHER INFORMATION

Revision #: 3
Review Date: 04/14/2005
Revision Date: 04/14/2005
Revisions since last change (discussion): This Material Safety Data Sheet (MSDS) is

SECTION 17  LABEL INFORMATION

READ AND UNDERSTAND MATERIAL SAFETY DATA SHEET BEFORE HANDLING OR DISPOSING OF PROD
PRODUCT CODE(S): 94042, 9404200001, 9404200055, 9404206621
ROTTELLA® ELC Premixed 50/50

WARNING!
MAY BE HARMFUL OR FATAL IF SWALLOWED. MAY CAUSE ACIDOSIS, CARDIOPULMONARY AND KIDNE
MAY CAUSE DAMAGE TO: Cardiovascular System, Kidney, Liver, Lungs.
Refer to Section 11, Toxicological Information, for specific information on the fol:
Developmental Toxicity, Reproductive Toxicity

Precautionary Measures:
Avoid prolonged or repeated contact with eyes, skin and clothing. Avoid breathing

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

9/1/2005
Eye Contact: Flush eyes with plenty of water while holding eyelids open. Rest eye.
Ingestion: DO NOT take internally. If swallowed, IMMEDIATELY contact a poison c.

FIRE

In case of fire, Use water fog, ‘alcohol foam’, dry chemical or carbon dioxide (C
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 s:
CONTAINS: Ethylene Glycol, 107-21-1; Deionized Water, 7732-18-5; Proprietary addit

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 caps.

Hazardous Substance/Material RQ: Ethylene glycol / 10936.85

CAUTION: Misuse of empty containers can be hazardous. Empty containers can be h

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

THE INFORMATION CONTAINED IN THIS DATA SHEET IS BASED ON THE DATA AVAILABLE TO US /
TO DETERMINE THE APPLICABILITY OR EFFECT OF ANY LAW OR REGULATION WITH RESPECT TO :
44043-11552-100R-04/14/2005


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