SECTION 1  PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: ENSIS® Compound DW 1012

MSDS NUMBER:  402748L - 0
PRODUCT CODE(S):  5063375, 5063454, 5064629

PRODUCT USE: Metal Working Fluid

MANUFACTURER TELEPHONE NUMBERS
SOPUS Products Spill Information: (877) 242-7400
P.O. Box 4427 Health Information: (877) 504-9351
Houston, TX.  77210-4427 MSDS Assistance Number: (877) 276-7285

SECTION 2  PRODUCT/INGREDIENTS

INGREDIENTS CAS# CONCENTRATION
Rust Inhibitor Fluid Mixture 80 - 90 %weight
Highly refined petroleum oils and distillates
Petroleum Sulfonic Acids, Calcium Salts 61789-86-4 10 - 20 %weight

SECTION 3  HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Health Hazards: May be harmful or fatal if swallowed. Do not induce vomiting. May cause aspiration pneumonitis. May cause CNS depression.
Physical Hazards: No known physical hazards.
NFPA Rating (Health, Fire, Reactivity): 2, 2, 0
Hazard Rating: Least - 0 Slight - 1 Moderate - 2 High - 3 Extreme - 4

Route(s) of Exposure: Eye, Inhalation, 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:
May be irritating to the eyes causing a burning sensation, redness, swelling and/or blurred vision.
**Skin Contact:**
May be irritating to the skin causing a burning sensation, redness and/or swelling. 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. Generally considered to have a low order of acute oral toxicity.

**Other Health Effects:**
Carcinogenic in animal tests. Known human carcinogen. See Section 11. It is probable that the material causes cancer in laboratory animals. Refer to Section 11, Toxicological Information, for specific information on the following effects: Genotoxicity

**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.

**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

**Inhalation:**
Move victim to fresh air and provide oxygen if breathing is difficult. Get medical attention. 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 eyes with large amounts of water for at least 15 minutes. If redness, burning, blurred vision or swelling persist, 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. 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.

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### SECTION 5  FIRE FIGHTING MEASURES

**Flash Point [Method]:** 150 °F/65.56 °C
**Upper Flammability Limit:** Not Determined
**Lower Flammability Limit:** Not Determined
Extinguishing Media:
This material is non-flammable. 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:
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. Cool surrounding equipment, fire-exposed containers and structures with water. 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.

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.

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

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. Wash thoroughly after handling.

Handling:
Surfaces that are sufficiently hot may ignite liquid material.

Air-dry contaminated clothing in a well-ventilated area before laundering.

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.

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.

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Limit</th>
<th>TWA</th>
<th>STEL</th>
<th>Ceiling</th>
<th>Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral Oil Mist</td>
<td>ACGIH TLV</td>
<td>5 mg/m³</td>
<td>10 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mineral Oil Mist</td>
<td>OSHA PEL</td>
<td>5 mg/m³</td>
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</table>

<table>
<thead>
<tr>
<th>Decomposition Product</th>
<th>Limit</th>
<th>TWA</th>
<th>STEL</th>
<th>Ceiling</th>
<th>Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen sulfide</td>
<td>ACGIH - TLV</td>
<td>10 ppmm</td>
<td>15 ppmm</td>
<td></td>
<td></td>
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<tr>
<td>Hydrogen sulfide</td>
<td>OSHA - PEL_IS</td>
<td>10 ppmm</td>
<td>15 ppmm</td>
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</table>

<table>
<thead>
<tr>
<th>Decomposition Product</th>
<th>Method</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen sulfide</td>
<td>Elevated Temperatures</td>
<td>Combustion</td>
</tr>
</tbody>
</table>

**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 - 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 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

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**

**Appearance & Odor:** Brown liquid. Slight Hydrocarbon Odor.
**Substance Chemical Family:** Lubricants
**Physical State:** Liquid

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point</td>
<td>150 °F</td>
</tr>
<tr>
<td>Solubility (in Water)</td>
<td>Negligible</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.807</td>
</tr>
<tr>
<td>Viscosity</td>
<td>&lt; 20 cSt @ 40 °C</td>
</tr>
</tbody>
</table>

**Odor Threshold:** Not Determined
**Partition Coefficient:** Not Determined
**pH:** Not Determined

**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. Aldehydes, Calcium Oxide, Carbon Monoxide, Carbon Dioxide, Hydrogen Sulfide, Sulfur Oxides and other unidentified organic compounds may be formed upon combustion.

**SECTION 11  TOXICOLOGICAL INFORMATION**

**Carcinogenicity Classification**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rust Inhibitor Fluid</td>
<td>No</td>
<td>Not Reviewed by IARC</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**Carcinogenicity**
Contains middle distillates. Long-term skin painting of kerosene and related materials caused malignant skin tumors with long latency periods (appearing late in the animals lives) in mice. Mechanistic studies suggest that these tumors are a secondary effect related to
prolonged skin injury and irritation.

| Genotoxicity    | A closely related component middle distillate component did not cause detectable mutations in two different in vivo (live animal) studies. Some evidence of genotoxicity was seen in separate in vitro (test tube) studies, usually in cases where the test material was metabolically activated. |

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:
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: Combustible Liquid, N.O.S.
Technical Names(s): Petroleum Distillates
Identification Number: NA1993
Hazard Class/Division: Combustible Liquid
Packing Group: III

Combustible Liquid: This material is not regulated under 49 CFR if in a container of 119 gallon capacity or less.

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.

Emergency Response Guide #128

International Air Transport Association
Hazard Class/Division: 3 (Flammable Liquid)
Identification Number: NA1993
Packing Group: III
Proper Shipping Name: Combustible Liquid, N.O.S.
Technical Name(s): Petroleum Distillates

International Maritime Organization Classification
Hazard Class/Division: 3 (Flammable Liquid)
Identification Number: NA1993
Packing Group: III
Proper Shipping Name: Combustible Liquid, N.O.S.
Technical Name(s): Petroleum Distillates

SECTION 15 REGULATORY INFORMATION

Federal Regulatory Status

OSHA Classification:

WHMIS Classification: Class B3

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.

<table>
<thead>
<tr>
<th>SARA Hazard Categories (311/312):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate Health</td>
</tr>
<tr>
<td>YES</td>
</tr>
</tbody>
</table>

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

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: 02/17/2005
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):  5063375, 5063454, 5064629

ENSIS® Compound DW 1012

CAUTION!
OVEREXPOSURE TO VAPORS CAN CAUSE CNS DEPRESSION. MAY CAUSE SKIN AND EYE IRRITATION. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. PROLONGED OR REPEATED SKIN CONTACT MAY CAUSE OIL ACNE OR DERMATITIS.
Refer to Section 11, Toxicological Information, for specific information on the following effects:
Genotoxicity

Precautionary Measures:
Avoid heat and open flames. Avoid prolonged or repeated contact with eyes, skin and clothing. Avoid breathing of vapors, fumes, or mist. Do not take internally. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. 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. 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 redness, swelling, pain and/or blister occur, transport to the nearest medical facility for additional treatment.

Eye Contact: Flush eyes with large amounts of water for at least 15 minutes. If eye irritation persists, seek medical advice. If redness, burning, blurred vision or swelling persist, 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. 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.

FIFFE

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: Highly refined petroleum oils and distillates, Mixture; Petroleum Sulfonic Acids, Calcium Salts, 61789-86-4

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

TRANSPORTATION

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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.

Emergency Response Guide #128

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

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. YOU ARE URGED TO OBTAIN DATA SHEETS FOR ALL PRODUCTS YOU BUY, PROCESS, USE OR DISTRIBUTE, AND ARE ENCOURAGED TO ADVISE THOSE WHO MAY COME IN CONTACT WITH SUCH PRODUCTS OF THE INFORMATION CONTAINED HEREIN.

TO DETERMINE THE APPLICABILITY OR EFFECT OF ANY LAW OR REGULATION WITH RESPECT TO THE PRODUCT, YOU SHOULD CONSULT WITH YOUR LEGAL ADVISOR OR THE APPROPRIATE GOVERNMENT AGENCY. WE WILL NOT PROVIDE ADVICE ON SUCH MATTERS, OR BE RESPONSIBLE FOR ANY INJURY FROM