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Inhalation: No significant effects expected from a single short-term exposure. Inhalation exposures are not expected under recommended uses/conditions.

Oral: Low ingestion hazard in normal use. If ingested, do not induce vomiting.

Prolonged/ repeated exposure effects

Eye: Not classified as hazardous

Skin: Not classified as hazardous

Inhalation: Not classified as hazardous

Oral: Not classified as hazardous

Repeated and/or prolonged exposure may cause irritation to the skin, eyes or respiratory tract. For mineral base oils: Base oils in this product are severely solvent refined and/or severely hydrotreated. Chronic mouse skin painting studies of severely treated oils show no evidence of carcinogenic effects.

Signs and symptoms of overexposure:

Irritation and/or redness of eyes and skin

Medical conditions aggravated by exposure

None identified

NFPA HAZARD ID: Health: 1 Flammability: 1 Reactivity: 0
(National Fire Protection Association)

NOTE: This material should not be used for any other purpose than the intended use in Section 1

SECTION 4 FIRST AID MEASURES

INHALATION Not expected to be a problem since high temperature or high mechanical shear are required to generate airborne exposure. However, if respiratory irritation, dizziness, nausea, or unconsciousness occurs due to excessive vapor or mist exposure, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or mouth-to-mouth resuscitation.

SKIN CONTACT Wash contact areas with soap and water. Remove and clean oil soaked clothing daily and wash affected area.

EYE CONTACT Flush thoroughly with water. If irritation occurs, call a physician.

INGESTION Seek medical attention. Do not induce vomiting.

NOTE TO PHYSICIAN: Ingested material, if aspirated into the lungs, can cause chemical pneumonitis.
SECTION 5  FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate extinguishing media: Carbon dioxide, foam, dry chemical and water fog. Water can be used to cool fire exposed containers.

FIRE FIGHTING

Fire fighting instructions: Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep the exposed containers cool. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

Unusual fire hazards: None identified.

Hazardous combustion products: Thermal breakdown of this product during fire or very high heat conditions may evolve the following hazardous decomposition products: Fumes, smoke, carbon monoxide, sulfur oxides, aldehydes and other decomposition products.

FLAMMABILITY PROPERTIES

Flash point °C (°F) [method]: >180 °C (>356 °F) [Open Cup]
Flammable limits (approx. Volume % in air): not determined
Autoignition temperature °C (°F): not determined

SECTION 6  ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES: Report spills/releases to appropriate authorities as required.

CONTAINMENT/ CLEANUP

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

LAND SPILL: Shut off source taking normal safety precautions. Take measures to minimize the effects on ground water. Recover by pumping or contain spilled material with sand or other suitable absorbent and remove mechanically into containers. If necessary, dispose of adsorbed residues as required by regulations (see Section 13.)

WATER SPILL: Confine the spill immediately with booms. Notify relevant authorities. Remove from the surface by skimming or with suitable absorbents.

ENVIRONMENTAL PRECAUTIONS: Prevent material from entering sewers, water sources or low lying areas; advise the relevant authorities if it has, or if it contaminates soil/vegetation.

PERSONAL PROTECTIVE EQUIPMENT FOR SPILLS

Eyes: Use proper protection – safety glasses as a minimum.
Skin: Washing at mealtime and end-of-shift is adequate.
Inhalation: No respiratory protection should be needed.
Precautionary measures: Avoid eye contact. Use reasonable care.

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SECTION 7 HANDLING AND STORAGE

HANDLING
Avoid prolonged/ repeated skin contact. Use with adequate ventilation

STORAGE:
Keep containers closed when not in use. Do not store in open or unlabelled containers. Store away from strong oxidizing agents and combustible materials. Do not store near heat, sparks, flame or strong oxidants.

SPECIAL PRECAUTIONS
Prevent small spills and leakages to optimize housekeeping and avoid slip hazard.

EMPTY CONTAINER WARNING
Empty containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to refill or clean container since residue is difficult to remove. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

STORAGE
Use reasonable care and store away from oxidizing materials

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMIT VALUES
When mists/aerosols can occur, the following are recommended:
5 mg/m3 (as oil mist) - ACGIH Threshold Limit Value (TLV)
10 mg/m3 (as oil mist) - ACGIH Short Term Exposure Limit (STEL)
5 mg/m3 (as oil mist) – OSHA Permissible Exposure Limit (PEL)

ENGINEERING CONTROLS
General ventilation is recommended. No local exhaust ventilation should be needed

PERSONAL PROTECTION
Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection:
No respiratory protection should be needed

Hand Protection:
No special protection needed

Eye Protection:
Use proper protection – safety glasses as a minimum
Specific Hygiene Measures:
Washing at mealtime and end-of-shift is adequate

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below. Consult the Cannon Instrument Company as indicated in Section 1 for additional data.

GENERAL INFORMATION
Physical state: Liquid
Form: Liquid
Color: Light amber color
Odor: Characteristic petroleum odor
Odor threshold: not available

IMPORTANT HEALTH, SAFETY AND ENVIRONMENTAL INFORMATION

Specific Gravity @ 25°C: <0.9
Bulk density g/cc: not determined
Density, kg/m³ (lbs./gal.): not determined
Flash point °C (°F) [method]: >180 °C (>356 °F) [Open Cup]
Flammable limits (approx. Volume % in air): not determined
Ignition temperature (polymers) °C (°F): not applicable
Autoignition temperature °C (°F): not determined
Boiling point/range °C (°F): >315 °C (599 °F)
Vapor density @ 101 kPa (air =1): not determined
Vapor pressure @ 20°C, kPa (mm Hg): <0.013 kPa (<0.1 mm Hg)
Evaporation rate (n-butyl acetate =1): not determined
pH: not applicable
Log Pow (n-Octanol/water partition coefficient): not determined
Solubility in water (20 °C): negligible
Viscosity: see product specification

OTHER INFORMATION
Freezing point °C (°F): not determined
Melting Point °C (°F): not determined
Pour point °C (°F): not determined
Molecular weight: not available
Hygroscopic: no
Coefficient of thermal expansion: not determined

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Extreme heat and high energy sources of ignition.

MATERIALS TO AVOID: Strong oxidizing agents/ materials can cause a reaction

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HAZARDOUS DECOMPOSITION PRODUCTS:  Product does not decompose at ambient temperatures.

HAZARDOUS POLYMERIZATION:  Hazardous polymerization will not occur

SECTION 11  TOXICOLOGICAL INFORMATION

This product is a mixture of components, and it has not been tested. Information from suppliers indicates that the product is not classifiable as hazardous

SECTION 12  ECOLOGICAL INFORMATION

Environmental fate and distribution

No specific environmental data are available for this product; this assessment is based on information for similar components/products.

Air:  This product has a low vapor pressure. As a result, it is unlikely to become an atmospheric contaminant under recommended conditions of use

Water:  This product has low water solubility. Since it has a specific gravity of <1, if discharged to water, it will form a surface film. As the product is non-volatile and has a high binding affinity for particulate matter, it will absorb to particulates and form sediment.

Soil:  This product is expected to have a high binding affinity for particulate matter in soil

Degradation:  This product is expected to be inherently biodegradable.

Environmental effects

Toxicity to water organisms:  Based on analogy to similar materials, this product is expected to exhibit low toxicity to aquatic organisms

Toxicity to soil organisms:  No available information

Bioaccumulation:  Bioaccumulation is unlikely due to the very low water solubility of this product; therefore bioavailability to aquatic organisms is minimal

Fate and effects in water treatment plants

This product or similar products have been shown to be non-toxic to sewage sludge bacteria

SECTION 13  DISPOSAL CONSIDERATIONS

When a decision is made to discard this material, it is not considered a hazardous waste under Resource Conservation and Recovery Act (RCRA).

State or local laws may impose additional regulatory requirements regarding disposal.
**WASTE DISPOSAL**: Product is suitable for burning in an enclosed, controlled burner for fuel value. Such burning may be limited pursuant to the Resource Conservation and Recovery Act. In addition, the product is suitable for processing by an approved recycling facility or can be disposed of at an appropriate government waste disposal facility. Use of these methods is subject to user compliance with applicable laws and regulations and consideration of product characteristics at time of disposal.

**SECTION 14 TRANSPORT INFORMATION**

*Note*: The information provided below may not apply to all shipping situations. Consult appropriate Dangerous Goods Regulations for additional requirements and mode-specific, material-specific, or quantity-specific shipping requirements.

**United States Department of Transportation (US DOT):**

<table>
<thead>
<tr>
<th>UN/ID#</th>
<th>Proper Shipping Name</th>
<th>Class/Division</th>
<th>Hazard Label(s)</th>
<th>Packing Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not Regulated As A Hazardous Material Or Dangerous Good For This Mode of Transportation.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**International Air Transport Association (IATA):**

<table>
<thead>
<tr>
<th>UN/ID#</th>
<th>Proper Shipping Name</th>
<th>Class/Division</th>
<th>Hazard Label(s)</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not Regulated As A Hazardous Material Or Dangerous Good For This Mode of Transportation.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SECTION 15 REGULATORY INFORMATION**

**OSHA HAZARD COMMUNICATION STANDARD**: When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

**NATIONAL CHEMICAL INVENTORY LISTING**: This product, and/ or its constituents, is listed on the US EPA/ TSCA (Toxic Substances Control Act) Inventory

**COMMUNITY RTK**:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Typical Value</th>
<th>Component TPQ</th>
<th>Product TPQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly refined mineral oil</td>
<td>May contain one or more of the following: 64742-54-7, 64742-57-0, 64742-53-6, 61788-76-9, 64741-88-4, 64742-01-4, 64742-65-0, 64741-89-5, 64742-48-9, 64742-52-5 *</td>
<td>100%</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

*Suppliers of certain components have not provided specific identities for the supplied highly refined mineral oil YS-30 and YS-35 contain up to 40% of a synthetic base oil, CAS# 68037-01-4

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Section 304 CERCLA HAZARDOUS SUBSTANCES:

This product contains no chemicals that are classified as hazardous under CERCLA

SARA (311/312) REPORTABLE HAZARD CATEGORIES:

This product contains no chemicals that are classified as hazardous under SARA 312

SARA (313) TOXIC RELEASE INVENTORY:

This product contains no chemicals that are regulated under SARA 313

International chemical inventories and hazard classifications

This product and/or its components are on the Canadian Domestic Substance List/ NDSL, or are otherwise in compliance with related regulations.

WHMIS Classifications (Canada):

This series of fluids is not controlled under provisions of WHMIS.

This product and/or its components are on EINECS (European Inventory of Existing Chemical Substances) and/or ELINCS (European Library of Notified Chemical Substances), or is otherwise in conformance with related EU directives/regulations.

EU Hazard Classification, risk and safety phrases (Europe):

This series of fluids is not classified according to EU directives and regulations.

SECTION 16 OTHER INFORMATION

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Revision Summary:

- October 15, 2005 -- This MSDS has been fully reviewed and reformatted to conform to changes in standard format
- May 14, 2007: Added Canadian and European classification and labeling information, based on current regulations and/or recommendations from suppliers (see Section 15)
- January 28, 2008: Removed C200, G200, S200(KU), S200, C350, G350, N350, N350(KU), C600, G600, N600, S600(KU), and S600 due to reformulation and transferred to another MSDS [11]. Removed S3, C6, G6, and S6 and transferred to a new MSDS [34] to segregate base oil types. Updated and standardized format of Transport Information (see Section 14).
- March 6, 2008: Clarified wording of Section 304/CERCLA chemical classification in Regulatory Information (see Section 15)
- March 9, 2011: Reviewed content. Updated Alternate Description/Brand of Product and Company Identification to add SV35 (see Section 1). Updated NFPA Hazard ID and Effects of Overexposure of Hazard Identification (see Section 3). Updated Flammability Properties of Fire-Fighting Measures (see Section 5). Updated Important Health, Safety, and Environmental Information of Physical and Chemical Properties (see Section 9). Updated Community RTK of Regulatory Information (see Section 15).
- June 14, 2012: Updated Alternate Description/Brand of Product and Company Identification to add SV20 (see Section 1).

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NOTES:

- October 26, 2012: Updated Community RTK of Regulatory Information (see Section 15).