MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT
Product Name: HYJET V
Product Description: Synthetic Base Stocks and Additives
Product Code: 201050303020, 430330-00, 97Y953
Intended Use: Aviation hydraulic fluid

COMPANY IDENTIFICATION
Supplier: EXXON MOBIL CORPORATION
3225 GALLOWS RD.
FAIRFAX, VA. 22037 USA
609-737-4411
800-424-9300
281-834-3296
800-662-4625, 800-947-9147

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

Reportable Hazardous Substance(s) or Complex Substance(s)

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS#</th>
<th>Concentration*</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALIPHATIC EPOXIDE</td>
<td>62256-00-2</td>
<td>5 - 7%</td>
</tr>
<tr>
<td>TRIBUTYL PHOSPHATE</td>
<td>125-73-8</td>
<td>70 - 80%</td>
</tr>
<tr>
<td>TRIPHENYL PHOSPHATE</td>
<td>115-86-6</td>
<td>&lt; 2.5%</td>
</tr>
</tbody>
</table>

* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

SECTION 3 HAZARDS IDENTIFICATION

This material is considered to be hazardous according to regulatory guidelines (see (M)SDS Section 15).

POTENTIAL HEALTH EFFECTS
Irritating to eyes. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. When heated, the vapors/fumes given off may cause respiratory tract irritation. High-pressure injection under skin may cause serious damage.

Target Organs: Eye

ENVIRONMENTAL HAZARDS
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

NFPA Hazard ID: Health: 2 F lammability: 1 Reactivity: 0
HMIS Hazard ID: Health: 2* F lammability: 1 Reactivity: 0
NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 4 FIRST AID MEASURES

INHALATION
Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT
Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

EYE CONTACT
Flush thoroughly with water for at least 15 minutes. Get medical assistance.

INGESTION
Seek immediate medical attention. Do not induce vomiting.

NOTE TO PHYSICIAN
If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Inappropriate Extinguishing Media: Straight Streams of Water

FIRE FIGHTING
Fire Fighting Instructions: Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Unusual Fire Hazards: May generate irritating and harmful gases/vapors/fumes when burning. Pressurized mists may form a flammable mixture. Hazardous material. Firefighters should consider protective equipment indicated in Section 8.

Hazardous Combustion Products: Smoke, Fume, Aldehydes, Sulfur oxides, Phosphorus oxides, Incomplete combustion products, Nitrogen oxides
FLAMMABILITY PROPERTIES

Flash Point [Method]: 160°C (320°F) - 175°C (347°F) [Cleveland Open Cup]
Flammable Limits (Approximate volume % in air): LEL: N/D UEL: N/D
Autoignition Temperature: 400°C (752°F)

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES
In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

PROTECTIVE MEASURES
Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

SPILL MANAGEMENT
Land Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do it without risk. Prevent entry into waterways, sewer, basements or confined areas. Ventilate the area. Recover by pumping or with suitable absorbent. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Water Spill: Stop leak if you can do it without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS
Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7 HANDLING AND STORAGE

HANDLING
Avoid contact with eyes. Avoid vapors from heated materials to prevent exposure to potentially toxic/irritating fumes. Avoid contact with skin. Prevent small spills and leakage to avoid slip hazard.

Static Accumulator: This material is not a static accumulator.
SECTION 8  EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

<table>
<thead>
<tr>
<th>Source</th>
<th>Form</th>
<th>Limit / Standard</th>
<th>NOTE</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRIBUTYL PHOSPHATE</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td>N/A</td>
<td>OSHA Z1</td>
</tr>
<tr>
<td>TRIBUTYL PHOSPHATE</td>
<td>TWA</td>
<td>0.2 ppm</td>
<td>N/A</td>
<td>ACGIH</td>
</tr>
<tr>
<td>TRIPHENYL PHOSPHATE</td>
<td>TWA</td>
<td>3 mg/m3</td>
<td>N/A</td>
<td>OSHA Z1</td>
</tr>
<tr>
<td>TRIPHENYL PHOSPHATE</td>
<td>TWA</td>
<td>3 mg/m3</td>
<td>N/A</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

- Adequate ventilation should be provided whenever the material is heated or mists are generated.

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: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

- No protection is ordinarily required under normal conditions of use and with adequate ventilation.
- For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

- If prolonged or repeated contact is likely, chemical resistant gloves are recommended. If contact with forearms is likely, wear gauntlet style gloves.

Eye Protection: Chemical goggles are recommended.
Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

- If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS
Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

GENERAL INFORMATION
Physical State: Liquid
Form: Clear
Color: Violet
Odor: Sweet
Odor Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION
Relative Density (at 15 °C): 0.993
Flash Point [Method]: 160°C (320°F) - 175°C (347°F) [Cleveland Open Cup]
Flammable Limits (Approximate volume % in air): LEL: N/D UEL: N/D
Autoignition Temperature: 400°C (752°F)
Boiling Point / Range: 288°C (550°F)
Vapor Density (Air = 1): N/D
Vapor Pressure: 0.067 kPa (0.5 mm Hg) at 20 °C
Evaporation Rate (n-butyl acetate = 1): N/D
pH: N/D
Log Pow (n-Octanol/Water Partition Coefficient): N/D
Solubility in Water: Negligible
Viscosity: 10.1 cSt (10.1 mm²/sec) at 40 °C | 3.5 cSt (3.5 mm²/sec) at 100°C
Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION
Freezing Point: N/D
Melting Point: N/A
Pour Point: -62°C (-80°F)

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.
CONDITIONS TO AVOID: Excessive heat.

MATERIALS TO AVOID: Strong oxidizers

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

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11

TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

<table>
<thead>
<tr>
<th>Route of Exposure</th>
<th>Conclusion / Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td></td>
</tr>
<tr>
<td>Toxicity (Rat): LC50 &gt; 5 mg/l</td>
<td>Minimally Toxic. Based on assessment of the components.</td>
</tr>
<tr>
<td>Irritation: No end point data for material.</td>
<td>Elevated temperatures or mechanical action may form vapors, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs. Based on test data for structurally similar materials.</td>
</tr>
<tr>
<td>Ingestion</td>
<td></td>
</tr>
<tr>
<td>Toxicity (Rat): LD50 1.348 g/kg</td>
<td>Slightly toxic. Based on test data for the material.</td>
</tr>
<tr>
<td>Skin</td>
<td></td>
</tr>
<tr>
<td>Toxicity (Rabbit): LD50 &gt; 2000 mg/kg</td>
<td>Minimally Toxic. Based on test data for structurally similar materials.</td>
</tr>
<tr>
<td>Irritation (Rabbit): Data available.</td>
<td>Negligible irritation to skin at ambient temperatures. Based on test data for the material.</td>
</tr>
<tr>
<td>Eye</td>
<td></td>
</tr>
<tr>
<td>Irritation (Rabbit): No end point data for material.</td>
<td>Irritating and will injure eye tissue. Based on test data for structurally similar materials.</td>
</tr>
</tbody>
</table>

CHRONIC/OTHER EFFECTS

For the product itself:
Sensitization: Non-sensitizing to the skin in humans.
Sensitization: Non-sensitizing to the skin of laboratory animals.
Contains:
Tributyl phosphate (TBP): Studies in rats have shown an increased incidence of urinary bladder tumors following long-term feeding of TBP in the diet. No bladder tumors were observed in similar studies in mice. The relevance of these findings for humans is uncertain.

Additional information is available by request.

The following ingredients are cited on the lists below: None.

---REGULATORY LISTS SEARCHED---

1 = NTP CARC
2 = NTP SUS
3 = IARC 1
4 = IARC 2A
5 = IARC 2B
6 = OSHA CARC

SECTION 12

ECOLOGICAL INFORMATION
The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY
Material -- Expected to be harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

SECTION 13 DISPOSAL CONSIDERATIONS
Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS
Protect the environment. Dispose of used oil at designated sites. Minimize skin contact. Do not mix used oils with solvents, brake fluids or coolants. Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by supervised incineration.

REGULATORY DISPOSAL INFORMATION
RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrositivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

Empty Container Warning: Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, 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.

SECTION 14 TRANSPORT INFORMATION

LAND (DOT): Not Regulated for Land Transport

Footnote: This material is not regulated under 49 CFR if in a container of 119 gallon capacity or less, except when transported by vessel.

LAND (TDG): Not Regulated for Land Transport
Product Name: HYJET V
Revision Date: 13 Dec 2012
Page 8 of 10

Footnote: Regulated under TDG as UN 3082, Environmentally Hazardous Substance, liquid, Class 9, Marine Pollutant, only when transported by ship.

SEA (IMDG): Not Regulated for Sea Transport according to IMDG-Code

AIR (IATA): Not Regulated for Air Transport

SECTION 15 — REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purpose, this material is classified as hazardous in accordance with OSHA 29CFR 1910.1200.

Complies with the following national/regional chemical inventory requirements: DSL, IECSC, TSCA

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>AICS</td>
<td>Restrictions Apply</td>
</tr>
<tr>
<td>KECI</td>
<td>Restrictions Apply</td>
</tr>
</tbody>
</table>

EPCRA SECTION 302: This material contains no extremely hazardous substances.


SARA (313) TOXIC RELEASE INVENTORY: This material contains no chemicals subject to the supplier notification requirements of the SARA 313 Toxic Release Program.

The following ingredients are cited on the lists below:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>List Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>CYCLOHEXANESULFONIC ACID, DECAFLUORO(PENTAFLUORO ETHYL)-, POTASSIUM SALT</td>
<td>67584-42-3</td>
<td>6</td>
</tr>
<tr>
<td>CYCLOHEXANESULFONIC ACID, NONAFLUOROBIS(TRIFLUORO METHYL) -, POTASSIUM SALT.</td>
<td>66156-01-4</td>
<td>6</td>
</tr>
<tr>
<td>TRIBUTYL PHOSPHATE</td>
<td>126-73-8</td>
<td>1, 4, 13, 16, 17, 18, 19</td>
</tr>
<tr>
<td>TRIPHENYL PHOSPHATE</td>
<td>115-86-6</td>
<td>1, 4, 13, 16, 17, 19</td>
</tr>
</tbody>
</table>

--REGULATORY LISTS SEARCHED--

1 = ACGIH ALL   6 = TSCA 5a2   11 = CA P65 REPRO   16 = MN RTK
2 = ACGIH A1    7 = TSCA 5e    12 = CA RTK      17 = NJ RTK
3 = ACGIH A2    8 = TSCA 6     13 = IL RTK     18 = PA RTK
4 = OSHA Z      9 = TSCA 12b   14 = LA RTK 19 = RI RTK
THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Revision Changes:
Composition: Component table was modified.
Section 04: First Aid Inhalation - Header was modified.
Section 15: Special Cases Table was modified.
Section 06: Protective Measures was modified.
Section 13: Disposal Considerations - Disposal Recommendations was modified.
Section 01: Product Code was modified.
Section 09: Phys/Chem Properties Note was modified.
Section 09: Physical State was modified.
Section 09: Color was modified.
Section 09: Boiling Point C(F) was modified.
Section 08: Evaporation Rate - Header was modified.
Section 08: Comply with applicable regulations phrase was modified.
Section 09: Vapor Pressure was modified.
Section 11: Eye Irritation Test Data was modified.
Section 11: Inhalation Irritation Test Data was modified.
Section 05: Hazardous Combustion Products was modified.
Section 09: Relative Density - Header was modified.
Section 09: Flash Point C(F) was modified.
Section 09: Viscosity was modified.
Section 09: Viscosity was modified.
Section 14: Sea (IMDG) - Header was modified.
Section 14: Air (IATA) - Header was modified.
Section 14: LAND (TDG) - Header was modified.
Section 14: LAND (DOT) - Header was modified.
Section 15: List Citations Table was modified.
Section 14: LAND (DOT) - Default was modified.
Section 14: LAND (TDG) Default was modified.
Section 14: Sea (IMDG) - Default was modified.
Section 14: Air (IATA) - Default was modified.
Section 15: National Chemical Inventory Listing - Header was modified.
Section 15: National Chemical Inventory Listing was modified.
Section 15: Community RTK - Header was modified.
Section 04: First Aid Ingestion - Header was modified.

PRECAUTIONARY LABEL TEXT:
Contains: TRIBUTYL PHOSPHATE
WARNING!
HEALTH HAZARDS
Irritating to eyes.
Target Organs: Eye
PRECAUTIONS
Avoid contact with eyes. Avoid vapors from heated materials to prevent exposure to potentially toxic/irritating fumes. Avoid contact with skin.

FIRST AID
Eye: Flush thoroughly with water for at least 15 minutes. Get medical assistance.

Oral: Seek immediate medical attention. Do not induce vomiting.

Skin: If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

Use
Not intended or suitable for use in or around a household or dwelling.

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