

EXXON COMPANY USA -- 212334-02334,HYJET IV-A PLUS -- 9150-01-096-6497

=====  
Product Identification  
=====

Product ID:212334-02334,HYJET IV-A PLUS

MSDS Date:06/01/1999

FSC:9150

NIIN:01-096-6497

Status Code:A

MSDS Number: CKFNH

=== Responsible Party ===

Company Name:EXXON COMPANY USA

Box:2180

City:HOUSTON

State:TX

ZIP:77252-2810

Country:US

Info Phone Num:800-443-9966

Emergency Phone Num:713-656-3424

Preparer's Name:NOT PROVIDED.

Chemtrec Ind/Phone:(800)424-9300

CAGE:0TS34

=== Contractor Identification ===

Company Name:EXXON COMPANY

Address:200 PARK AVE

Box:City:FLORHAM PARK

State:NJ

ZIP:07932-1002

Country:US

Phone:9737655498

Contract Num:SP0450-00-M-C170

CAGE:1DKH2

Company Name:EXXON MOBIL LUBRICANTS AND PETROLEUM SPECIALTIES CO.

Address:3225 GALLOWS RD

Box:City:FAIRFAX

State:VA

ZIP:22037

Country:US

Phone:703-846-4240

CAGE:0TS34

=====  
Composition/Information on Ingredients  
=====

=====

Ingred Name:TRIBUTYL PHOSPHATE  
CAS:126-73-8  
RTECS #:TC7700000  
Minumum % Wt:70.  
Maxumum % Wt:80.  
Other REC Limits:NOT PROVIDED.  
OSHA PEL:5 MG/M3  
ACGIH TLV:2.2 MG/M3;0.2 PPM

Ingred Name:AROMATIC PHOSPHATE  
Minumum % Wt:10.  
Maxumum % Wt:15.  
Other REC Limits:NOT PROVIDED.  
OSHA PEL:NOT PROVIDED.  
ACGIH TLV:NOT PROVIDED.

Ingred Name:POLYMER ADDITIVES  
Minumum % Wt:5.  
Maxumum % Wt:10.  
Other REC Limits:NOT PROVIDED.  
OSHA PEL:NOT PROVIDED.  
ACGIH TLV:NOT PROVIDED.

Ingred Name:ALIPHATIC EPOXIDES  
Minumum % Wt:5.  
Maxumum % Wt:10.  
Other REC Limits:NOT PROVIDED.  
OSHA PEL:NOT PROVIDED.  
ACGIH TLV:NOT PROVIDED.

===== Hazards Identification =====

LD50 LC50 Mixture:LD50 (ORAL, RAT) > 5,000 MG/KG  
Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES  
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO  
Health Hazards Acute and Chronic:EFFECTS OF OVEREXPOSURE: PROLONGED OR  
REPEATED SKIN CONTACT MAY CAUSE SKIN IRRITATION. REPEATED AND  
PROLONGED OVEREXPO

SURE TO OIL MISTS MAY RESULT IN DROPLET DEPOSITION, OIL GRANULOMA FORMATION, INFLAMMATION AND INCREASED INCIDENCE OF INFECTION. PROLONGED OR REPEATED CONTACT WITH THIS PRODUCT TENDS TO REMOVE SKIN OILS, POSSIBLY LEADING TO IRRITATION AND DERMATITIS. PRODUCT CONTACTING THE EYES WILL CAUSE EYE IRRITATION. PRODUCT HAS A LOW ORDER OF ACUTE ORAL AND DERMAL TOXICITY, BUT MINUTE AMOUNTS ASPIRATED INTO THE LUNGS DURING INGESTION OR VOMITING MAY CAUSE MILD TO SEVERE PULMONARY INJURY AND POSSIBLY DEATH.

Explanation of Carcinogenicity:IN ACCORDANCE WITH THE CURRENT OSHA COMMUNICATION STANDARD CRITERIA, THIS PRODUCT DOES NOT REQUIRE A CANCER HAZARD WARNING. THIS PRODUCT CONTAINS SYNTHETICALLY DERIVED MATERIALS, AND AS SUCH IS NOT CHARACTERIZED BY CURRENT IARC CLASSIFICATION CRITERIA FOR OILS.

Effects of Overexposure:PROLONGED OR REPEATED SKIN CONTACT MAY CAUSE SKIN IRRITATION. PROLONGED OR REPEATED CONTACT WITH THIS PRODUCT TENDS TO REMOVE SKIN OILS, POSSIBLY LEADING TO IRRITATION AND DERMATITIS. PRODUCT CONTACTING THE EYES WILL CAUSE EYE IRRITATION. PRODUCT HAS A LOW ORDER OF ACUTE ORAL AND DERMAL TOXICITY, BUT MINUTE AMOUNTS ASPIRATED INTO THE LUNGS DURING INGESTION OR VOMITING MAY CAUSE MILD TO SEVERE PULMONARY INJURY AND POSSIBLY DEATH.

Medical Cond Aggravated by Exposure:NONE RECOGNIZED.

===== First Aid Measures =====

First Aid:EYE CONTACT: IF SPLASHED INTO THE EYES, FLUSH WITH CLEAR

WATER FOR 15 MINUTES OR UNTIL IRRITATION SUBSIDES. IF IRRITATION PERSISTS, CALL PHYSICIAN. SKIN: IN CASE OF CONTACT, WASH WITH SOAP AND WATER. IF INJECTED INTO/UNDER SKIN, REGARDLESS OF THE APPEARANCE OR ITS SIZE, CONTACT PHYSICIAN IMMEDIATELY. INHALATION: VAPOR PRESSURE IS LOW AND INHALATION NORMALLY IS NOT A PROBLEM. IF OVERCOME BY VAPOR FROM HOT PRODUCT, IMMEDIATELY REMOVE FROM EXPOSURE AND CALL A PHYSICIAN. IF BREATHING IS IRREGULAR/HAS

STOPPED, START RESUSCITATION, ADMINISTER OXYGEN IF AVAILABLE. INGESTION: IF INGESTED, DO NOT INDUCE VOMITING; CALL PHYSICIAN IMMEDIATELY.

===== Fire Fighting Measures =====

Flash Point Method:COC

Flash Point:=177.8C, 352.F

MINIMUM

Autoignition Temp:=407.8C, 766.F

Lower Limits:NOT AVAILABL

Upper Limits:NOT AVAILABL

Extinguishing Media:FOAM, WATER SPRAY (FOG), DRY CHEMICAL, CARBON DIOXIDE AND VAPORIZING LIQUID TYPE EXTINGUISHING AGENTS MAY ALL BE

SUITABLE FOR EXTINGUISHING FIRES INVOLVING THIS TYPE OF PRODUCT.

Fire Fighting Procedures:USE WATER TO KEEP FIRE EXPOSED CONTAINERS COOL. IF A LEAK/SPILL HAS NOT IGNITED, USE WATER SPRAY TO DISPERSE THE VAPORS AND TO PROVIDE PROTECTION FOR PERSONS ATTEMPTING TO STOP A LEAK. WATER SPRAY MAY BE USED TO FLUSH SPILLS AWAY. USE SUPPLIED-AIR BREATHING EQUIPMENT FOR ENCLOSED/CONFINED SPACES OR AS OTHERWISE NEEDED.

Unusual Fire/Explosion Hazard:NOT PROVIDED.

===== A  
ccidental Release Measures =====

Spill Release Procedures:RECOVER FREE PRODUCT. ADD SAND, EARTH OR OTHER SUITABLE ABSORBENT TO SPILL AREA. MINIMIZE BREATHING VAPORS. MINIMIZE SKIN CONTACT. OPEN ALL WINDOWS AND DOORS. KEEP PRODUCT OUT OF SEWERS AND WATERCOURSES BY DIKING OR IMPOUNDING. ADVISE AUTHORITIES IF PRODUCT HAS ENTERED OR MAY ENTER SEWERS, WATERCOURSES, OR EXTENSIVE LAND AREAS. ASSURE CONFORMITY WITH APPLICABLE GOVERNMENTAL REGULATIONS.

Neutralizing  
Agent:NOT RELEVANT.

===== Handling and Storage =====

Handling and Storage Precautions:KEEP CONTAINER CLOSED WHEN NOT IN USE. DO NOT STORE NEAR HEAT, SPARKS, FLAME OR STRONG OXIDANTS. USE PRODUCT WITH CAUTION AROUND HEAT, SPARKS, PILOT LIGHTS, STATIC ELECTRICITY, AND OPEN FLAME.

Other Precautions:EMPTY CONTAINERS RETAIN PRODUCT RESIDUES (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.

===== Exposure Controls/Personal Protection =====

Respiratory Protection:USE SUPPLIED-AIR RESPIRATORY PROTECTION IN CONFINED OR ENCLOSED SPACES, IF NEEDED.

Ventilation:USE LOCAL EXHAUST, IF NECESSARY. PROVIDE VENTILATION SUFFICIENT TO PREVENT EXCEEDING RECOMMENDED EXPOSURE LIMIT OR BUILDUP OF EXPLOSIVE CONCENTRATIO

NS OF VAPOR

Protective Gloves:USE CHEMICAL RESISTANT GLOVES TO AVOID PROLONGED OR REPEATED SKIN CONTACT.

Eye Protection:USE SPLASH GOGGLES OR FACE SHIELD WHEN EYE CONTACT MAY OCCUR.

Other Protective Equipment:USE CHEMICAL RESISTANT APRON OR OTHER IMPERVIOUS CLOTHING, IF NEEDED, TO PREVENT SKIN CONTACT.

Work Hygienic Practices:TO PREVENT FIRE OR EXPLOSION RISK FROM STATIC ACCUMULATION AND DISCHARGE, EFFECTVELY BOND AND/OR GROUND PRODUCT TRANSFER SYSTEM IN ACCORDANCE WITH THE N

ATIONAL FIRE PROTECTION ASSOCIATION PUBLICATIONS.

Supplemental Safety and Health

MINIMIZE BREATHING VAPOR, MIST OR FUMES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. REMOVE CONTAMINATED CLOTHING AND LAUNDER OR DRY-CLEAN BEFORE REUSE.

===== Physical/Chemical Properties =====

HCC:V6

NRC/State Lic Num:NOT RELEVANT.

Boiling Pt:=287.8C, 550.F

B.P. Text:APPROXIMATELY

Melt/Freeze Pt:=-56.5C, -70.F

M.P/F.P Text:POUR POINT

Decomp Temp:Decomp Text:NOT PROVIDED.

Vapor Pres:0.5 @ 200F

Spec Gravity:0.995

pH:NOT RELEVANT.

Viscosity:10.33 CST @ 100F

Evaporation Rate & Reference:NO DATA

Solubility in Water:NEGLIGIBLE

Appearance and Odor:CLEAR PURPLE LIQUID, SWEET ODOR

Percent Volatiles by Volume:NEGLIGIBLE

Corrosion Rate:NOT PROVIDED.

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

AVOID CONTACT WITH STRONG OXIDANTS SUCH AS LIQUID CHLORINE, CONCENTRATED OXYGEN, SODIUM HYPOCHLORITE, CAL

CIUM HYPOCHLORITE,  
NITRATES, PEROXIDES, ETC., AS THIS PRESENT A SERIOUS EXPLOSION  
HAZARD.

Stability Condition to Avoid:WILL NOT REACT WITH WATER.

Hazardous Decomposition Products:FUMES, SMOKE, CARBON MONOXIDE, SULFUR  
OXIDES, NITROGEN OXIDES, PHOSPHORUS OXIDES, ALDEHYDES AND OTHER  
DECOMPOSITION PRODUCTS, IN THE CASE OF INCOMPLETE COMBUSTION.

===== Toxicological Information =====

Toxicological Information:THIS PRODUCT, AS MANUFACTURED BY EXXON, DOES

NOT CONTAIN POLYCHLORINATED BIPHENYLS (PCB'S). ACUTE DERMAL LD50  
(RABBIT) GREATER THAN 3.16 G/KG. EXPOSURE LIMIT FOR TOTAL PRODUCT 5  
MG/M3 FOR OIL MIST (AE ROSOL) FOR AN 8-HOUR WORKDAY. 3 MG/M3 FOR  
TRIPHENYL PHOSPHATE FOR AN 8-HOUR WORKDAY. IN A LONG TERM FEEDING  
STUDY IN MICE TRIBUTYL PHOSPHATE CAUSED AN INCREASE INCIDENCE OF  
BENIGN LIVER TUMORS IN MALE CD-1 MICE (3500 PPM ONLY, NOEL = 1000  
PPM) WHICH WAS ACCOMPANIED BY LIVER ENLARGEMENT. IN MALE AND FEMALE  
CD RA

TS, A CHRONIC FEEDING STUDY RESULTED IN BENIGN AND MALIGNANT  
TUMORS OF THE URINARY BLADDER.

===== Ecological Information =====

Ecological:MAY BE TOXIC TO AQUATIC ORGANISMS.

===== Disposal Considerations =====

Waste Disposal Methods:DRUMS SHOULD BE RETURNED TO A DRUM CONDITIONER.  
ALL OTHER CONTAINERS SHOULD BE DISPOSED OF IN AN ENVIRONMENTALLY  
SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENTAL REGULATIONS.

=====  
===== MSDS Transport Information =====

Transport Information:U.S. DOT HAZARDOUS MATERIAL SHIPPING DESCRIPTION:  
TRANSPORTED BY HIGHWAY, RAIL OR AIR (49 CFR 171-180) BULK  
PACKAGINGS (CAPACITY GREATER THAN 119 U.S. GALLONS):  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIARYL  
PHOSPHATES, ISOPROPYLATED), 9, UN 3082, III, MARINE POLLUTANT.  
NON-BULK PACKAGINGS (CAPACITY LESS THAN OR EQUAL TO 119 U.S.  
GALLONS) NOT REGULATED (49 CFR 171-180, IATA DG

R 7.1.5 .2).

TRANSPORTED BY MARINE VESSEL: BULK AND NON-BULK PACKAGINGS (IMDG 7.2.1): ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIARYL PHOSPHATES, ISOPROPYLATED), 9, UN 3082, III, MARINE POLLUTANT .

=====  
===== Regulatory Information =====

SARA Title III Information:TOXIC CHEMICAL RELEASE REPORTING, EPA REGULATION 40 CFR 372 (SARA SECTION 313): NO TOXIC CHEMICAL IS PRESENT GREATER THAN 1% OR 0.1% (CARCINOGEN). TOXIC CHEMICAL R

RELEASE REPORTING, EPA REGULATION 40 C FR 370 (SARA SECTION 311-312): EPA HAZARD CLASSIFICATION CODES: ACUTE, CHRONIC.

Federal Regulatory Information:TOXIC SUBSTANCE CONTROL ACT: THIS PRODUCT CONTAINS THE FOLLOWING TSCA 12B REPORTABLE CHEMICAL SUBSTANCE (S): TRIBUTYL PHOSPHATE CAS # 126-73-8.

State Regulatory Information:NOT PROVIDED.

=====  
===== Other Information =====

Disclaimer (provided with this information by the compiling agencies):

This info

mation is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.