

430207-00 MOBIL JET OIL II
MATERIAL SAFETY DATA BULLETIN

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MOBIL JET OIL II
SUPPLIER: MOBIL OIL CORP.
NORTH AMERICA MARKETING AND REFINING
3225 GALLOWS RD.
FAIRFAX, VA 22037
24 - Hour Emergency (call collect): 609-737-4411
Product and MSDS Information: 800-662-4525 609-224-4644
CHEMTREC: 800-424-9300 202-483-7616

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAMES AND SYNONYMS: SYN. HYDROCARBONS AND ADDITIVES
INGREDIENTS CONSIDERED HAZARDOUS TO HEALTH:

Substance Name	Wt%
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TRICRESYL PHOSPHATE (1330-78-5)	1-5
1-NAPHTHALENAMINE, N-PHENYL (90-30-2)	1-5

NOTE: This product contains 1.0% wt. P.A.N. (phenyl-alpha-naphthylamine)
90-30-2.

See Section 15 for European Label Information.
See Section 8 for exposure limits (if applicable).

3. HAZARDS IDENTIFICATION

US OSHA HAZARD COMMUNICATION STANDARD: Product assessed in accordance
with OSHA 29 CFR 1910.1200 and determined to be hazardous.

EFFECTS OF OVEREXPOSURE: This product is not expected to produce
neurotoxic effects under normal conditions of use and with
appropriate personal hygiene practices. This product contains
tricresyl phosphate (TCP). Overexposure to TCP by swallowing,
prolonged or repeated breathing of oil mist, or prolonged or
repeated skin contact may produce nervous system disorders
including gastrointestinal disturbances, numbness, muscular
cramps, weakness and paralysis. Paralysis may be delayed. Refer
to emergency and first aid procedures for additional information.
EMERGENCY RESPONSE DATA: Amber Liquid. DOT ERG No. - NA. SEC: 0

4. FIRST AID MEASURES

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

SKIN CONTACT: Wash contact areas with soap and water. Do not wear
ordinary clothing wet with this product. Remove contaminated
clothing. Launder contaminated clothing before reuse.

INHALATION: Remove from further exposure. If respiratory irritation,
dizziness, nausea, or unconsciousness occurs, seek immediate
medical assistance. If breathing has stopped, assist ventilation
with bag-valve-mask device or use mouth-to-mouth resuscitation.

INGESTION: Seek immediate medical attention. If medical attention will be delayed, contact a Regional Poison Center or emergency medical professional regarding the induction of vomiting or use of activated charcoal. Do not induce vomiting or give anything by mouth to a groggy or unconscious person.

NOTE TO PHYSICIANS: This product is not expected to produce adverse effects under normal conditions of use and appropriate personal hygiene. This product contains TCP which can cause symptoms associated with cholinesterase inhibition. TCP may also produce neurotoxicity associated with inhibition of neuropathy target esterase (NTE). Effects of cholinesterase inhibition are expected to occur within hours of exposure, but neurotoxicity related to NTE inhibition may not become evident for several days. Treat appropriately.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemical and water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Water or foam may cause frothing.

Use water to keep fire exposed containers cool. Water spray may be used to flush spills away from exposure. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

SPECIAL PROTECTIVE EQUIPMENT: For fires in enclosed areas, fire fighters must use self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None. Flash Point C(F): 246(475) (ASTM D-92). Flammable limits - LEL: NA, UEL: NA.

NFPA HAZARD ID: Health: 1, Flammability: 1, Reactivity: 0

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES: Report spills as required to appropriate authorities. U. S. Coast Guard regulations require immediate reporting of spills that could reach any waterway including intermittent dry creeks. Report spill to Coast Guard toll free number (800) 424-8802. In case of accident or road spill notify CHEMTREC (800) 424-9300.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED: Adsorb on fire retardant treated sawdust, diatomaceous earth, etc. Shovel up and dispose of at an appropriate waste disposal facility in accordance with current applicable laws and regulations, and product characteristics at time of disposal.

ENVIRONMENTAL PRECAUTIONS: Prevent spills from entering storm sewers or drains and contact with soil.

PERSONAL PRECAUTIONS: See Section 8

7. HANDLING AND STORAGE

HANDLING: Avoid ingestion. Avoid inhalation of mists. Avoid prolonged repeated skin contact. Wash thoroughly before eating or smoking. Keep away from feed or food products. Do not use on food processing machinery.

STORAGE: Store in a cool, dry, well ventilated area away from heat.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: Use in well ventilated area with local exhaust ventilation.

RESPIRATORY PROTECTION: Approved respiratory protective equipment should be used if ventilation is inadequate and breathing of mists or vapors is likely.

EYE PROTECTION: If eye contact is likely, safety glasses with side shields or chemical type goggles should be worn.

SKIN PROTECTION: If prolonged or repeated skin contact is likely, oil impervious gloves should be worn. Good personal hygiene practices should always be followed.

EXPOSURE LIMITS: This product does not contain any components which have recognized exposure limits. However, a exposure limit of 5.00 mg/m3 is suggested for oil mist.

9. PHYSICAL AND CHEMICAL PROPERTIES

Typical physical properties are given below. Consult Product Data Sheet for specific details.

APPEARANCE: Liquid

COLOR: Amber

ODOR: Mild

ODOR THRESHOLD-ppm: NE

pH: NE

BOILING POINT C(F): NE

MELTING POINT C(F): NA

FLASH POINT C(F): 246(475) (ASTM D-92)

FLAMMABILITY: NE

AUTO FLAMMABILITY: NE

EXPLOSIVE PROPERTIES: NA

OXIDIZING PROPERTIES: NA

VAPOR PRESSURE-mmHg 20 C: NE

VAPOR DENSITY: NE

EVAPORATION RATE: NE

RELATIVE DENSITY, 15/4 C: 1

SOLUBILITY IN WATER: Negligible

PARTITION COEFFICIENT: NE

VISCOSITY AT 40 C, cSt: > 23.0

VISCOSITY AT 100 C, cSt: > 4.9

POUR POINT C(F): -54(-65)

FREEZING POINT C(F): NE

VOLATILE ORGANIC COMPOUND: NA

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES

FOR FURTHER TECHNICAL INFORMATION, CONTACT YOUR MARKETING REPRESENTATIVE

10. STABILITY AND REACTIVITY

STABILITY (THERMAL, LIGHT, ETC.): Stable.

CONDITIONS TO AVOID: Extreme heat.

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL DATA

---ACUTE TOXICOLOGY---

ORAL TOXICITY (RATS): Practically non-toxic (LD50: greater than 2000 mg/kg). ---Based on testing of similar products and/or the components.

DERMAL TOXICITY (RABBITS): Practically non-toxic (LD50: greater than 2000 mg/kg). ---Based on testing of similar products and/or the components.

INHALATION TOXICITY (RATS): Practically non-toxic (LC50: greater than 5 mg/l). ---Based on testing of similar products and/or the components.

EYE IRRITATION (RABBITS): Practically non-irritating. (Draize score: 0 or greater but 6 or less). ---Based on testing of similar products and/or the components.

SKIN IRRITATION (RABBITS): Practically non-irritating. (Primary Irritation Index: greater than 0.5 but less than 3). ---Based on testing of similar products and/or the components.

OTHER ACUTE TOXICITY DATA: ****This mixture or a similar mixture did not result in any fatalities to rats at concentrations (see inhalation toxicity above) substantially higher than the 5 mg/m3 TLV suggested for oil mists.

---REPRODUCTIVE TOXICOLOGY (SUMMARY)---

This product is unlikely to produce reproductive effects by any route of exposure. In Mobil laboratory studies, no adverse effects were seen on male reproductive systems of rats exposed to a generic jet engine oil containing 3% TCP for 14 days oral or 13 weeks dermal exposure. In addition, no adverse effects were seen in ovaries of female rats after 13 weeks dermal exposure.

---SENSITIZATION (SUMMARY)---

This product contains 1.0% wt. phenyl-alpha-naphthylamine (PAN). Human repeated insult patch testing with lubricants containing 1.0% (w/w) PAN caused no reactions indicative of sensitization in over 449 human subjects. A similar jet oil formulation (containing 0.75% w/w PAN) was evaluated in a guinea pig sensitization test (Buehler) and found not to cause skin sensitization. In a separate study, guinea pigs that were highly sensitized to pure PAN were found to tolerate a challenge concentration of 1.0% (w/w) PAN in mineral oil with no sensitization response.

---OTHER TOXICOLOGY DATA---

Under normal conditions of use this product is unlikely to produce neurotoxic effects by dermal or inhalation exposure but may produce such effects if orally ingested. While not acutely toxic, repeated applications of 2 g/kg of a generic engine oil containing 3% tricresyl phosphate (TCP), (one dermal application/day, 5 days/week for 90 days), to male and female Sprague-Dawley rats decreased the activities of both serum and red blood cell cholinesterases. TCP was found to be responsible for the observed effects. Acute oral studies with the TCP additive showed inhibition of brain neuropathy target esterase which is indicative of a potential to produce delayed neurotoxicity. Repeated oral administration of 2 g/kg of a generic jet engine oil containing 3% tricresyl phosphate (TCP) (once/day, 5 days/week for 10 weeks) to hens (60mg/kg/day TCP) inhibited brain neuropathy target esterase (NTE) by 70% and caused ataxia or paralysis in 22 of 30 hens in this treatment group.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE AND EFFECTS: Not established.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by supervised

incineration. 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.

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 hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity, or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

14. TRANSPORT INFORMATION

USA DOT: NOT REGULATED BY USA DOT.
RID/ADR: NOT REGULATED BY RID/ADR.
IMO: NOT REGULATED BY IMO.
IATA: NOT REGULATED BY IATA.

15. REGULATORY INFORMATION

Governmental Inventory Status: All components comply with TSCA, and EINECS/ELINCS.

EU Labeling: EU labeling not required.

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III: This product contains no "EXTREMELY HAZARDOUS SUBSTANCES".

SARA (311/312) REPORTABLE HAZARD CATEGORIES:
CHRONIC

This product contains no chemicals reportable under SARA (313) toxic release program.

The following product ingredients are cited on the lists below:

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS
TRICRESYL PHOSPHATE (3.00%)	1330-78-5	22
--- REGULATORY LISTS SEARCHED ---		
1=ACGIH ALL	6=IARC 1	11=TSCA 4
2=ACGIH A1	7=IARC 2A	12=TSCA 5a2
3=ACGIH A2	8=IARC 2B	13=TSCA 5e
4=NTP CARC	9=OSHA CARC	14=TSCA 6
5=NTP SUS	10=OSHA Z	15=TSCA 12b
		16=CA P65 CARC
		17=CA P65 REPRO
		18=CA RTK
		19=FL RTK
		20=IL RTK
		21=LA RTK
		22=MI 293
		23=MN RTK
		24=NJ RTK
		25=PA RTK
		26=RI RTK

Code key: CARC=Carcinogen; SUS=Suspected Carcinogen; REPRO=Reproductive

16. OTHER INFORMATION

Precautionary Label Text:

CONTAINS TRICRESYL PHOSPHATE, 1-NAPHTHALENAMINE, N-PHENYL-WARNING!

Swallowing this product can cause nervous system disorders including paralysis. Prolonged or repeated breathing of oil mist, or prolonged or repeated skin contact can cause nervous system effects.

Never swallow. Wash hands after handling and before eating. Never use in or around food. Avoid prolonged or repeated overexposure to skin or lungs.

FIRST AID: If swallowed, seek immediate medical attention. If medical

attention will be delayed, induce vomiting. In case of contact, wash skin with soap and water. Remove contaminated clothing. For industrial use only. Not intended or suitable for use in or around a household or dwelling. Never use empty container to carry water or food. Do not cut, puncture, or weld on or near container.

USE: AVIATION ENGINE OIL

NOTE: MOBIL PRODUCTS ARE NOT FORMULATED TO CONTAIN PCBS.

Please call the Customer Response Center on 800-662-4525 for formulation disclosure.

For Internal Use Only: MHC: 0* 0* 1* 0* 1*, MPPEC: C, TRN: 430207-00, GLIS: 400268, CMCS97: 970570, REQ: MIAMI, SAFE USE: L
EHS Approval Date: 23NOV1998

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