ExxonMobil

7032965-60 CRUDE OIL
MATERIAL SAFETY DATA BULLETIN

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1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: CRUDE OIL
06/06/2003

SUPPLIER: Esso Petroleum Company
ExxonMobil House
Ermyn Way, Leatherhead
Surrey, KT22 8UX
UK

Environmental/Health Emergency telephone: 01372 222 000 (UK)
44 1372 222 000 (Ireland)

INTENDED USE: FEED STOCK

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2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAMES AND SYNONYMS: PETROLEUM CRUDE OIL

GLOBALLY REPORTABLE MSDS INGREDIENTS:

Substance Name	Approx. Wt%	EU Classification
PETROLEUM CRUDE OIL (CAS 8002-05-9) (EINECS 232-298-5)	100	T;R45 F+;R12 Xn;R65 R66 R67 R52/53

NOTE: Crude oils may contain varying concentrations of hydrogen sulphide depending on gas stripping operations. The concentration of the components shown above are representative of the maximum concentrations expected, and can vary substantially.

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3. HAZARDS IDENTIFICATION

This product is considered hazardous according to EU regulatory guidelines (see Section 15).

Symbol: F+ T Extremely Flammable, Toxic.

Risk Phrase(s): R12-45-65-66-67-52/53.

POTENTIAL HEALTH EFFECTS: **** Warning: H2S a highly toxic gas may be present, see MSDS toxicology section. Respiratory irritation, dizziness, nausea, loss of consciousness, and in cases of extreme exposure, possibly death. Overexposure to benzene may result in cancer, blood disorders and damage to the bone marrow. Low

viscosity material-if swallowed may enter the lungs and cause lung damage. Exposure to normal hexane may result in nerve damage.

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

For further health effects/toxicological data, see Section 11.

NOTE: This product should not be used for any other purpose without expert advice.

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4. FIRST AID MEASURES

EYE CONTACT: Flush thoroughly with water. If irritation occurs, call a doctor.
SKIN CONTACT: Dry-wipe the skin. Cleanse the area with waterless hand cleaner, and follow by washing thoroughly with soap and water. Remove contaminated clothing. Launder clothing before re-use. Discard shoes if material has penetrated to inside surface. In case of contact with hot product, flush skin with cold water to dissipate heat. Get medical advice immediately. (See Section 16 - Injection Injury)
INHALATION: Immediately remove from further exposure. Get immediate medical assistance. For those providing assistance, avoid exposure to yourself and others. Use adequate respiratory protection. Give supplemental oxygen, if available. If breathing has stopped, assist ventilation with a mechanical device.
INGESTION: Seek immediate medical attention. Do not induce vomiting.
NOTE TO DOCTORS: Material if aspirated into the lungs may cause chemical pneumonitis. PRE-EXISTING MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY EXPOSURE: Benzene- Individuals with liver disease may be more susceptible to toxic effects. Hexane- Individuals with neurological disease should avoid exposure.

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5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemical and water fog.
SPECIAL FIRE FIGHTING PROCEDURES: Use water to keep fire exposed containers cool. If a leak or spill has not ignited, use water spray to disperse the vapours and to protect personnel attempting to stop leak. Water spray may be used to flush spills away from exposures. Prevent runoff from fire control or dilution from entering waterways or drinking water supply.
SPECIAL PROTECTIVE EQUIPMENT: For fires in enclosed areas, firefighters MUST use self-contained breathing apparatus.
UNUSUAL FIRE AND EXPLOSION HAZARDS: EXTREMELY FLAMMABLE. Vapour accumulation could flash and/or explode if in contact with open flame. Exposure to fire can generate highly toxic fumes.
Flash Point C(F): < 35(95) (IP 34 / ASTM D-93).
Flammable Limits (approx.% vol.in air) - LELNE, UEL: NE
NFPA HAZARD ID: Health: 2 , Flammability: 3 , Reactivity: 0

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6. ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES: Report spills/releases as required to appropriate authorities. In case of accident or road spill,

contact the Police and Fire Brigade and, if appropriate, the Area Water Authority.

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 using explosion-proof equipment or contain spilled liquid with sand or other suitable absorbent and remove mechanically into containers. If necessary, dispose of adsorbed residues as directed in Section 13.

WATER SPILL: Confine the spill immediately with booms. Warn other ships in the vicinity. Notify port and other relevant authorities. Remove from the surface by skimming or with suitable absorbents. If permitted by regulatory authorities the use of suitable dispersants should be considered where recommended in local oil spill procedures.

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 PRECAUTIONS: See Section 8

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7. HANDLING AND STORAGE

SPECIFIC USES: FEED STOCK

HANDLING: Avoid contact with skin. Avoid inhalation of vapours or mists. Use in well ventilated area away from all ignition sources. Trace amounts of hydrogen sulphide (H2S) may be present. H2S may collect in the vapour space of tanks or other enclosed vessels. Keep face clear of openings in storage tanks and transport vehicles. Avoid all personal contact and breathing gas. Avoid sparking conditions. Ground and bond all transfer equipment. See Section 8 for additional personal protection advice when handling this product.

STORAGE: Inhalation hazard: Contains trace amounts of H2S. Environment should be tested for contaminant before entering area. Drums must be grounded and bonded and equipped with self-closing valves, pressure vacuum bungs and flame arresters. Outside or detached storage preferred. Storage containers should be grounded and bonded. Store in a cool area away from all ignition sources.

EMPTY CONTAINER WARNING: Empty containers retain residue (liquid and/ or vapour) 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 returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS:

This product does not contain any components which have recognized exposure limits.

VENTILATION: Ventilation required and equipment MUST be explosion proof. Use away from all heat and ignition sources.
RESPIRATORY PROTECTION: Use supplied-air respiratory protection in confined or enclosed spaces, if needed.
EYE PROTECTION: Chemical type goggles should be worn.
SKIN PROTECTION: Impervious gloves MUST be worn. If contact is likely, oil impervious clothing MUST be worn. Good personal hygiene practices should always be followed.
ENVIRONMENTAL CONTROLS: SEE SECTION 7

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9. PHYSICAL AND CHEMICAL PROPERTIES

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

GENERAL:

PHYSICAL STATE:	Liquid
COLOUR:	Brown or Black
ODOUR:	Sulphur
ODOUR THRESHOLD-ppm:	NE

IMPORTANT HEALTH, SAFETY AND ENVIRONMENTAL INFORMATION:

pH:	NA
BOILING POINT C(F):	NE
FLASH POINT C(F):	< 35(95) (IP 34 / ASTM D-93)
FLAMMABILITY (solids):	NE
AUTO FLAMMABILITY C(F):	NE
EXPLOSIVE PROPERTIES:	NA
OXIDIZING PROPERTIES:	NA
VAPOUR PRESSURE-mmHg 20 C:	NE
RELATIVE DENSITY, 15/4 C:	0.8
SOLUBILITY IN WATER:	Negligible
PARTITION COEFFICIENT:	NE
VISCOSITY AT 40 C, cSt:	< 7.0
VISCOSITY AT 100 C, cSt:	NE
VAPOUR DENSITY:	NE
EVAPORATION RATE:	NE

OTHER INFORMATION:

MELTING POINT C(F):	NA
POUR POINT C(F):	NE
FREEZING POINT C(F):	NE

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES

FOR FURTHER TECHNICAL INFORMATION, CONTACT YOUR MARKETING REPRESENTATIVE

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10. STABILITY AND REACTIVITY

STABILITY (THERMAL, LIGHT, ETC.): Stable.
CONDITIONS TO AVOID: Heat, sparks, flame and build up of static electricity.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidisers.
HAZARDOUS DECOMPOSITION PRODUCTS: Product does not decompose at ambient temperatures.
HAZARDOUS POLYMERISATION: Will not occur.

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11. TOXICOLOGICAL DATA

---ACUTE TOXICOLOGY---

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

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

INHALATION TOXICITY: Harmful (LC50: greater than 2 but 5 mg/l or less). ---Based on testing of similar products and/or the components.

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

SKIN IRRITATION: 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: H2S acts as a chemical asphyxiant, preventing the body from utilising oxygen in the tissue. It can be irritating to the eyes at 10 ppm and to the respiratory tract at 50-100 ppm after 1-hour exposure. Sufficiently high concentrations can result in immediate collapse and death.

---CHRONIC TOXICOLOGY (SUMMARY)---

Evidence of skin carcinogenicity in laboratory tests. Experiments to assess the skin cancer potential of crude oil produced mixed results. Some crudes produced skin tumors in mice, following long term, repeated exposures, while other crudes produced no tumors. IARC has examined the full body of data and concluded that crude oil is not classifiable as to its carcinogenicity (Cat.3), based on the limited evidence in animals. Prolonged, repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis.

---OTHER TOXICOLOGY DATA---

Repeated exposures to low levels of benzene (50-500 ppm) have been reported to result in blood abnormalities including anemia and, in rare cases, leukemia in both animals and humans. Benzene has also caused damage to the fetus of test animals in developmental studies. Benzene has tested positive (mutagenic) in a number of short-term cancer/mutation predicative tests. Prolonged exposure to n-hexane may result in a condition known as peripheral neuropathy. This is nervous system damage and is characterized by numbness of the extremities and, in extreme cases, paralysis. Crude oils may contain low levels of polycyclic aromatic compounds (PACs), some of which, when made available by dilution with solvents or oils, and under conditions of poor personal hygiene and prolonged repeated contact, are suspected as a cause of skin cancer in humans. H2S is a colorless, toxic and extremely flammable gas with an odor at low concentrations characteristic of rotten eggs and a sweetish odor at high concentrations. Odor cannot be relied upon as a means of detection because the sense of smell rapidly becomes insensitive to H2S, and the H2S odor may be masked by the general odor of this product.

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12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE AND EFFECTS:

In the absence of specific environmental data for this crude oil product, this assessment is based on information developed with various other crude oils.

ECOTOXICITY: Generally, crude oil is harmful to aquatic organisms. Indirect toxicity to aquatic wildlife may result from physical fouling. Shoreline habitats can be significantly impacted by crude oil.

MOBILITY: Overall, crude oil will float on the water surface if released in an aquatic environment; if released on land, crude will absorb to sediment and soil. Because of the range of components which comprise crude oil, individual hydrocarbon components will begin to partition to specific environmental media (air, water, soil, and sediment) immediately following a release.

PERSISTENCE AND DEGRADABILITY: Volatile components will be degraded in the atmosphere via hydroxyl oxidation. Overall, crude oil is inherently biodegradable in aquatic and terrestrial environments, since most fractions of crude oil are known to degrade at moderate to rapid rates, while some of the heaviest components are expected to persist.

BIOACCUMULATIVE POTENTIAL: Not established.

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13. DISPOSAL CONSIDERATIONS

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 any licensed waste disposal site. Use of these methods is subject to user compliance with applicable laws and regulations and consideration of product characteristics at time of disposal.

EUROPEAN WASTE CODE: 05 07 99 (wastes not otherwise specified) Waste generated from the intended use of this product is assigned the above waste disposal code. However, deviation from the intended use and/or the presence of any potential contaminants may require an alternative waste disposal code to be assigned by the end user.

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14. TRANSPORT INFORMATION

USA DOT:

SHIPPING NAME:	Petroleum Crude Oil
HAZARD CLASS & DIV:	3
ID NUMBER:	UN1267
ERG NUMBER:	128
PACKING GROUP:	PG I

STCC:	4910165
DANGEROUS WHEN WET:	No
POISON:	No
LABEL(s):	Flammable Liquid
PLACARD(s):	Flammable
PRODUCT RQ:	555 lbs (based on RQ for BENZENE)
MARPOL III STATUS:	NA

RID/ADR:

HAZARD CLASS:	3
PACKING GROUP:	I
LABEL:	3
DANGER NUMBER:	33
UN NUMBER:	1267
SHIPPING NAME:	Petroleum Crude Oil (contains PETROLEUM CRUDE OIL)
REMARKS:	NA

IMO:

HAZARD CLASS & DIV:	3
UN NUMBER:	1267
PACKING GROUP:	PG I
SHIPPING NAME:	Petroleum Crude Oil
LABEL(s):	Flammable Liquid
MARPOL III STATUS:	NA

ICAO/IATA:

HAZARD CLASS & DIV:	3
ID/UN Number:	1267
PACKING GROUP:	PG I
SHIPPING NAME:	Petroleum Crude Oil
SUBSIDIARY RISK:	NA
LABEL(s):	Flammable Liquid

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15. REGULATORY INFORMATION

EU Labelling: Product is dangerous as defined by the European Union Dangerous Substances/Preparations Directives.

Symbol: F+ T Extremely Flammable, Toxic.

Risk Phrase(s): R12-45-65-66-67-52/53.
Extremely flammable. May cause cancer. Harmful: may cause lung damage if swallowed. Repeated exposure may cause skin dryness or cracking. Vapors may cause drowsiness and dizziness. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrase(s): S23-36-28-53-62.
Do not breathe vapour. Wear suitable protective clothing. After contact with skin, wash immediately. Avoid exposure - obtain special instructions before use. If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Contains: Benzene.

Substance Identification Number: 1267

NOTE: This product is subject to the provisions of the EU Marketing and Use Directive and is restricted to professional users.

THE FOLLOWING PRODUCT INGREDIENTS ARE CITED ON THE LISTS BELOW:

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS

*** NO REPORTABLE INGREDIENTS ***

--- REGULATORY LISTS SEARCHED ---

1=IARC 1	6=NO ALLERGI	11=DE TERAT B	16=DE CARC B	21=CH CARC	
2=IARC 2A	7=SE ALLERGY	12=DE TERAT C	17=AT TERAT A		
3=IARC 2B	8=SE CARC	13=DE TERAT D	18=AT TERAT B		
4=NTP CARC	9=DK CARC	14=DE CARC A1	19=AT TERAT C		
5=NTP SUS	10=DE TERAT A	15=DE CARC A2	20=AT TERAT D		

CARC=CARCINOGEN; SUS=SUSPECTED CARCINOGEN; TERAT=TERATOGENIC

AT = Austria	DE = Germany	NO = Norway
CH = Switzerland	DK = Denmark	SE = Sweden

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16. OTHER INFORMATION

LIBRARY OF RISK PHRASES LISTED IN SECTION 2 OF THIS DOCUMENT:

R12	Extremely flammable.
R45	May cause cancer.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapors may cause drowsiness and dizziness.

NOTE: EXXONMOBIL PRODUCTS ARE NOT FORMULATED TO CONTAIN PCBS.

Health studies have shown that many hydrocarbons pose potential human health risks which may vary from person to person. Information provided on this MSDS reflects intended use. This product should not be used for other applications. In any case, the following advice should be considered:

INJECTION INJURY WARNING: 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.

COSHH Regulations: Product reviewed and considered to be potentially hazardous to health. The Regulations must be followed and measures to control exposure may be necessary.

Any sections of this Material Safety Data Sheet which are printed in bold text highlights recent significant changes which have been made to the advice or information given.

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For Internal Use Only: MHC: 1* 1* 2* 0* 1*, MPPEC: DVF, TRN: 7032965-60, ELIS: 032965, CMCS97: EMGC44
EHS Approval Date: 06JUN2003
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