

Common Name: 1 SYNTHETIC GREASE
Manufacturer: EXXON MOBIL
MSDS Revision Date: 2/9/2006

Grainger Item Number(s): 6Y777

**Manufacturer Model MOBIL 1 GREASE
Number(s):**

EXXONMOBIL

PRODUCT NAME/ MOBIL 1 SYNTHETIC GREASE

REVISION DATE/ 0 FEB 200

MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT/

PRODUCT NAME/ MOBIL 1 SYNTHETIC GREASE

PRODUCT DESCRIPTION/ BASE OIL AND ADDITIVES

PRODUCT CODE/ 32010-00. 71332

INTENDED USE/ GREASE

COMPANY IDENTIFICATION/

SUPPLIER/

EXXON MOBIL CORPORATION
322 GALLOWS RD.
FAIRFAX, VA. 22037
USA

24 HOUR HEALTH EMERGENCY/ 0 737-4411

TRANSPORTATION EMERGENCY PHONE/ 800-424-300

EXXONMOBIL TRANSPORTATION NO./ 261-34-32

MSDS REQUESTS/ 713-13-3 1

PRODUCT TECHNICAL INFORMATION/ 800-2-4 2 , 800-47-147

MSDS INTERNET ADDRESS/

HTTP//WWW.EXXON.COM.

HTTP//WWW.MOBIL.COM

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

REPORTABLE HAZARDOUS SUBSTANCE(S) OR COMPLEX SUBSTANCE(S)

NAME	CAS#	CONCENTRATION*
ZINC DITHIOPHOSPHATE	1344-42-3	2. %

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. IF IRRITATION OCCURS, GET MEDICAL ASSISTANCE.

INGESTION

FIRST AID IS NORMALLY NOT REQUIRED. SEEK MEDICAL ATTENTION IF DISCOMFORT OCCURS.

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.

HAZARDOUS COMBUSTION PRODUCTS

SMOKE, FUME, OXIDES OF CARBON, ALDEHYDES, SULFUR OXIDES. INCOMPLETE COMBUSTION PRODUCTS.

SPILL MANAGEMENT

LAND SPILL

SCRAPE UP SPILLED MATERIAL WITH SHOVELS INTO A SUITABLE CONTAINER FOR RECYCLE OR DISPOSAL.

WATER SPILL

STOP LEAK IF YOU CAN DO IT WITHOUT RISK. CONFINE THE SPILL IMMEDIATELY WITH BOOMS. SKIM FROM SURFACE.

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

PREVENT ENTRY INTO WATERWAYS, SEWERS, BASEMENTS OR CONFINED AREAS.

SECTION 7 HANDLING AND STORAGE

HANDLING PREVENT SMALL SPILLS AND LEAKAGE TO AVOID SLIP HAZARD.

STATIC ACCUMULATOR THIS MATERIAL IS NOT A STATIC ACCUMULATOR.

STORAGE DO NOT STORE IN OPEN OR UNLABELLED CONTAINERS.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

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

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT SELECTIONS VARY BASED ON POTENTIAL EXPOSURE CONDITIONS SUCH AS APPLICATIONS, HANDCA2.4110 ()-2.40 0 (A)-22(S)-2.40 0 (U)-2.40 0 PERS PE AND PE 40 0 (C)-.4E2.40 7 (U)-2.40 0 (R)-2.40 TEOEOR LPCCC (,)-2.40 ()-2.40 0 (()-2.402.40 7 (E)-.4LSNG G .411 (N)-2.411 (G)-2.41INB (

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. WORK CONDITIONS CAN GREATLY EFFECT GLOVE DURABILITY INSPECT AND REPLACE WORN OR DAMAGED GLOVES. THE TYPES OF GLOVES TO BE CONSIDERED FOR THIS MATERIAL INCLUDE
NO PROTECTION IS ORDINARILY REQUIRED UNDER NORMAL CONDITIONS OF USE.

EYE PROTECTION

IF CONTACT IS LIKELY, SAFETY GLASSES WITH SIDE SHIELDS 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
NO SKIN PROTECTION IS ORDINARILY REQUIRED UNDER NORMAL CONDITIONS OF USE. IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE PRACTICES, PRECAUTIONS SHOULD BE TAKEN TO AVOID SKIN CONTACT.

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 SEE SECTIONS , 7, 12, 13.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES ARE GIVEN BELOW. CONSULT THE SUPPLIER IN SECTION 1 FOR ADDITIONAL DATA.

GENERAL INFORMATION

PHYSICAL STATE SOLID
FORM SEMI-FLUID
COLOR RED
ODOR CHARACTERISTIC
ODOR THRESHOLD N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

RELATIVE DENSITY (AT 1 C) 0.

FLASH POINT (METHOD) 204C (3 P) (EST. FOR OIL, ASTM D- 2 (COC))

FLAMMABLE LIMITS (APPROXIMATE VOLUME % IN AIR)

LEL N/D

UEL N/D

AUTOIGNITION TEMPERATURE N/D

BOILING POINT/RANGE 2 C (70F)

VAPOR DENSITY (AIR_{v1}) N/D

VAPOR PRESSURE 0.013 KPA (0.1 MMHG) AT 20 C

EVAPORATION RATE (N-BUTYL ACETATE_{v1}) N/D

pH N/A

LOG POW (N-OCTANOL/WATER PARTITION COEFFICIENT) 3.

SOLUBILITY IN WATER NEGLIGIBLE

VISCOSITY

220 CST (220 MM2/SEC) AT 40 C

2 . CST (2 . MM2/SEC) AT 100 C

OXIDIZING PROPERTIES SEE SECTIONS 3, 1 , 1 .

OTHER INFORMATION

FREEZING POINT N/D

MELTING POINT 2 0 DEG. C (00 DEG. F)

DMSO EXTRACT (MINERAL OIL ONLY), IP-34 3 %WT

NOTE

MOST PHYSICAL PROPERTIES ABOVE ARE FOR THE OIL COMPONENT IN THE MATERIAL.

SECTION 10 STABILITY AND REACTIVITY

STABILITY MATERIAL IS STABLE UNDER NORMAL CONDITIONS.

CONDITIONS TO AVOID EXCESSIVE HEAT. HIGH ENERGY SOURCES OF IGNITION.

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

ROUTE OF EXPOSURE

CONCLUSION/REMARKS

INHALATION

TOXICITY (RAT) LC 0 000 MG/M3

MINIMALLY TOXIC. BASED ON ASSESSMENT OF THE COMPONENTS.

IRRITATION NO END POINT DATA.

NOT DETERMINED.

INGESTION

TOXICITY (RAT) LD 0 2000 MG/KG

MINIMALLY TOXIC. BASED ON TEST DATA FOR STRUCTURALLY SIMILAR MATERIALS.

SKIN

TOXICITY (RABBIT) LD 0 2000 MG/KG

MINIMALLY TOXIC. BASED ON TEST DATA FOR STRUCTURALLY SIMILAR MATERIALS.

IRRITATION (RABBIT) DATA AVAILABLE.

NEGLIGIBLE IRRITATION TO SKIN AT AMBIENT TEMPERATURES. BASED ON ASSESSMENT OF THE COMPONENTS.

EYE

IRRITATION (RABBIT) DATA AVAILABLE.

MAY CAUSE MILD, SHORT-LASTING DISCOMFORT TO EYES. BASED ON ASSESSMENT OF THE COMPONENTS.

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THE INFORMATION GIVEN IS BASED ON DATA AVAILABLE FOR THE MATERIAL, THE COMPONENTS OF THE MATERIAL, AND SIMILAR MATERIALS.

ECOTOXICITY✓

MATERIAL - NOT EXPECTED TO BE HARMFUL TO AQUATIC ORGANISMS.

MOBILITY✓

BASE OIL COMPONENT - LOW SOLUBILITY AND FLOATS AND IS EXPECTED TO MIGRATE FROM WATER TO THE LAND. EXPECTED TO PARTITION TO SEDIMENT AND WASTEWATER SOLIDS.

PERSISTENCE AND DEGRADABILITY✓

BIODEGRADATION✓

BASE OIL COMPONENT - EXPECTED TO BE INHERENTLY BIODEGRADABLE

BIOACCUMULATION POTENTIAL✓

BASE OIL COMPONENT - HAS THE POTENTIAL TO BIOACCUMULATE, HOWEVER METABOLISM OR PHYSICAL PROPERTIES MAY REDUCE THE BIOCONCENTRATION OR LIMIT BIOAVAILABILITY.

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✓

PRODUCT IS SUITABLE FOR BURNING IN AN ENCLOSED CONTROLLED BURNER FOR FUEL VALUE OR DISPOSAL BY SUPERVISED INCINERATION AT VERY HIGH TEMPERATURES TO PREVENT FORMATION OF UNDESIRABLE COMBUSTION PRODUCTS.

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 2 1D), NOR IS IT FORMULATED TO CONTAIN MATERIALS WHICH ARE LISTED AS HAZARDOUS WASTES. IT DOES NOT EXHIBIT THE HAZARDOUS CHARACTERISTICS OF IGNITABILITY, CORROSIT

SECTION 14 TRANSPORT INFORMATION

LAND (DOT)✓ NOT REGULATED FOR LAND TRANSPORT

LAND (TDG)✓ NOT REGULATED FOR LAND TRANSPORT

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 PURPOSES, THIS MATERIAL IS NOT CLASSIFIED AS HAZARDOUS IN ACCORDANCE WITH OSHA 29 CFR 1910.1200.

NATIONAL CHEMICAL INVENTORY LISTING✓ AICS. IECSC. DSL. KECI. TSCA

EPCRA✓ THIS MATERIAL CONTAINS NO EXTREMELY HAZARDOUS SUBSTANCES.

SARA (311/312) REPORTABLE HAZARD CATEGORIES✓ NONE.

SARA (313) TOXIC RELEASE INVENTORY✓

CHEMICAL NAME	CAS NUMBER	TYPICAL VALUE
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ZINC DITHIOPHOSPHATE	84-42-3	2. %
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THE FOLLOWING INGREDIENTS ARE CITED ON THE LISTS BELOW * ✓

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS
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DIPHENYLAMINE	122-3-4	, , 18
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PHOSPHORUS	7723-14-0	1, 4
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ZINC DITHIOPHOSPHATE	84-42-3	13, 1 , 17
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REGULATORY LISTS SEARCHED✓

1 ✓ ACGIH ALL

2 ✓ ACGIH A1

3 ✓ ACGIH A2

4 ✓ OSHA Z

✓ TSCA 4

✓ TSCA A2

7 ✓ TSCA E

8 ✓ TSCA

✓ TSCA 12B

10 ✓ CA P CARC

11 ✓ CA P REPRO

12 ✓ CA RTK

13 ↓ IL RTK
14 ↓ LA RTK
1 ↓ MI 2 3
1 ↓ MN RTK
1 ↓ NJ RTK
1 ↓ PA RTK
1 ↓ RI RTK

CODE KEY

CARC ↓ CARCINOGEN

REPRO ↓ REPRODUCTIVE

* EPA RECENTLY ADDED NEW CHEMICAL SUBSTANCES TO ITS TSCA SECTION 4 TEST
RULES. PLEASE CONTACT THE SUPPLIER TO CONFIRM WHETHER THE INGREDIENTS IN
TS PRODUCT CPRENTLY APPEAR ON A TSCA 4 AR TSCA H

REESION CHANGES TLST*(R)-2.40 (E)-2.40 (C)-2.40 AND CAS-2005 FOMES/REGONLATOR ACCISE

