



MSDS FOR SARA REPORTS

**Fuel Oil #2
CAS # 68476-30-2**

Health	0
Flammability	2
Reactivity	0
Special	

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 * M S D S *
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 * Canadian Centre for Occupational Health and Safety *
 * * * * * Issue : 2000-4 (November, 2000) *
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*** IDENTIFICATION ***

MSDS RECORD NUMBER : 2374085
 PRODUCT NAME(S) : FUEL OIL 2
 PRODUCT IDENTIFICATION : PRODUCT CODE R00000001800
 DATE OF MSDS : 1998-11-20
 CURRENCY NOTE : This MSDS was provided to CCOHS in
 electronic form on 2000-09-06

*** MANUFACTURER INFORMATION ***

MANUFACTURER : SUN COMPANY, INC
 ADDRESS : Ten Penn Center
 1801 Market Street
 Philadelphia Pennsylvania
 U.S.A. 19103-1699
 Telephone: 215-977-6182 (Joanne Houck)
 EMERGENCY TELEPHONE NO. : 800-964-8861 (SUN COMPANY, AFTER NORMAL
 BUSINESS HOURS)
 800-424-9300 (CHEMTREC, AFTER NORMAL
 BUSINESS HOURS)

*** MATERIAL SAFETY DATA ***

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1. CHEMICAL PRODUCT AND COMPANY INFORMATION

REVISION DATE: 11/20/1998
 UN NUMBER: NA1993

PRIMARY APPLICATION- FUEL OIL

MANUFACTURER- SUN COMPANY, INC.
 TEN PENN CENTER
 1801 MARKET STREET
 PHILADELPHIA PA 19103-1699

SYNONYMS..... : PETROLEUM DISTILLATE
 CAS REGISTRY NO: 68476-30-2

CAS NAME..... : NO.2 FUEL OIL
 CHEMICAL FAMILY: PETROLEUM HYDROCARBON BLEND
 INFORMATION
 SUPPLIER.. JOANNE HOUCK
 PHONE.... : (610) 859-1120

EMERGENCY PHONE NUMBERS (AFTER NORMAL BUSINESS HOURS)
 SUN CO.. 1-800-964-8861
 CHEMTREC. 1-800-424-9300

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2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT/CAS NO.	LO%	HI%	OSHA		EXPOSURE GUIDELINES		TWA	STEL	UNIT	
			TWA	STEL	ACGIH	SUN/MFR				
LIMITS FOR THE PRODUCT:										
									100	PPM
NO. 2 FUEL OIL									100	PPM
68476-30-2	100.0	100.0								

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3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW -----

DANGER] COMBUSTIBLE. HIGH VAPOR CONCENTRATIONS MAY CAUSE DIZZINESS.
 CAUSES SKIN AND EYE IRRITATION. HARMFUL OR FATAL IF SWALLOWED. PULMONARY
 ASPIRATION HAZARD-CAN ENTER LUNGS AND CAUSE DAMAGE. POSSIBLE CANCER
 HAZARD. BASED ON ANIMAL DATA.

APPEARANCE-- LIGHT AMBER LIQUID. ODOR-- KEROSENE-LIKE ODOR.

POTENTIAL HEALTH EFFECTS -----

PRIMARY ROUTES OF ENTRY- INHALATION(X) SKIN(X) EYE(X) INGESTION(X)

INHALATION -----

EXCESSIVE EXPOSURES MAY CAUSE IRRITATION TO EYES, NOSE, THROAT, LUNGS;
 RESPIRATORY TRACT; CENTRAL NERVOUS SYSTEM (BRAIN) EFFECTS; HEADACHES,
 NAUSEA; DIZZINESS, LOSS OF BALANCE AND COORDINATION; UNCONSCIOUSNESS,
 COMA; RESPIRATORY FAILURE AND DEATH.

SKIN -----

PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG).
 CONTAINS A MATERIAL(S) WHICH HAS CAUSED SKIN TUMORS IN LAB ANIMALS. MAY
 CAUSE IRRITATION WITH PROLONGED OR REPEATED CONTACT.

EYE -----

CONTACT WITH THE EYE MAY CAUSE MODERATE IRRITATION.

INGESTION -----

HARMFUL OR FATAL IF SWALLOWED. PULMONARY ASPIRATION HAZARD IF SWALLOWED
 AND/OR VOMITING OCCURS - CAN ENTER LUNGS AND CAUSE DAMAGE.

CARCINOGEN LISTED BY-IARC(NO) NTP(NO) OSHA(NO) ACGIH(NO) OTHER(NO)

PRE-EXISTING MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE-
 DISORDERS OR DISEASES OF THE SKIN, EYE, NERVOUS SYSTEM, RESPIRATORY
 AND/OR PULMONARY SYSTEM, LUNG (E.G. ASTHMA-LIKE CONDITIONS).

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4. FIRST AID MEASURES

INHALATION -----

MOVE PERSON TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION,
 OBTAIN MEDICAL ASSISTANCE.

SKIN -----

WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. IF REDNESS OR SWELLING
 DEVELOPS, OBTAIN MEDICAL ASSISTANCE. IMMEDIATELY REMOVE SOAKED CLOTHING.
 WASH CLOTHING BEFORE REUSE. DESTROY CONTAMINATED SHOES.

EYE -----

FLUSH WITH WATER FOR AT LEAST 15 MINUTES. IF IRRITATION PERSISTS, OBTAIN

MEDICAL ASSISTANCE.
INGESTION -----
DO NOT INDUCE VOMITING] DO NOT GIVE LIQUIDS] OBTAIN EMERGENCY MEDICAL
ATTENTION. SMALL AMOUNTS WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED
OUT UNTIL TASTE OF IT IS GONE.

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5. FIRE FIGHTING MEASURES

FLASH POINT: 135 MINIMUM PMCC (DEG. F); 57 MINIMUM PMCC (DEG. C)
AUTOIGNITION TEMP.: 495 (DEG. F); 257 (DEG. C)

---FLAMMABLE LIMITS IN AIR---
LOWER EXPLOSIVE LIMIT (LEL): NOT DETERMINED % VOLUME
UPPER EXPLOSIVE LIMIT (UEL): NOT DETERMINED % VOLUME

FIRE AND EXPLOSION HAZARDS -----
COMBUSTIBLE (FLASH POINT 100 TO 200F)

EXTINGUISHING-MEDIA -----
WATER SPRAY. REGULAR FOAM. DRY CHEMICAL. CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS -----
USE WATER SPRAY. COOL TANK/ CONTAINER. WEAR SELF-CONTAINED BREATHING
APPARATUS. WEAR STRUCTURAL FIREFIGHTERS PROTECTIVE CLOTHING.

NFPA/HMIS CLASSIFICATION	HAZARD RATING
HEALTH - 0 / 0	0=LEAST 1=SLIGHT
FIRE - 2 / 2	2=MODERATE 3=HIGH
REACTIVITY - 0 / 0	4=EXTREME
PERSONAL PROTECTION INDEX - X	

SPECIFIC HAZARD: COMBUSTIBLE

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6. ACCIDENTAL RELEASE MEASURES

PREVENT IGNITION; STOP LEAK; VENTILATE AREA. CONTAIN SPILL. FOR LARGE
SPILL, LEAK OR RELEASE. USE PERSONAL PROTECTIVE EQUIPMENT STATED IN
SECTION 8. ADVISE EPA; STATE AGENCY IF REQUIRED. ABSORB ON INERT
MATERIAL. SHOVEL, SWEEP OR VACUUM SPILL.

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7. HANDLING AND STORAGE

KEEP AWAY FROM HEAT, SPARKS AND FLAME. KEEP CONTAINER TIGHTLY CLOSED.
KEEP IN WELL VENTILATED SPACE. NFPA CLASS II STORAGE. CONSULT NFPA AND
OSHA CODES. TRANSFER OPERATIONS MUST BE ELECTRICALLY GROUNDED TO
DISSIPATE STATIC BUILDUP. AVOID PROLONGED BREATHING OF MIST OR VAPOR.
AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID CONTACT WITH EYES.
WASH THOROUGHLY AFTER HANDLING.

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8. EXPOSURE CONTROL / PERSONAL PROTECTION

CONSULT WITH A HEALTH/SAFETY PROFESSIONAL FOR SPECIFIC SELECTION.

VENTILATION -----
USE ONLY WITH ADEQUATE VENTILATION. VENTILATE AS NEEDED TO COMPLY WITH
EXPOSURE LIMIT. GENERAL DILUTION VENTILATION ACCEPTABLE.

PERSONAL PROTECTIVE EQUIPMENT -----
EYE -----
SPLASH PROOF CHEMICAL GOGGLES OR FULL FACE SHIELD RECOMMENDED TO PROTECT
AGAINST SPLASH OF PRODUCT.

GLOVES -----
PROTECTIVE GLOVES RECOMMENDED TO PROTECT AGAINST CONTACT WITH PRODUCT.
THE FOLLOWING GLOVE MATERIALS ARE ACCEPTABLE: POLYETHYLENE; POLYVINYL
CHLORIDE (PVC); NEOPRENE; NITRILE; POLYVINYL ALCOHOL; VITON;

RESPIRATOR -----
CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH

CERTIFIED RESPIRATORY PROTECTION. HALF-MASK AIR PURIFYING RESPIRATOR WITH ORGANIC VAPOR CARTRIDGES IS ACCEPTABLE TO 10 TIMES THE EXPOSURE LIMIT. FULL-FACE AIR PURIFYING RESPIRATOR WITH ORGANIC VAPOR CARTRIDGES IS ACCEPTABLE TO 50 TIMES THE EXPOSURE LIMIT NOT TO EXCEED THE CARTRIDGE LIMIT OF 1000 PPM. PROTECTION BY AIR PURIFYING RESPIRATORS IS LIMITED. USE A POSITIVE PRESSURE-DEMAND FULL-FACE SUPPLIED AIR RESPIRATOR OR SCBA FOR EXPOSURES ABOVE 50X THE EXPOSURE LIMIT. IF EXPOSURE IS ABOVE IDLH(IMMEDIATELY DANGEROUS TO LIFE & HEALTH) OR THERE IS THE POSSIBILITY OF AN UNCONTROLLED RELEASE OR EXPOSURE LEVELS ARE UNKNOWN THEN USE A POSITIVE PRESSURE-DEMAND FULL-FACE SUPPLIED AIR RESPIRATOR WITH ESCAPE BOTTLE OR SCBA.

OTHER -----

AVOID ALL SKIN CONTACT. IF CONTACT IS UNAVOIDABLE, WEAR CHEMICAL RESISTANT CLOTHING. THE FOLLOWING MATERIALS ARE ACCEPTABLE AS PROTECTIVE CLOTHING MATERIALS: POLYVINYL ALCOHOL(PVA); POLYVINYL CHLORIDE(PVC); NEOPRENE; NITRILE; VITON; POLYURETHANE; SAFETY SHOWER AND EYE WASH AVAILABILITY RECOMMENDED. LAUNDRY SOILED CLOTHES. FOR NON-FIRE EMERGENCIES, POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS (SCBA) & STRUCTURAL FIREFIGHTERS' PROTECTIVE CLOTHING WILL PROVIDE LIMITED PROTECTION.

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9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT..... : 390 TO 600 (DEG. F) _____ 199 TO 315 (DEG. C)
MELTING POINT..... : N/A (DEG. F) _____ N/A (DEG. C)
SPECIFIC GRAVITY... : 0.87 (WATER=1)
PACKING DENSITY... : N/A (KG/M3)
VAPOR PRESSURE..... : 2.07 (MM HG @ 38 DEG C)
VAPOR DENSITY..... : 8 (AIR=1)
SOLUBILITY IN WATER.: NIL (% BY VOLUME)
PH INFORMATION..... : N/A AT CONC. N.D. G/L H2O
% VOLATILES BY VOL..: 100
EVAPORATION RATE... : 600 X SLOWER (ETHYL ETHER=1)
OCTANOL/WATER COEFF.: N.D.
APPEARANCE..... : LIGHT AMBER LIQUID.
ODOR..... : KEROSENE-LIKE ODOR.
ODOR THRESHOLD.... : N.D. (PPM)
VISCOSITY..... : N.D. SUS @ N.D DEG F ... 1.9 CST @ 40 DEG C
MOLECULAR WEIGHT... : N.D. (G/MOLE)

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10. STABILITY AND REACTIVITY

STABILITY -----
STABLE.
CONDITIONS TO AVOID-
HEAT, SPARKS AND OPEN FLAMES.
INCOMPATIBLE MATERIALS -----
STRONG OXIDIZERS.
HAZARDOUS DECOMPOSITION -----
COMBUSTION WILL PRODUCE CARBON MONOXIDE AND ASPHYXIANTS.
POLYMERIZATION -----
WILL NOT OCCUR.

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11. TOXICOLOGICAL INFORMATION

FOR THE PRODUCT -----
INHALATION: OVEREXPOSURE TO VAPORS OR EXHAUST FUMES MAY CAUSE HEADACHE NAUSEA, EYE, NOSE, THROAT, RESPIRATORY IRRITATION. HIGH VAPOR CONCENTRATIONS MAY CAUSE CNS (BRAIN) EFFECTS, RESPIRATORY FAILURE, COMA, DEATH. SKIN:
LOW ACUTE TOXICITY. PROLONGED/REPEATED CONTACT MAY CAUSE IRRITATION, DERMATITIS. REPEATED APPLICATIONS (2 YR) OF SIMILIAR MIDDLE DISTILLATES IN ANIMALS CAUSED SKIN CANCER. EYE: MODERATE IRRITANT. ORAL: HARMFUL/FATAL IF SWALLOWED:PULMONARY ASPIRATION HAZARD CAN ENTER LUNGS & CAUSE DAMAGE. IF USED AS A DIESEL FUEL, WHOLE DIESEL ENGINE EXHAUST IS CLASSIFIED AS A PROBABLE CARCINOGEN (IARC 2A); IS REGARDED AS A POTENTIAL CAUSE OF OCCUPATIONAL LUNG CANCER (NIOSH).

NO. 2 FUEL OIL (COMPONENT)

INHALATION: OVEREXPOSURE TO VAPORS OR EXHAUST FUMES MAY CAUSE HEADACHE
NAUSEA, EYE, NOSE, THROAT, RESPIRATORY IRRITATION. HIGH VAPOR
CONCENTRATIONS MAY CAUSE CNS (BRAIN) EFFECTS, RESPIRATORY FAILURE,
COMA, DEATH. SKIN: LOW ACUTE TOXICITY. PROLONGED/REPEATED CONTACT MAY
CAUSE IRRITATION, DERMATITIS. REPEATED APPLICATIONS (2 YR) OF SIMILAR
MIDDLE DISTILLATES IN ANIMALS CAUSED SKIN CANCER. EYE: MODERATE
IRRITANT. ORAL: HARMFUL/FATAL IF SWALLOWED: PULMONARY ASPIRATION HAZARD
CAN ENTER LUNGS & CAUSE DAMAGE. IF USED AS A DIESEL FUEL, WHOLE DIESEL
ENGINE EXHAUST IS CLASSIFIED AS A PROBABLE CARCINOGEN (IARC 2A); IS
REGARDED AS A POTENTIAL CAUSE OF OCCUPATIONAL LUNG CANCER (NIOSH).

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12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA-----

NO DATA AVAILABLE.

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13. DISPOSAL CONSIDERATIONS

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. RCRA HAZARDOUS WASTE. DO
NOT FLUSH TO DRAIN/ STORM SEWER. CONTRACT TO AUTHORIZED DISPOSAL
SERVICE.

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14. TRANSPORTATION INFORMATION

DOT-
PROPER SHIPPING NAME- FUEL OIL (NO. 2)
HAZARD CLASS- COMBUSTIBLE LIQUID
IDENTIFICATION NUMBER- NA1993
LABEL REQUIRED- PG III

IMDG- PROPER SHIPPING NAME- NOT AVAILABLE

IATA- PROPER SHIPPING NAME- GAS OIL

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15. REGULATORY INFORMATION

SARA 302 THRESHOLD PLANNING QUANTITY. N/A

SARA 304 REPORTABLE QUANTITY N/A

SARA 311 CATEGORIES- IMMEDIATE (ACUTE) HEALTH EFFECTS.. Y
 DELAYED (CHRONIC) HEALTH EFFECTS.. Y
 FIRE HAZARD Y
 SUDDEN RELEASE OF PRESSURE HAZARD. N
 REACTIVITY HAZARD N

WHEN A PRODUCT AND/OR COMPONENT IS LISTED BELOW, THE REGULATORY
LIST ON WHICH IT APPEARS IS INDICATED.

THIS PRODUCT OR ALL COMPONENTS OF THIS PRODUCT ARE LISTED
ON THE U.S. TSCA INVENTORY.

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16. OTHER INFORMATION

DANGER] KEEP OUT OF REACH OF CHILDREN. ONLY APPROVED METAL CONTAINERS
SHOULD BE USED FOR STORAGE. CONTAINERS ARE HAZARDOUS WHEN EMPTY AS
PRODUCT VAPOR OR LIQUID REMAINS. ANY RISK WOULD DEPEND ON DURATION AND
LEVEL OF EXPOSURE.

IATA INFORMATION:
PROPER SHIPPING NAME: GAS OIL
HAZARD CLASS: FLAMMABLE LIQUID
ID: UN1202
LABEL: PACKING GROUP III

