







MATERIAL SAFETY DATA SHEET

MSDS NUMBER ▶ 864,020-3

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97367 (4-85)

24 HOUR EMERGENCY ASSISTANCE			GENERAL MSDS ASSISTANCE								
SHELL: 713-473-9461 CHEMTREC: 800-424-9300			SHELL: 713-241-4819								
ACUTE HEALTH  1	FIRE  1	REACTIVITY  0	HAZARD RATING ▶ <table style="display: inline-table; vertical-align: middle;"> <tr> <td>LEAST - 0</td> <td>SLIGHT - 1</td> <td>MODERATE - 2</td> </tr> <tr> <td>HIGH - 3</td> <td>EXTREME - 4</td> <td></td> </tr> </table>				LEAST - 0	SLIGHT - 1	MODERATE - 2	HIGH - 3	EXTREME - 4
LEAST - 0	SLIGHT - 1	MODERATE - 2									
HIGH - 3	EXTREME - 4										

*For acute and chronic health effects refer to the discussion in Section III

SECTION I	NAME
PRODUCT ▶	SHELL SPIRAX(R) HEAVY DUTY 80W/90
CHEMICAL NAME ▶	MIXTURE (SEE SEC. IIA)
CHEMICAL FAMILY ▶	PETROLEUM HYDROCARBON; GEAR OIL
SHELL CODE ▶	59210

SECTION II-A		PRODUCT/INGREDIENT	
NO.	COMPOSITION	CAS NUMBER	PERCENT
P	SHELL SPIRAX HEAVY DUTY 80W/90	MIXTURE	100
1	SOLVENT REFINED, HYDROTREATED RESIDUAL OIL	64742-57-0	30-70
2	SOL. REF., HYDROTREATED, HEAVY PARAFFINIC DIST.	64742-54-7	9-40
3	SEVERELY HYDROTREATED HEAVY NAPHTHENIC DIST.	64742-52-5	15-40
4	SEVERELY HYDROTREATED LIGHT NAPHTHENIC DISTILLATE	64742-53-6	10-30
5	SOLVENT REFINED HYDROTREATED MIDDLE DIST.	64742-46-7	<10
6	ADDITIVE PACKAGE	MIXTURE	<10

SECTION II-B		ACUTE TOXICITY DATA		
NO.	ACUTE ORAL LD50	ACUTE DERMAL LD50	ACUTE INHALATION LC50	
P	NOT AVAILABLE			

BASED UPON DATA AVAILABLE TO SHELL, COMPONENT 6 IN THIS PRODUCT IS NOT HAZARDOUS UNDER OSHA HAZARD COMMUNICATION (29 CFR 1910.1200).

SECTION III HEALTH INFORMATION

THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

EYE CONTACT
 BASED ON COMPONENT INFORMATION PRODUCT IS NO MORE THAN MINIMALLY IRRITATING TO THE EYES.

SKIN CONTACT
 BASED ON COMPONENT INFORMATION PRODUCT IS NO MORE THAN MILDLY IRRITATING TO THE SKIN. PROLONGED AND REPEATED CONTACT CAN RESULT IN VARIOUS SKIN DISORDERS SUCH AS DERMATITIS. FOLLICULITIS OR OIL ACNE.

INHALATION
 INHALATION OF VAPORS (GENERATED AT HIGH TEMPERATURES ONLY) OR OIL MIST FROM THIS PRODUCT MAY CAUSE MINOR IRRITATION OF THE MUCOUS MEMBRANES OF THE UPPER RESPIRATORY TRACT.

INGESTION

BASED ON COMPONENT INFORMATION THIS PRODUCT IS NO MORE THAN SLIGHTLY TOXIC IF SWALLOWED.

SIGNS AND SYMPTOMS

IRRITATION AS NOTED ABOVE.

AGGRAVATED MEDICAL CONDITIONS

PREEXISTING SKIN AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

SECTION IV OCCUPATIONAL EXPOSURE LIMITS

NO.	OSHA PEL/TWA	OSHA PEL/CEILING	ACGIH TLV/TWA	ACGIH TLV/STEL	OTHER
P	5 MG/M3*	NONE	5 MG/M3*	10 MG/M3*	NONE

*OIL MIST, MINERAL

SECTION V EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT

FLUSH WITH WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

SKIN CONTACT

REMOVE CONTAMINATED CLOTHING AND WIPE EXCESS OFF. WASH WITH SOAP AND WATER OR A WATERLESS HAND CLEANER FOLLOWED BY SOAP AND WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

INHALATION

REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GET MEDICAL ATTENTION.

INGESTION

DO NOT INDUCE VOMITING. IN GENERAL NO TREATMENT IS NECESSARY UNLESS LARGE QUANTITIES OF PRODUCT ARE INGESTED. HOWEVER, GET MEDICAL ADVICE.

NOTE TO PHYSICIAN

IN GENERAL, EMESIS INDUCTION IS UNNECESSARY IN HIGH VISCOSITY, LOW VOLATILITY PRODUCTS, I.E., MOST OILS AND GREASES.

SECTION VI SUPPLEMENTAL HEALTH INFORMATION

NONE IDENTIFIED.

SECTION VII PHYSICAL DATA

BOILING POINT: NOT AVAILABLE (DEG F)	SPECIFIC GRAVITY: 0.8990 (H2O=1)	VAPOR PRESSURE: NOT AVAILABLE (MM HG)
MELTING POINT: -21 (POUR POINT) (DEG F)	SOLUBILITY: NEGLIGIBLE (IN WATER)	VAPOR DENSITY: NOT AVAILABLE (AIR=1)

EVAPORATION RATE (N-BUTYL ACETATE = 1): NOT AVAILABLE

VIS, CS
(40 DEG C):128

APPEARANCE AND ODOR:
BROWN LIQUID. SLIGHT HYDROCARBON ODOR.

SECTION VIII FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD:
310 DEG F (COC)

FLAMMABLE LIMITS % VOLUME IN AIR
LOWER: N/AV UPPER: N/AV

EXTINGUISHING MEDIA

USE WATER FOG, FOAM, DRY CHEMICAL OR CO2. DO NOT USE A DIRECT STREAM OF WATER. PRODUCT WILL FLOAT AND CAN BE REIGNITED ON SURFACE OF WATER.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS

MATERIAL WILL NOT BURN UNLESS PREHEATED. DO NOT ENTER CONFINED FIRE-SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE-PRESSURE NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

SECTION IX REACTIVITY

STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS AND MATERIALS TO AVOID:

AVOID HEAT, OPEN FLAMES AND OXIDIZING MATERIALS.

HAZARDOUS DECOMPOSITION PRODUCTS

THERMAL DECOMPOSITION PRODUCTS ARE HIGHLY DEPENDENT ON THE COMBUSTION CONDITIONS. A COMPLEX MIXTURE OF AIRBORNE SOLID, LIQUID, PARTICULATES AND GASES WILL EVOLVE WHEN THIS MATERIAL UNDERGOES PYROLYSIS OR COMBUSTION. CARBON MONOXIDE AND OTHER UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED UPON COMBUSTION.

SECTION X EMPLOYEE PROTECTION

RESPIRATORY PROTECTION

IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SECTION IV) USE A NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134 USE EITHER AN ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS AND PARTICULATES.

PROTECTIVE CLOTHING

WEAR CHEMICAL RESISTANT GLOVES AND OTHER PROTECTIVE CLOTHING AS REQUIRED TO MINIMIZE SKIN CONTACT. WEAR SAFETY GOGGLES TO AVOID EYE CONTACT. TEST DATA FROM PUBLISHED LITERATURE AND/OR GLOVE AND CLOTHING MANUFACTURERS INDICATE THE BEST PROTECTION IS PROVIDED BY NITRILE GLOVES.

SECTION XI ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURES

MAY BURN ALTHOUGH NOT READILY IGNITABLE. USE CAUTIOUS JUDGMENT WHEN CLEANING UP LARGE SPILLS. *** LARGE SPILLS *** WEAR RESPIRATOR AND PROTECTIVE CLOTHING AS APPROPRIATE. SHUT OFF SOURCE OF LEAK IF SAFE TO DO SO. DIKE AND CONTAIN. REMOVE WITH VACCUM TRUCKS OR PUMP TO STORAGE SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ADSORBENT SUCH AS CLAY, SAND, OR OTHER SUITABLE MATERIALS; DISPOSE OF PROPERLY. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE. *** SMALL SPILLS *** TAKE UP WITH AN ABSORBENT MATERIAL AND DISPOSE OF PROPERLY.

SECTION XII SPECIAL PRECAUTIONS

MINIMIZE SKIN CONTACT. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. LAUNDRY CONTAMINATED CLOTHING BEFORE REUSE. PROPERLY DISPOSE OF CONTAMINATED LEATHER ARTICLES, INCLUDING SHOES, THAT CANNOT BE DECONTAMINATED. STORE IN A COOL, DRY PLACE WITH ADEQUATE VENTILATION. KEEP AWAY FROM OPEN FLAMES AND HIGH TEMPERATURES.

SECTION XIII TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION:
NOT HAZARDOUS BY D.O.T. REGULATIONS

SECTION XIV OTHER REGULATORY CONTROLS

THE COMPONENTS OF THIS PRODUCT ARE LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL SUBSTANCES. IN ACCORDANCE WITH SARA TITLE III, SECTION 313, THE EDS SHOULD ALWAYS BE COPIED AND SENT WITH THE MSDS.

SECTION XV SPECIAL NOTES

SECTION XI - ENVIRONMENTAL PROTECTION HAS BEEN REVISED. THE INFORMATION IN THE "WASTE DISPOSAL" AND "ENVIRONMENT PROTECTION" HAS BEEN REMOVED AND INCLUDED IN THE ATTACHED ENVIRONMENTAL DATA SHEET. IN ACCORDANCE WITH SARA TITLE III, SECTION 313, THE EDS SHOULD ALWAYS BE COPIED AND SENT WITH THE MSDS.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SHELL ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

DATE PREPARED: JUNE 13, 1989

J. C. WILLETT

BE SAFE

READ OUR PRODUCT
SAFETY INFORMATION ...AND PASS IT ON
(PRODUCT LIABILITY LAW
REQUIRES IT)

SHELL OIL COMPANY
PRODUCT SAFETY AND COMPLIANCE
P. O. BOX 4320
HOUSTON, TX 77210