MATERIAL SAFETY DATA SHEET



A DIVISION OF PENNZOIL PRODUCTS COMPANY

Manufacturer's Name	MOLF'S HEAD OIL COMPANY	CAS Number: MIX		
Address	P.O. BOX 808 OIL CITY, PENNSYLVANIA 163010808		0 - Least Health: 1 1 - Slight	
Emergency Telephone No.	(713) 236-6070	, Reactivity: 0	3 - Hìgh 4 - Extreme	
Trade Name	WOLF'S HEAD HYDRA-TRANZ FLUID	<i>\$</i> 4019	± 4019	
Synonyms	PETROLEUM HYDROCARBON LUBRICANT.			

II INGREDIENTS

COMPONENT NAME	HAZARDOUS	PERCE	NTAGE	COMPONENT	
CAS NUMBER	IN BLEND	MIN	MAX	EXPOSURE LIMITS	UNITS
BASE LUBRICATING OILS MIXTURE	NO	75.00 TO	85.00	OSHA PEL ACGIH TLV	NO LIMIT NO LIMIT
DETERGENT/INHIBITOR SYSTEM PROPRIETARY	МО	5.00 TO	10.00	OSHA PEL ACGIH TLY	NO LIMIT NO LIMIT
VISCOSITY INDEX IMPROVER PROPRIETARY	NO	5.00 TO	0 10.00	OSHA PEL ACGIH TLV	NO LIMIT NO LIMIT
POUR POINT DEPRESSANT PROPRIETARY	МО	¢	1.00	OSHA PEL ACGIH TLV	NO LIMIT NO LIMIT
SILICONE ANTIFOAM ADDITIVE PROPRIETARY	NO	•	1.00	OSHA PEL ACGIH TLV	NO LIMIT NO LIMIT

BY: ENVIRONMENTAL, SAFETY & HEALTH (713) 546-8512

EFFECTIVE DATE: AUGUST 20, 1987

DISCLAIMER OF WARRANTY:

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REQUIRED UNDER USDL SAFETY AND HEALTH REGULATIONS FOR SHIP REPAIRING, SHIPBUILDING, AND SHEET TO CAMPBELL CO. (29 CFR 1915, 1916, 1917).

2975 Lapeer Rd. Port Hurcz, Mich. 48060

III HEALTH EFFECT INFORMATION

EYE CONTACT THIS PRODUCT IS PRACTICALLY NON-IRRITATING TO THE EYES UPON DIRECT CONTACT.

SKIN CONTACT

AVOID SKIN CONTACT. THIS PRODUCT HAS NOT BEEN TESTED FOR ACUTE DERMAL EFFECTS. THIS PRODUCT IS EXPECTED TO BE PRACTICALLY NON-IRRITATING UPON DIRECT CONTACT. PROLONGED OR REPEATED CONTACT MAY RESULT IN CONTACT DERMATITIS WHICH IS CHARACTERIZED BY DRYNESS, CHAPPING, AND REDDENING, THIS CONDITION MAY MAKE THE SKIN MORE SUSCEPTIBLE TO OTHER IRRITANTS, SENSITIZERS, AND DISEASE. PROLONGED OR REPEATED CONTACT MAY RESULT IN OIL ACNE WHICH IS CHARACTERIZED BY BLACKHEADS WITH POSSIBLE SECONDARY INFECTION. ALLERGIC DERMATITIS, USUALLY PRECEDED BY CONTACT DERMATITIS, MAY OCCUR AND SPREAD BEYOND AREAS OF DIRECT CONTACT. CONSTITUENTS OF THIS PRODUCT HAVE BEEN ASSOCIATED WITH PHOTOSENSITIVITY, AN ABNORMAL SENSITIVITY OF SKIN TO SUNLIGHT.

INHALATION

THIS PRODUCT HAS A LOW VAPOR PRESSURE AND IS NOT EXPECTED TO PRESENT AN INHALATION HAZARD AT AMBIENT CONDITIONS. CAUTION SHOULD BE TAKEN TO PREVENT AEROSOLIZATION OR MISTING OF THIS PRODUCT. THE THRESHOLD LIMIT VALUE (TLV) FOR THIS PRODUCT AS OIL MIST IS 5 MG/M3. EXPOSURES BELOW 5 MG/M3 APPEAR TO BE WITHOUT SIGNIFICANT HEALTH RISK.

INGESTION

DO NOT INGEST. INGESTION IS RELATIVELY NON-TOXIC UNLESS ASPIRATION OCCURS. THIS PRODUCT HAS LAXATIVE PROPERTIES AND MAY RESULT IN ABDOMINAL CRAMPS AND DIARRHEA. SEE HEALTH DATA SECTION BELOW.

HEALTH DATA

ON RARE OCCASIONS, PROLONGED AND REPEATED EXPOSURE TO OIL MIST POSES A RISK OF PULMONARY DISEASE SUCH AS CHRONIC LUNG INFLAMMATION. THIS CONDITION IS USUALLY ASYMPTOMATIC AS A RESULT OF REPEATED SMALL ASPIRATIONS. SHORTNESS OF BREATH AND COUGH ARE THE MOST COMMON SYMPTOMS. ASPIRATION MAY LEAD TO CHEMICAL PNEUMONITIS WHICH IS CHARACTERIZED BY PULMONARY EDEMA AND HEMORRHAGE, AND MAY BE FATAL. SIGNS OF LUNG INVOLVEMENT INCLUDE INCREASED RESPIRATION RATE, INCREASED HEART RATE, AND A BLUISH DISCOLORATION OF THE SKIN. COUGHING, CHOKING, AND GAGGING ARE OFTEN NOTED AT THE TIME OF ASPIRATION. GASTROINTESTINAL DISCOMFORT MAY DEVELOP, FOLLOWED BY VOMITTING, WITH A FURTHER RISK OF ASPIRATION.

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V PERSONAL	HEALTH PROTECTION INFORMATION		
EYE PROTECTION	EYE PROTECTION IS NOT REQUIRED UNDER CONDITIONS OF NORMAL USE. IF MATERIAL IS THAT IT COULD BE SPLASHED INTO EYES, WEAR PLASTIC FACE SHIELD OR SPLASH-PROOF GOGGLES.	HANDLED SAFETY	SUCH
SKIN PROTECTION	NO SKIN PROTECTION IS REQUIRED FOR SINGLE, SHORT DURATION EXPOSURES. FOR PROLOR REPEATED EXPOSURES, USE IMPERVIOUS SYNTHETIC RUBBER CLOTHING (BOOTS, GLOVES, AVECTOR OF THE BODY SUBJECT TO EXPOSURE. IF HANDLING HOT MATERIAL, USE INSUPROTECTIVE CLOTHING (BOOTS, GLOVES, APRONS, ETC.).	ONGED OR APRONS, E ULATED	erc.)
RESPIRATORY PROTECTION	RESPIRATORY PROTECTION IS NOT REQUIRED UNDER CONDITIONS OF NORMAL USE. IF VAPOR GENERATED WHEN THE MATERIAL IS HEATED OR HANDLED, USE AN ORGANIC VAPOR RESPIRATORS AND MIST FILTER. ALL RESPIRATORS MUST BE NIOSH CERTIFIED. DO NOT USE COMPONYGEN IN HYDROCARBON ATMOSPHERES.	OR OR MIS NTOR WITH PRESSED	ST IS
VENTILATION	IF VAPOR OR MIST IS GENERATED WHEN THE MATERIAL IS HEATED OR HANDLED, ADEQUATE IN ACCORDANCE WITH GOOD ENGINEERING PRACTICE MUST BE PROVIDED TO MAINTAIN CONCEPTION THE SPECIFIED EXPOSURE OR FLAMMABLE LIMITS.	E VENTILA ENTRATIO	TION NS
OTHER	CONSUMPTION OF FOOD AND BEVERAGE SHOULD BE AVOIDED IN WORK AREAS WHERE HYDROCA PRESENT. ALWAYS WASH HANDS AND FACE WITH SOAP AND WATER BEFORE EATING, DRINKIN SMOKING.	ARBONS AF	RE.

VI FIRE PROTECTION INFORMATION

FLASH POINT 400F

TEST METHOD C.O.C.

AUTOIGNITION TEMPERATURE > 800F

TEST METHOD NO DATA

FLAMMABLE LIMITS IN AIR % BY VOL.

LOWER NO DATA

UPPER NO DATA

EXTINGUISHING MEDIA

USE DRY CHEMICAL, FOAM, OR CARBON DIOXIDE.

SPECIAL FIRE FIGHTING PROCEDURES WATER MAY BE INEFFECTIVE BUT CAN BE USED TO COOL CONTAINERS EXPOSED TO HEAT OR FLAME. CAUTION SHOULD BE EXERCISED WHEN USING WATER OR FOAM AS FROTHING MAY OCCUR, ESPECIALLY IF SPRAYED INTO CONTAINERS OF HOT, BURNING LIQUID.

UNUSUAL FIRE AND EXPLOSIVE CONDITIONS DENSE SMOKE MAY BE GENERATED WHILE BURNING. CARBON MONOXIDE, CARBON DIOXIDE, AND OTHER OXIDES MAY BE GENERATED AS PRODUCTS OF COMBUSTION.

VII REACTIVITY DATA

STABILITY (THERMAL, LIGHT, ETC.)

STABLE

CONDITIONS TO AVOID

NONE

HAZARDOUS OLYMERIZATION

WILL NOT OCCUR

CONDITIONS TO AVOID

NONE

INCOMPATIBILITY MATERIALS TO AVOID

MAY REACT WITH STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION NONE PRODUCTS

VIII ENVIRONMENTAL PRECAUTIONS

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED CONSULT HEALTH EFFECT INFORMATION IN SECTION III, PERSONAL HEALTH PROTECTION INFORMATION IN SECTION V, FIRE PROTECTION INFORMATION IN SECTION VI, AND REACTIVITY DATA IN SECTION VII. NOTIFY APPROPRIATE AUTHORITIES OF SPILL CONTAIN SPILL IMMEDIATELY. DO NOT ALLOW SPILL TO ENTER SEWERS OR WATERCOURSES. REMOVE ALL SOURCES OF IGNITION. ABSORB WITH APPROPRIATE INERT MATERIAL SUCH AS SAND, CLAY, ETC.. LARGE SPILLS MAY BE PICKED UP USING VACUUM PUMPS, SHOVELS, BUCKETS, OR OTHER MEANS AND PLACED IN DRUMS OR OTHER SUITABLE CONTAINERS.

WASTE DISPOSAL METHOD ALL DISPOSALS MUST COMPLY WITH FEDERAL, STATE, AND LOCAL REGULATIONS. THE MATERIAL, IF SPILLED OR DISCARDED, MAY BE A REGULATED WASTE. REFER TO STATE AND LOCAL REGULATIONS. CAUTION: IF REGULATED SOLVENTS ARE USED TO CLEAN UP SPILLED MATERIAL, THE RESULTING WASTE MIXTURE MAY BE REGULATED. DEPARTMENT OF TRANSPORTATION (DOT) REGULATIONS MAY APPLY FOR TRANSPORTING THIS MATERIAL WHEN SPILLED. WASTE MATERIAL MAY BE LANDFILLED OR INCINERATED AT AN APPROVED FACILITY. MATERIALS SHOULD BE RECYCLED IF POSSIBLE.

IX MISCELLANEOUS

HANDLING AND STORAGE REQUIREMENTS DO NOT TRANSFER TO UNMARKED CONTAINERS. STORE IN CLOSED CONTAINERS AWAY FROM HEAT, SPARKS, OPEN FLAME, OR OXIDIZING MATERIALS. THIS PRODUCT IS NOT CLASSIFIED AS HAZARDOUS UNDER DOT REGULATIONS. FIRE EXTINGUISHERS SHOULD BE KEPT READILY AVAILABLE. SEE NFPA 30 AND OSHA 1910.106--FLAMMABLE AND COMBUSTIBLE LIQUIDS.

ADDITIONAL INFORMATION

THIS MIXTURE MAY BE FORMULATED IN PART WITH COMPONENTS PURCHASED FROM OTHER COMPANIES. IN MANY INSTANCES, ESPECIALLY WHEN PROPRIETARY OR TRADE SECRET MATERIALS ARE USED, PENNZOIL COMPANY MUST RELY UPON THE HAZARD EVALUATION OF SUCH COMPONENT SUBMITTED TO PENNZOIL BY THAT PRODUCT'S MANUFACTURER OR IMPORTER.

X PHYSICA	L PROPERTIES		
BOILING POINT	> 800F	PERCENT VOLATILE	N/A
MELTING POINT	- 35F	VAPOR DENSITY (AIR=1)	N/A
APPEARANCE	STRAW COLOR.	EVAPORATION RATE (EE=1)	N/A
ODOR -	MILD OILY ODOR.	SPECIFIC GRAVITY	0.884
VAPOR PRESSURE	N/A	MOLECULAR WEIGHT	VARIES
SOLUBILITY	INSOLUBLE IN WATER, SOLUBLE IN H	YDROCARBONS.	