

MATERIAL SAFETY DATA SHEET



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| Manufacturer's Name | PENNZOIL COMPANY | CAS Number: MIXTURE |
| Address | P.O. BOX 2967 HOUSTON, TEXAS 77252-2967 | MSDS Code: 008050 |
| | | NFPA Hazard Identification Degree of Hazard Hazard Ratings Health: 1 0 - Least Fire: 1 1 - Slight Reactivity: 0 2 - Moderate 3 - High 4 - Extreme |
| Emergency Telephone No. | (713) 236-6070 | |
| Trade Name | INHIBITED TRANSFORMER OIL | |
| Synonyms | PETROLEUM HYDROCARBON DISTILLATE. | |

| COMPONENT NAME CAS NUMBER | HAZARDOUS IN BLEND | PERCENTAGE MIN MAX | COMPONENT EXPOSURE LIMITS | UNITS |
|--|-----------------------|-----------------------|------------------------------|----------------------|
| LIGHT NAPHTHENIC HYDROTREATED DISTILLATE 64742-53-6 | NO | 95.00 TO 100.00 | OSHA PEL ACGIH TLV | NO LIMIT NO LIMIT |
| OXIDATION STABILIZER TRADE SECRET | NO | 1.00 | OSHA PEL ACGIH TLV | NO LIMIT NO LIMIT |

BY: ENVIRONMENTAL, SAFETY & HEALTH
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EFFECTIVE DATE: AUGUST 29, 1992

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

EYE CONTACT

THIS PRODUCT IS PRACTICALLY NON-IRRITATING TO THE EYES UPON DIRECT CONTACT. BASED ON TESTING OF SIMILAR PRODUCTS AND/OR COMPONENTS.

SKIN CONTACT

AVOID SKIN CONTACT. THIS PRODUCT MAY CAUSE SLIGHT SKIN IRRITATION UPON DIRECT CONTACT. BASED ON TESTING OF SIMILAR PRODUCTS AND/OR COMPONENTS. 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. CONSTITUENTS OF THIS PRODUCT HAVE BEEN ASSOCIATED WITH PHOTSENSITIVITY, AN ABNORMAL SENSITIVITY OF SKIN TO SUNLIGHT. SEE HEALTH DATA SECTION BELOW.

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 PERMISSIBLE EXPOSURE LIMIT (PEL) AND 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. THE SHORT-TERM EXPOSURE LIMIT FOR THIS PRODUCT AS AN OIL MIST IS 10 MG/M3.

INGESTION

DO NOT INGEST. INGESTION IS RELATIVELY NON-TOXIC UNLESS ASPIRATION OCCURS. ASPIRATION MAY LEAD TO CHEMICAL PNEUMONITIS WHICH IS CHARACTERIZED BY PULMONARY EDEMA AND HEMORRHAGE AND MAY BE FATAL. SIGNS OF LUNG INVOLVEMENT INCLUDE INCREASED RESPIRATORY 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. 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. THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER HAS CONCLUDED THAT HIGHLY REFINED MINERAL OILS ARE GROUP 3 SUBSTANCES, "NOT CLASSIFIABLE AS TO THEIR CARCINOGENICITY TO HUMANS," BASED ON INADEQUATE HUMAN AND INADEQUATE ANIMAL EVIDENCE. THIS SUBSTANCE IS NOT CARCINOGENIC ACCORDING TO THE OSHA HAZARD COMMUNICATION STANDARD.

EYE CONTACT

IMMEDIATELY FLUSH EYES WITH LARGE AMOUNTS OF WATER AND CONTINUE FLUSHING UNTIL IRRITATION SUBSIDES. IF MATERIAL IS HOT, TREAT FOR THERMAL BURNS AND TAKE VICTIM TO HOSPITAL IMMEDIATELY.

SKIN CONTACT

REMOVE CONTAMINATED CLOTHING. WASH CONTAMINATED AREA THOROUGHLY WITH SOAP AND WATER. IF REDNESS OR IRRITATION OCCURS, SEEK MEDICAL ATTENTION. IF MATERIAL IS HOT, SUBMERGE INJURED AREA IN COLD WATER. IF VICTIM IS SEVERELY BURNED, REMOVE TO A HOSPITAL IMMEDIATELY.

INHALATION

THIS MATERIAL HAS A LOW VAPOR PRESSURE AND IS NOT EXPECTED TO PRESENT AN INHALATION EXPOSURE AT AMBIENT CONDITIONS.

INGESTION

DO NOT INDUCE VOMITING. DO NOT INDUCE VOMITING DUE TO ASPIRATION HAZARD. IF VOMITING OCCURS LOWER HEAD BELOW KNEES TO AVOID ASPIRATION. SEEK MEDICAL ATTENTION. SEEK IMMEDIATE MEDICAL ATTENTION.

EYE
PROTECTION

EYE PROTECTION IS NOT REQUIRED UNDER CONDITIONS OF NORMAL USE. IF MATERIAL IS HANDLED SUCH THAT IT COULD BE SPLASHED INTO EYES, WEAR PLASTIC FACE SHIELD OR SPLASH-PROOF SAFETY GOGGLES.

SKIN
PROTECTION

NO SKIN PROTECTION IS REQUIRED FOR SINGLE, SHORT DURATION EXPOSURES. FOR PROLONGED OR REPEATED EXPOSURES, USE IMPERVIOUS CLOTHING (BOOTS, GLOVES, APRONS, ETC.) OVER PARTS OF THE BODY SUBJECT TO EXPOSURE. IF HANDLING HOT MATERIAL, USE INSULATED PROTECTIVE CLOTHING (BOOTS, GLOVES, APRONS, ETC.). LAUNDER SOILED CLOTHES. PROPERLY DISPOSE OF CONTAMINATED LEATHER ARTICLES INCLUDING SHOES, WHICH CANNOT BE DECONTAMINATED.

RESPIRATORY
PROTECTION

RESPIRATORY PROTECTION IS NOT REQUIRED UNDER CONDITIONS OF NORMAL USE. IF VAPOR OR MIST IS GENERATED WHEN THE MATERIAL IS HEATED OR HANDLED, USE AN ORGANIC VAPOR RESPIRATOR WITH A DUST AND MIST FILTER. ALL RESPIRATORS MUST BE NIOSH CERTIFIED. DO NOT USE COMPRESSED OXYGEN IN HYDROCARBON ATMOSPHERES.

VENTILATION

IF VAPOR OR MIST IS GENERATED WHEN THE MATERIAL IS HEATED OR HANDLED, ADEQUATE VENTILATION IN ACCORDANCE WITH GOOD ENGINEERING PRACTICE MUST BE PROVIDED TO MAINTAIN CONCENTRATIONS BELOW THE SPECIFIED EXPOSURE OR FLAMMABLE LIMITS.

OTHER

CONSUMPTION OF FOOD AND BEVERAGE SHOULD BE AVOIDED IN WORK AREAS WHERE HYDROCARBONS ARE PRESENT. ALWAYS WASH HANDS AND FACE WITH SOAP AND WATER BEFORE EATING, DRINKING, OR SMOKING.

FLASH POINT 300 F

TEST METHOD C.O.C.

AUTOIGNITION TEMPERATURE NO DATA

TEST METHOD NO DATA

FLAMMABLE LIMITS IN AIR % BY VOL

LOWER N/A

UPPER N/A

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 DATASTABILITY
(THERMAL,
LIGHT, ETC.)

STABLE

CONDITIONS TO
AVOID

NONE

HAZARDOUS
POLYMERIZATION

WILL NOT OCCUR

CONDITIONS TO
AVOID

NONE

INCOMPATIBILITY
MATERIALS TO AVOID

MAY REACT WITH STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION
PRODUCTS

NONE

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.

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 COMPONENTS SUBMITTED TO PENNZOIL BY THAT PRODUCT'S MANUFACTURER OR IMPORTER.

THIS PRODUCT IS NOT KNOWN TO CONTAIN ANY SARA TITLE III, SECTION 313 REPORTABLE CHEMICALS AT OR GREATER THAN 1.0% (0.1% FOR CARCINOGENS).

ALL INGREDIENTS OF THIS PRODUCT ARE LISTED ON THE TOXIC SUBSTANCES CONTROL ACT (TSCA) INVENTORY.

PHYSICAL PROPERTIES

| | | | |
|----------------|---|-------------------------|--------|
| BOILING POINT | IBP 580 F EP 670 F | PERCENT VOLATILE | N/A |
| MELTING POINT | POUR POINT < - 50 F | VAPOR DENSITY (AIR=1) | N/A |
| APPEARANCE | COLORLESS | EVAPORATION RATE (EE=1) | N/A |
| ODOR | MILD LUBE ODOR | SPECIFIC GRAVITY | .89 |
| VAPOR PRESSURE | N/A | MOLECULAR WEIGHT | VARIES |
| SOLUBILITY | EMULSIFIES IN WATER. SOLUBLE IN HYDROCARBONS. | | |