MATERIAL SAFETY DATA SHEET

EMERGENCY PHONE In Virginia: 1-804-730-4000

Outside Virginia: 1-304-730-4000

Chemtrec Assist: 1-804-730-4313

Other Product Safety Info: 1-800-825-5599

MANUFACTURER: James River Petroleum ADDRESS: P.O. 7200 Richmond, VA 23221

PRODUCT IDENTIFICATION

TRADE NAME: ENERGOL HLP 680 ...

AMF# 7:5-020-906 (Fint)

7:5-020-900 (Bulk)

CAS NUMBER: Mixture

SYNONYM(S): Lubricating Oil, Hydraulic Oil

CHENICAL FAMILY: Hydrocarbon YOLECULAR FORMULA: Mixture

MOLECULAR WEIGHT: NO

SOHIO PRODUCT CODE: P 3427

HIERARCHY: 050.060

MSDS NUMBER: BC9

PRODUCT HAZARD SUMMARY

HEALTH

MAY BE IRRITATING TO THE SKIN, EYES AND RESPIRATORY TRACT

REACTIVITY

STABLE

PRODUCT HEALTH HAZARD INFORMATION

ROUTE OF EXPOSURE

EFFECTS OF OVEREXPOSURE

PRACTICALLY NON-TOXIC. Estimated rat oral LOSO = >5 gms/kg. May cause gastrointestinal INGESTION: disturbances. Symptoms may include irritation, nausea, vomiting and diarrhea.

PRACTICALLY NON-TOXIC. Estimated rabbit dermal LOSO = >5 gms/kg. SLIGHTLY IRRITATING. SKIN: Repeated or prolonged contact may result in defatting, oil acne, redness, itching, inflammation, cracking and possible secondary infection. May cause allergic reactions in some individuals. Contact with heated material may cause thermal burns. High pressure skin injections are SERIOUS MEDICAL EMERGENCIES. Injury may not appear serious at first; within a few hours, tissue will become swollen, discolored and extremely painful (see Notes to Physician section).

SLIGHTLY IRRITATING. Contact with heated material may cause thermal burns.

May cause respiratory tract irritation. Exposure to high concentrations of dense oil INHALATION: mist may lead to oil pneumonia.

SPECIAL TOXIC EFFECTS:

NOTE: This product has not been tested as a whole for all potential health effects. It may have other health hazards related to its components. See "Ingredient/Health Hazards" for additional information.

FIRST AID

INGESTION:

DO NOT INDUCE VOMITING. If spontaneous vomiting occurs, monitor for breathing difficulty. Get immediate medical attention.

SKIN CONTACT:

Remove contaminated clothing immediately. Wash area of contact thoroughly with soap and water. Get medical attention if irritation persists. Thermal burns require immediate medical attention. High pressure skin injections are SERIOUS MEDICAL EMERGENCIES. Get immediate medical attention.

EYE CONTACT:

Flush immediately with large amounts of water. Eye lids should be held away from the eyeball to ensure thorough rinsing. Get medical attention if irritation persists. Thermal burns require immediate medical attention.

INHALATION:

Remove affected person from source of exposure. Get medical attention if irritation persists.

NOTES TO PHYSICIAN

The possible aspiration of high viscosity petroleum products is very slight. However, if aspirated, petroleum products may cause severe pneumonitis (oil pneumonia). In unconscious victims, use of an endotracheal tube should be considered if gastric lavage is undertaken.

In case of skin injection, prompt debridement of the wound is necessary to minimize necrosis and tissue loss.

PERSONAL PROTECTION INFORMATION

EYE PROTECTION:

Wear safety glasses or chemical goggles to prevent eye contact. Have eye baths readily available where eye contact can occur. Do not wear contact lenses when working with this substance.

SKIN PROTECTION:

Wear impervious gloves and protective clothing to prevent skin contact.

RESPIRATORY PROTECTION:

Use NIOSH or MSHA approved equipment when airborne exposure limits are exceeded. Ventilation may be used to control or reduce airborne concentrations.

> BC9/Page 2 P 3427

PHYSICAL PROPERTIES

SOILING POINT, C (F): 371.1 (700)

SPECIFIC GRAVITY: TO.92 9 60 F

LTING POINT, C (F): NA

% VOLATILE: 0 9 100 F

VAPOR PRESSURE, mm Hg: Negligible 9 100 F EVAPORATION RATE (WATER=1): Very Slow

VAPOR DENSITY (AIR=1): Heavier

VISCOSITY, eSt: 687-762 9 100 F POUR POINT: -4 C (25 F)

SOLUBILITY IN WATER, %: Insoluble

pH: ND

APPEARANCE/ODOR: Orange to brown clear liquid with a petroleum oil odor.

FIRE AND EXPLOSION DATA

FLASH POINT, C (F): 243 (470)

AUTOIGNITION TEXPERATURE, C (F): ND

FLAMMABILITY LIMITS IN AIR (% BY VOL.): LOWER: NO

BASIC FIREFIGHTING PROCEDURES: Use water spray, dry chemical, foam or carbon dioxide to extinguish fire. Water or foam may cause frothing, with further application leading to boilover. Use a water spray to cool fire-exposed containers, structures and to protect personnel. Use water to flush spills away from sources of ignition. Do not flush down

UNUSUAL FIRE AND EXPLOSION HAZARDS: Combustible at high temperatures. Irritating or toxic substances may be emitted upon thermal decomposition. Exposed firefighters should wear MSHA/NIOSH approved self-contained breathing apparatus, with full face mask and

full protective equipment.

REACTIVITY DATA

ABILITY/INCOMPATIBILITY: Stable under normal conditions of use. Avoid contact with strong oxidizers.

HAZARDOUS REACTIONS/DECOMPOSITION PRODUCTS:

Combustion may produce CO, CO $_2$ and reactive hydrocarbons. May also produce SO $_{
m x}$:

ENVIRONMENTAL INFORMATION

SPILL OR RELEASE TO THE ENVIRONMENT:

If your facility or operation has an "Oil or Hazardous Substance Contingency Plan", activate its procedures.

- -- Take immediate steps to stop and contain the spill. Caution should be exercised regarding personnel safety and exposure to the spilled material.
- -- For technical advice and assistance related to chemicals, contact CHEMTREC (800/424-9300) and your local fire department.
- -- Notify the National Response Center, if required.

Emergency Action: Keep unnecessary people-away. Keep ignition sources out of area.

Spill or Leak Procedure: Stop leak if you can do it without risk. Small Spills: Take up with sand or other noncombustible absorbent material or other sorbent known to be compatible, then flush area with water. Large Spills: Dike far ahead of spill for later disposal.

Notification:

Any spill or release, or substantial threat of release, of this material to navigable water (virtually any surface water) sufficient to cause a visible sheen upon the water must be reported immediately to the National Response Center (800/424-8802), as required by U.S. Federal Law. Failure to report may result in substantial civil and criminal penalties.

WASTE DISPOSAL: .

This substance, when discarded or disposed of, is not specifically listed as a hazardous waste in Federal regulations; however it could be hazardous if it is considered toxic, corrosive, ignitable, or reactive according to Federal definitions (40 CFR 261). Additionally, it could be designated as hazardous according to state regulations. This substance could also become a hazardous waste if it is mixed with or comes in contact with a hazardous waste. If such contact or mixing may have occurred, check 40 CFR 261 to determine whether it is a hazardous waste. If it is a hazardous waste, regulations at 40 CFR 262, 263, and 264 apply.

The transportation, storage, treatment, and disposal of this waste material must be conducted in compliance with all applicable Federal, state, and local regulations.

ADDITIONAL ENVIRONMENTAL REGULATORY INFORMATION: There may be specific regulations at the local, regional or state level that pertain to this material.

SPECIAL PRECAUTIONS/SUPPLEMENTAL INFORMATION

HANDLING/STORAGE:

Avoid extremes of temperature in storage. Store in tightly closed containers in cool, dry, isolated, well-ventilated area away from heat, sources of ignition and incompatibles. Do not store in unlabeled containers. Do not eat, drink or smoke in areas of use or storage.

Empty containers may contain flammable/combustible or explosive residue or vapors. Do not cut, grind, drill, weld or reuse containers unless adequate precautions are taken against these hazards.

TRANSPORTATION REQUIREMENTS

.O.T. HAZARD CLASS (49 CFR 172.101): NA

D.O.T. PROPER SHIPPING NAME (49 CFR 172.101): NA

D.O.T. LABELS REQUIRED (49 CFR 172.101): NA

D.O.T. PLACARDS REQUIRED: NA

SILL OF LADING DESCRIPTION: Lubricating Gil (Motor), Petroleum Lubricating Gil (Rail)

UN/NA CODE: NA

INGREDIENT/HEALTH HAZARD INFORMATION

EXPOSURE LIMITS - REFERENCE 7 CAS NO. 1

64741-88-4 *20-30 5 mg/M³ ACGIH TLV and OSHA PEL for Distillates (petroleum), solmineral₃oil mists vent refined heavy paraf-10 mg/M³ ACGIH STEL finic.

Health Hazards: Orally - practically non-toxic. Possible aspiration hazard (depending on viscosity). Dermally - practically non-toxic. Skin - slightly irritating. May cause allergic skin reactions in some individuals. Eye - slightly irritating. cause respiratory tract irritation. Published studies of the dermal tumorigenicity of severely solvent-refined paraffinic petroleum oils generally report a lack of carcinogenic effect. One study reports results that suggest a weak dermal carcinogenic potential for such oils. However, the International Agency for Research on Cancer (IARC), in its review of a large body of literature, has determined that there is "no evidence that severely solvent-refined oils are carcinogenic to experimental animals.

50-70 5 mg/M³ ACGIH TLV and OSHA PEL for mineral oil mists. Pistillates (petroleum), heavy paraffinic, deasphalted and 10 mg/M3 ACGIH STEL solvent dewaxed.

Health Hazards: Skin - repeated or prolonged contact may cause mild skin irritation. Published studies of the dermal tumorigenicity of severely solvent-refined paraffinic petroleum oils generally report a lack of carcinogenic effect. One study reports results that suggest a weak dermal carcinogenic potential for such oils. However, the International Agency for Research on Cancer (IARC), in its review of a large body of literature, has determined that there is "no evidence that severely solvent-refined oils are carcinogenic to experimental animals.

Remaining components not determined hazardous and/or hazardous components present at less than 1.0% (0.1% for carcinogens).

Trace NA Mixture

■NOTE: An alternate formulation for this product may be used depending on manufacturing. conditions. The oil indicated below is used with the same remaining components.

y- 64742-57-0 40-50 5 mg/M³ ACGIH TLV and OSHA PEL for Residual oil (petroleum), hy- 64742-57-0 It is also solvent drotreated. refined.

mineral oil mists 10 mg/M3 ACGIH STEL 32ALD \$8ALAR IT D.O

Health Hazards: Orally - practically non-toxic. Dermally - practically non-toxic. Skin - slightly irritating. Eye - slightly irritating. Inhalation - practically non-toxic. Published studies of the dermal tumorigenicity of severely solvent-refined paraffinic petroleum oils generally report a lack of carcinogenic effect. One study reports results that suggest a weak dermal carcinogenic potential for such oils. However, the International Agency for Research on Cancer (IARC), in its review of a large body of literature, has determined that there is "no evidence that severely solvent-refined oils are carcinogenic to experimental animals. This oil is also hydrotreated. IARC has also indicated that the combination of hydrotreating and solvent refining appears to reduce or eliminate skin tumorigenicity. Describer (percolaum) del-

EFFECTIVE DATE: 4/1/86

APPROVED BY:

COMPLETED BY: R. K. Rigney

REPLACES SHEET DATED: 10/3/85

testion, Poblished soutles of the dornal tunoricerity o NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Material Safety Data Sheet. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is, any authorization given or implied to practice any patented invention without a license in addition no responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.

ned 184 AHSO She VUT HIDDE TWYSE S

C me WE AUGIN SVELL

assim tib latenia

Amainh marards. Skin e repeated on prolonged contect may cause mile skin ifritalish. Cutified soudies of the dermal numbrigations of several solventiation that caracities sector sugar of its gamerally report, a lack of carcinoganic effect; the stucy reports recults that suggest a weak dermal carcinoganic potential for such cills. Movever, International Acency for Research on Cancer (IAFC) in its review of a large body of

An elation brucking

Ton Stranegosa animiema? determined hazardous andjet James a companyment every of tol Ali () NO. I card isal fo ...(anapphista)
...

TYPE A C FROM DIESE PARTIES CO.

bila astronasso bila militara

An alternate formulation for this product may be used described on contractoring conditions. The oil indicated below is used with the same remaining components.