



MATERIAL SAFETY DATA SHEET

SECTION 1 IDENTITY

NAME OF PRODUCT:

PLH-100/101/105 AND BP-99 HYDRAULIC OIL

MANUFACTURER'S NAME AND ADDRESS:

SUNNEN PRODUCTS COMPANY
7910 MANCHESTER
ST. LOUIS, MO 63143

CONTACT:

CHUCK KORN

DATE:

NOVEMBER 28, 1996

EMERGENCY TELEPHONE NUMBER:

314-781-2105

SECTION 2 INGREDIENTS/IDENTITY (PER 29 CFR 1910.1200(g))

CHEMICAL AND (COMMON) NAME OF COMPONENTS	MAX Wt%	CAS NO.	OSHA TWA Z1-A	OSHA STEL Z1-A	ACGIH TWA	CARCINOGENIC
REFINED MINERAL OIL (Oil)	95	64742-54-7	5(mist)	NONE	5(mist)	N

These mixture ingredients are cited on the following lists:

Name	CAS	Citations
MINERAL OIL	64741-44-2	2,4,5,6,7,9,10,11,12,13,14,16,17

1=IARC 2=OSHA 3=NTP 4=ACGIH 5=NFPA49 6=NFPA325M 7=DOT HMT 49CFR172.101 8=EPA 9=RTECS 10=MA RTK 11=AK RTK 12=CA RTK 13=FL RTK 14=IL RTK 15=ME RTK 16=MN RTK 17=NH RTK 18=NJ RTK 19=Cincinnati, OH RTK 20=Norwood, OH RTK 21=PA RTK 22=RI RTK 23=WV RTK

CONTAINS NO EXTREMELY HAZARDOUS SUBSTANCES PER SARA TITLE III. COMPONENTS REGISTERED IN ACCORDANCE WITH TSCA. FOR FURTHER SAFETY AND HEALTH INFORMATION REGARDING THE COMPOSITION OF THIS MATERIAL CONTACT SUNNEN PRODUCTS.

SECTION 3 PHYSICAL & CHEMICAL CHARACTERISTICS

- SPECIFIC GRAVITY (WATER=1)87
- PERCENT VOLATILE BY WEIGHT.....<1%
- BOILING POINT>600 F (316 C)
- VAPOR PRESSURE (mm Hg).....<.1mm Hg @ 68 F (20 C)
- VAPOR DENSITY (Air=1).....No applicable information found.
- EVAPORATION RATENEGLIGIBLE
- SOLUBILITY IN WATER.....NEGLIGIBLE
- REACTIVITY IN WATERNOT REACTIVE
- APPEARANCE AND ODORASTM 4.0 LIQUID.

SECTION 4 SPECIAL PRECAUTIONS

HANDLING AND STORAGE: NONE Refer to section 7.

SECTION 5 CORROSIVELY AND REACTIVITY DATA

STABILITY: MATERIAL IS STABLE UNDER NORMAL CONDITIONS OF TRANSPORT AND STORAGE.
POLYMERIZATION: HAZARDOUS POLYMERIZATION WILL NOT OCCUR. INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZING AGENTS. HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE FROM COMBUSTION

SECTION 6 HEALTH, FIRST AID AND MEDICAL DATA

THE INFORMATION PRESENTED AND CONCLUSIONS DRAWN ARE FROM OTHER THAN DIRECT TEST DATA. PRIMARY ROUTE(S) OF ENTRY ARE: INGESTION and SKIN ABSORPTION. ACUTE AND CHRONIC HEALTH EFFECTS AND EFFECTS OF OVEREXPOSURE:

ACUTE:

ORAL TOXICITY (RATS): LD50: > 5 G/KG 0/10 Rats died at this dosage level. Slightly toxic (estimated)--based on testing of similar products and/or the components.

DERMAL TOXICITY (RABBITS): LD 50: > 2 G/KG 0/10 Rabbits died at this dosage level. Slightly toxic (estimated)--based on testing of similar products and/or the components.

INHALATION TOXICITY (RATS): Not established. Harmful concentrations of mists and/or vapors are unlikely to be encountered through any customary or reasonably foreseeable handling, use, or misuse of this product.

EYE IRRITATION (RABBITS): Expected to be non-irritation.--Based on testing of similar products and/or the components.

SKIN IRRITATION (RABBITS): May cause slight irritation on prolonged or repeated contact.--Based on testing of similar products and/or the components.

CHRONIC:

The base oils in this product are severely solvent refined and/or severely hydrotreated. Two year mouse skin painting studies of similar oils showed no evidence of carcinogenic effects. Severely solvent refined and severely hydrotreated mineral base oils have been tested by dermal application to rats 5 days/week for 90 days at doses significantly higher than those expected during normal industrial exposure. Extensive evaluations including microscopic examination of internal organs and clinical chemistry of body fluids, showed no adverse effects.

EMERGENCY FIRST AID

INHALATION: Remove from further exposure. If unconsciousness occurs, seek immediate medical assistance and call a physician. If breathing has stopped, begin mouth to mouth resuscitation. EYE CONTACT: Remove contact lenses (if wearing) and flush eyes with water for 15 minutes. Seek medical attention to check for possible irritation. SKIN CONTACT: Wash contact areas with mild non-abrasive soap and water. INGESTION: Not expected to be a problem. However, if greater than 1/2 liter (Pint) ingested, immediately give 1 to 2 glasses of water and call a physician, hospital emergency room or poison control center for assistance. Do not induce vomiting or give anything by mouth to an unconscious person.

SECTION 7 HANDLING, STORAGE AND USE PROCEDURES

NORMAL STORAGE AND HANDLING: Store away from heat or flame. If stored outdoors, store so as to shed water. NORMAL USE: May cause skin irritation and/or defat the skin on prolonged or repeated contact. Practice good personal hygiene by washing hands several times each day. Launder contaminated clothing before reuse. Avoid wearing clothing soaked with fluid. Avoid prolonged inhalation of mist or vapors. Do not transfer to unlabeled containers. Do not reuse containers for other materials or purposes. Do not cut, braze, weld, solder, or pressurize container as doing so may cause container to EXPLODE, potentially causing serious injury or DEATH. FOR INDUSTRIAL USE ONLY. Not suitable for use in or around household or dwelling. All precautions detailed on the container label apply to partially full or empty containers. Do not attempt to clean as residue is difficult to remove.

Empty drums should be completely drained, properly closed and returned to a drum conditioner to be commercially cleaned. Otherwise, containers should be disposed of in an environmentally safe manner and in accordance with applicable governmental regulations. STEPS TO BE TAKEN IN CASE OF LEAKS OR SPILLS: Absorb on fire retardant absorbant. Gather and dispose of in accordance with applicable regulations. Notify Coast Guard if spill could reach any waterway (1-800-424-8802). WASTE DISPOSAL METHODS: Dispose of in accordance with applicable federal, state and local laws, regulations, rules, orders and ordinances. RCRA Information: The unused product, in our opinion is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D); does not exhibit the hazardous characteristics of ignitability, corrosivity, or reactivity, and is not formulated with the metals cited in the EP toxicity test. Used product may be regulated.

SECTION 8 PERSONAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: If use conditions give rise to excessive mist (greater than 5 mg/cu M) use a NIOSH approved respirator rated for mineral oil mist or forced ventilation to reduce mist exposure to well below TLV levels. VENTILATION-LOCAL: Normal. MECHANICAL: Required if use conditions give rise to levels greater than 5 mg/cu M. OTHER: No applicable information found. SKIN PROTECTION: No special equipment required. However, good personal hygiene practices should always be followed. Do not wear oil soaked clothing. EYE PROTECTION: Always wear NIOSH approved eye protection when working around or operating machinery. OTHER EQUIPMENT: Oil-impervious apron if desired. MEASURES TO BE TAKEN DURING REPAIR AND MAINTENANCE OF CONTAMINATED EQUIPMENT THAT HAS BEEN IN CONTACT WITH THIS MATERIAL: Same as for petroleum lubricating oil. Remove traces of material if soldering, welding, brazing, cutting or other process involving ignition sources to prevent a fire hazard.

SECTION 9 FIRE AND EXPLOSION HAZARD DATA

FLASH POINT 395 F (202 C) ASTM D-92. FLAMMABLE LIMITS LEL: 0.6 UEL: 7.0 EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemical and water fog. SPECIAL FIRE FIGHTING PROCEDURES: Firefighters must use recommended protective equipment. UNUSUAL FIRE AND EXPLOSION HAZARDS: Sealed containers may explode if exposed to extreme heat.

NOTICE

THIS MATERIAL SAFETY DATA SHEET ("MSDS") IS SUPPLIED PURSUANT TO THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S HAZARD COMMUNICATION RULE (THE "RULE"), 29 CFR 1910.1200. THIS MSDS IS BEING FURNISHED TO THE IMMEDIATE PURCHASER OF THE MATERIAL TO WHICH IT REFERS WITHOUT REPRESENTATION OR WARRANTY AS TO THE COMPLETENESS OR ACCURACY OF ANY INFORMATION OR RECOMMENDATIONS CONTAINED HEREIN.

THIS MSDS IS OFFERED SOLELY TO COMPLY WITH THE RULE AND IS NOT INTENDED TO CREATE ANY LIABILITY OF ANY KIND ON THE PART OF SUNNEN PRODUCTS COMPANY ("SUNNEN"). IN NO EVENT WILL SUNNEN BE RESPONSIBLE FOR ANY DEATH, INJURY OR DAMAGE OF ANY NATURE WHATSOEVER RESULTING FROM THE USE OF, RELIANCE UPON, OR MISUSE OF THE MSDS. NO REPRESENTATIONS OR WARRANTIES, WHETHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER NATURE, ARE MADE HEREUNDER. THIS MSDS IS NOT INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR EXTEND LICENSES UNDER VALID PATENTS.

THIS MSDS IS FURNISHED UPON THE EXPRESS CONDITION THAT ALL PERSONS RECEIVING IT WILL MAKE THEIR OWN DETERMINATION AS TO ITS SUITABILITY FOR THEIR PURPOSED PRIOR TO USE. RESPONSIBILITY FOR COMPLIANCE WITH APPLICABLE FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING DISSEMINATION OF THE MSDS AND SALE AND USE OF THE MATERIAL TO WHICH IT REFERS RESTS SOLELY UPON THE PURCHASER.

ATTACH LABEL TO MACHINE



ATTENTION

Contains

Sunnen PLH HYDRAULIC Oil

Do not take internally. Practice good personal hygiene. Wash hands often. Read MSDS before using this material.

MSDS 11-3