



SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	: TPEO D3015
SAE GRADE	: 30
TBN	: 15
RECOMMENDED USE	: Marine Engine Oil
RESTRICTIONS ON USE	: This product should not be used for any other purpose than that recommended without expert advice.

2. HAZARDS IDENTIFICATION

This material is not considered to be hazardous according to regulatory guidelines.

HEALTH HAZARDS : Low order of toxicity. Irritating to skin.

ENVIRONMENTAL HAZARDS : This product may be harmful to aquatic organisms, may cause long-term adverse effect to aquatic environment.

3. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME AND SYNONYMS : Petroleum hydrocarbon and additives.

HAZARDOUS INGREDIENTS : No reportable hazardous substances or complex substances.

4. FIRST AID MEASURES

No hazards which require special first aid measures.

INHALATION : Remove from further exposure. Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion. If respiratory irritation, dizziness, nausea or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a medical device or use mouth-to-mouth resuscitation. Do not use mouth-to-mouth resuscitation if exposure to hydrogen sulfide is suspected.

SKIN CONTACT : Remove contaminated clothing and flush affected area with running water. If product is injected into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

EYE CONTACT : Immediately flush with large quantity of water for at least 15 minutes. If irritation occurs, seek medical assistance.

INGESTION : Rinse mouth with water. Do not induce vomiting. Do not give milk or alcoholic beverages. Do not give anything through mouth to an unconscious person. Keep victim at rest. Seek medical assistance.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA :

- **Appropriate Extinguishing Media** : Water fog, foam, dry chemical or carbon dioxide.
- **Inappropriate Extinguishing Media** : Straight stream of water.

FIRE FIGHTING :

- **Fire Fighting Instructions** : Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.
- **Hazardous Combustion Products** : Smoke, fume, oxides of carbon, sulfur oxides, nitrogen oxides, hydrogen sulfide, mercaptans, incomplete combustion products.

6. ACCIDENTAL RELEASE MEASURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

PROTECTIVE MEASURES :

- Avoid contact with spilled material.
- Do not touch or walk through spilled material.
- Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

SPILL MANAGEMENT :

- **Land Spill** : Stop leak if you can do so without risk. Recover by pumping or with suitable absorbent.
- **Water Spill** : Stop leak if you can do so without risk. Confine the spill immediately with booms. Warn other shipping. Notify port or relevant authority and keep public away. Remove from surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material. However, geographic conditions, wind, temperature, wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted.

ENVIRONMENTAL PRECAUTION :

- **Small Spill** : Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
- **Large Spill** : Dyke far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

7. HANDLING AND STORAGE

HANDLING : Avoid eye contact and repeated or prolonged skin contact. This product contains zinc dialkylthiophosphate (ZDDP). It is temperature sensitive, do not reheat above the recommended temperature. This product is a static accumulator.

STORAGE : Do not store in open and unlabeled containers. Keep containers closed when not in use. Store in temperature below 60°C (140°F).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMIT :	ACGIH TLV/TWA	ACGIH STEL	OSHA PEL
Oil mist, refined mineral	5mg/m ³	10mg/m ³	5mg/m ³

ENGINEERING CONTROLS : No special requirements under ordinary conditions of use and with adequate ventilation.

PERSONAL PROTECTION : The use and choice of Personal Protection Equipment is related to the hazard of the product, the workplace, and the way the product is handled.

- **Respiratory Protection** : No special requirements under ordinary conditions of use and with adequate ventilation.
- **Hand Protection** : No special requirements under ordinary conditions of use and with adequate ventilation. However, polyvinyl chloride (PVC) or nitrile gloves are recommended.
- **Eye protection** : Chemical goggles and face shield are recommended.
- **Skin and Body Protection** : No skin protection is required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.
- **Specific Hygiene Measures** : Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE :	Oily Liquid
COLOUR :	Max. 4.5
ODOUR :	Sulfur smell
ODOUR THRESHOLD :	N/D
PH :	N/A
POUR POINT :	Max. -6°C (21°F)
BOILING POINT / RANGE :	Min. 288°C (550°F)
FLASH POINT [METHOD] :	Min. 200 °C (392° F) [ASTM D92]
EVAPORATION RATE :	< 0.01
FLAMMABILITY :	N/D
FLAMMABLE LIMITS (approximate volume % in air) :	LEL : 0.9 UEL : 7.0
AUTOIGNITION TEMPERATURE :	N/D
VAPOUR PRESSURE :	< 0.013 kPa (0.1 mm Hg) at 20°C
VAPOUR DENSITY (air = 1):	> 2 at 101 kPa
SPECIFIC GRAVITY (water = 1.0):	Approximately 0.90 at 15°C
SOLUBILITY IN WATER :	Negligible
PARTITION COEFFICIENT (n-octanol/water) :	> 3.5
VISCOSITY:	Approximately 12 cSt at 100°C

10. STABILITY AND REACTIVITY

REACTIVITY : No reactivity hazards are known for the product.

CHEMICAL STABILITY : Product is stable under normal conditions.

POSSIBILITY OF HAZARDOUS REACTIONS : No known hazardous reactions.

CONDITIONS TO AVOID : Excessive heat. High energy sources of ignition, flames, spark.

INCOMPATIBLE MATERIALS : Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS : Product does not decompose at ambient temperatures.

11. TOXICOLOGICAL INFORMATION

----- ACUTE EXPOSURE -----

INHALATION : Minimally toxic. If this product is over-heated especially in the presence of water, hydrogen sulfide may be released, causes respiratory collapse, coma and even death without any odor being sensed. Based on test data for structurally similar materials.

INGESTION : Minimally toxic. Based on test data for structurally similar materials.

SKIN : Minimally toxic. Negligible irritation to skin at ambient temperatures. Based on test data for structurally similar materials.

EYE : Severely irritating, may seriously damage eye tissue. Based on test data for structurally similar materials.

----- CHRONIC EXPOSURE -----

GERM CELL MUTAGENICITY : No data available to indicate this product or any of its components is mutagenic or genotoxic.

CARCINOGENICITY : No data available to indicate this product or any of its components is carcinogenic.

REPRODUCTIVE TOXICITY : No data available to indicate this product or any of its components causes reproductive toxicity.

TERATOGENICITY : No data available to indicate that this product or any of its components causes birth defects.

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) : No data available to indicate this product or any of its components causes organ toxicity.

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) : A component of this product contains tertrapropenylphenol. Effects on liver, adrenals and reproductive organs were seen in rats given high repeated oral doses. No data available to indicate this product or any of its components causes organ toxicity.

12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

ECOTOXICITY : A component of this product is expected to be toxic to aquatic organisms, may cause long-term adverse effect to aquatic environment.

MOBILITY : Not determined.

PERSISTENCE AND DEGRADABILITY : A component of this product is expected to be inherently biodegradable.

BIOACCUMULATION POTENTIAL : Bioaccumulation is unlikely due to the very low water solubility of this product, therefore bioavailability to aquatic organisms is minimal.

13. DISPOSAL CONSIDERATION

WASTE DISPOSAL : This product should not be allowed to enter waterways or soil. Not suitable for landfill. Offer surplus and non-recyclable solutions to a licensed disposal company. Disposal must be in accordance with applicable laws and regulations and material characteristics at time of disposal.

EMPTY CONTAINER WARNING (where applicable) : Empty containers may contain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Do not attempt to refill or clean containers without proper instructions. Empty containers should be completely drained, properly bunged and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

14. TRANSPORT INFORMATION

LAND : Not regulated for Land Transport.

SEA(IMDG) : Not regulated for Sea Transport according to IMDG-Code.

AIR(IATA): Not regulated for Air Transport.

15. REGULATORY INFORMATION

Not dangerous for conveyance under UN, ADR/RID, IMO and IATA/ICAO.
All components comply with TSCA. EU labeling not required.

16. OTHER INFORMATION

N/D = Not determined, N/A = Not applicable

No revision information is available.

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