

SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY INFORMATION

Product Name: **STARFIRE SYNTHETIC EXTREME PRESSURE (EP) GEAR OIL**
ISO GRADES: 68, 100, 150, 220, 320, 460, 680

Product Use: Lubricant, Industrial EP Gear Oil, AGMA Grades: 2EP thru 8EP

Manufactures Name: PennStar
 6 Horwith Dr.
 Northampton, PA18067

Emergency Assistance: CHEMTREC 800-424-9300 Business Telephone No.: 484-275-7990

SECTION 2: HAZARD IDENTIFICATION

United States (U.S.)
 According to OSHA 29 CFR 1910.1200 HCS

Classification of the mixture:
 OSHA HCS 2012 Not Classified
 Label Elements
 OSHA HCS 2012 No signal word

Hazard Statements No known significant effects or critical hazards

Precautionary Statements No precautionary phrases

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

	%Weight
P Synthetic Industrial EP Gear Lubricant, ISO 68-680	100
1 Solvent refined, hydrotreated paraffinic/synthetic distillate base oil.	30-75
2 Refined and hydroprocessed high viscosity/synthetic/residual base oil.	20-65
3 Additive system containing proprietary formulated ingredients	4-16
4 Other minor additives.	<1

SECTION 4: FIRST-AIDE MEASURES

Eye Contact - Flush with water for 15 minutes while holding eyelids open. If irritation persists, get medical attention.
 Skin Contact -Remove contaminated clothing and wipe excess off. Wash with soap and water or a waterless hand cleaner followed by soap and water. If irritation occurs, get medical attention.
 Inhalation - If overcome by vapor remove victim to fresh air; administer oxygen if breathing is difficult. Get medical attention.
 Ingestion - Do not induce vomiting. In general no treatment is necessary unless large quantities of product are ingested. However, get medical attention.
 Note to Physician - In general, Emesis Induction is unnecessary in high viscosity, low volatility products, I.E., most oils and greases.

SECTION 5: FIRE FIGHTING MEASURES

Flammable limits /% Volume in AiR
 Lower: N/AV Upper: N/AV

NFPA RATINGS- Health: 1 Flammability: 1 Reactivity: 0 Special: --
 NPCA-HMIS RATINGS- Health: 1 Flammability: 1 Reactivity: 0

Extinguishing Media:

Use water fog, foam, dry chemical or CO₂. Do not use a direct stream of water.

Fighting Procedures and Precautions:

Material will not burn unless preheated. Do not enter confined fire-space without full bunker gear (Helmet with face shield, bunker coats, gloves and rubber boots), including a positive-pressure NIOSH-Approved self-contained breathing apparatus. Cool fire exposed containers with water.



NFPA

National Fire Protection Association (U.S.A.)

Product will float and be reignited on surface of water.Special Fire

SECTION 6: ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures:

May burn although not readily ignitable. Use cautious judgement when cleaning up large spills. ***Large Spills*** Wear respirator and protective clothing as appropriate. Shut off source of leak. If safe to do so, dike and contain. Remove with vacuum trucks or pump to storage salvage vessels. Soak up residue with an absorbent such as clay, sand, or other suitable materials; dispose of properly. Flush area with water to remove trace residue.

Small Spills Take up with an absorbent material and dispose of properly.

Waste Disposal: Place in an appropriate disposal facility in compliance with local regulations.

SECTION 7: HANDLING AND STORAGE

The health effects noted below are consistent with requirements under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Eye Contact: Lubricating oils are general considered no more than minimally irritating to the eyes.Skin Contact: Lubricating oils are generally considered no more than mildly irritating to the skin. Prolonged and repeated contact may result in various skin disorders such as Dermatitis, Folliculitis or Oil Acne.

Inhalation: Inhalation of vapor (generated at high temperatures only) or oil mist from this product may result in mild irritation of the upper respiratory tract.

Ingestion: Lubricating oils are generally considered no more than slightly toxic if swallowed.

Signs and symptoms: Irritation as noted above.

Storage: Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Store and use only in equipment/containers designed for use with this product

Aggravated Medical Conditions:

Preexisting skin and respiratory disorders may be aggravated by exposure to this product. The International Agency For Cancer Research has determined there is sufficient evidence for the carcinogenicity in experimental animals exposed by contact to used motor (crankcase) oil. Handling procedures and safety precautions in the MSDS should be followed to minimize exposure to the product as used lubricating oil in gasoline or diesel fueled internal combustion engines.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Minimize skin contact. Wash with soap and water before eating, drinking, smoking or using toilet facilities. Launder contaminated clothing before reuse, properly dispose of contaminated leather articles, including shoes that cannot be decontaminated. Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures.

Respiratory Protection:

If exposure may or does exceed occupational exposure limits (SECTION 2) use a NIOSH-Approved respirator to prevent overexposure. In accord with 29 CFR 1910.134 use either an atmosphere-supplying respirator or an air-purifying respirator for organic vapors and particulate.

Protective clothing:

Wear chemical resistant gloves and other protective clothing as required to minimize skin contact. Wear safety goggles to avoid eye contact. Test data from published literature and/or glove and clothing manufacturers indicate the best protection is provided by nitrile gloves.

Occupational Exposure Limits (estimated 8-hour workday):

Standards	OSHA Z1 ---> PEL/TWA	PEL/CEILING	ACGIH TLV/TWA	TLV/STEL	OTHER
Oil Mist	---> 5 Mg/M ³ *	None	5Mg/M ³ *	10 Mg/M ³ *	None

(*Oil Mist, Mineral)

SECTION 9: PHYSICAL/CHEMICAL PROPERTIES

Physical State: Liquid	Auto Ignition Temperature: >320°C/608°F	Upper/Lower Explosion/Flammability limits: 1-10 %V(based on Mineral Oil)
Boiling Point: NA	Gravity.(H ₂ O=10.0) API @ 60°F: 32.0 - 30.0	Melt Point: NA Pour Point: -60°F to -30°F Flash Pt., COC: 520°F - 550°F
Evaporation Rate: NA	Percent Volatile by Volume: Negligible	Vapor Density: (Air=1.0) >1.0 Viscosity@100°C, cSt.: 10.0 - 61.0
Solubility In Water: Negligible	Appearance: Clear-yellow to darker	Odor: Mild Hydrocarbon Viscosity@ 40°C, cSt.: 68 - 650
PH: NA	Vapor Pressure: <0.3kPa (0.1 @ 20°C [Est])	Electrical Conductivity: Not expected to be a static accumulator.

SECTION 10: REACTIVITY DATA

Stability: Stable Hazardous Polymerization: Will Not Occur Conditions and Materials to Avoid: Avoid heat, open flames and oxidizing materials.

Hazardous Decomposition Products:

Thermal decomposition products are highly dependent on the combustion conditions. A complex mixture of airborne solid, liquid, particulate and gases will evolve when this material undergoes pyrolysis or combustion. Carbon monoxide and other unidentified organic compounds may be formed upon combustion.

SECTION 11: TOXICOLOGICAL INFORMATION

Dermal LD50	>5.0 g/kg (Rabbit)	OSHA - Non Toxic	Based on similar material(s)	
Oral LD50	>5.0 g/kg (Rat)	OSHA - Non Toxic	Based on similar material(s)	
Carcinogenicity Classification (Highly Refined Mineral Oil/IP346<3%): human carcinogen.	GHS/CLP=No carcinogenicity classification.		IARC 3=No carcinogenicity to humans. NTP=No	ACGIH A4=Unclassified as a IOWA=No

SECTION 12: ECOLOGICAL INFORMATION

This product is classified as an oil under section 311 of the Clean Water Act. Spills entering (A) surface waters of (B) any water courses or sewer's-entering/leading to surface waters that cause a sheen must be reported to the nearest local Environmental Protection Agency Office.

SECTION 13: DISPOSAL CONSIDERATIONS

Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by supervised incineration. Proper characterization is recommended. The product is suitable for processing by an approved recycling facility or can be disposed of at an appropriate government waste disposal facility. Compliance with all appropriate Federal, State, and Local regulations should be satisfied at time of disposal. Base Oil Component is expected to be inherently biodegradable. The total mixture may be harmful to aquatic organisms.

SECTION 14: TRANSPORT INFORMATION

TDG Classification not regulated. Environmental transport classifications are indicate as non-hazard. DOT Identification Number: Not Regulated. IMDG: Not Regulated.

SECTION 15: REGULATORY INFORMATION

U.S. TSCA 8b INVENTORY:	All components of this product are on the US TSCA Inventory.
Other TSCA Regulations:	None Known
SARA SECTIONS 301- 304:	This product does not contain greater than 1.0% of any chemical substance on the SARA Extremely Hazardous Substances List.
SARA SECTION 311/312(Hazard):	This product does not contain any chemical substance on SARA Hazard, Delayed Health Hazard List.
SARA SECTION 313:	This product does not contain greater than 1.0% (greater than 0.1% for carcinogenic substance) of any chemical (Toxic Chemicals) substances listed under SARA Section 313.
CERCLA HAZARDOUS SUBSTANCES:	None Known
FDA APPROVAL:	Not Applicable
RCRA STATUS:	If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic.
Under RCRA it is the	responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

SECTION 16: OTHER INFORMATION

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE AND IS BELIEVED TO BE CORRECT. HOWEVER, PENNSTAR MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. PENNSTAR ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

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