

SYF1200/SHC SERIES

PAO BASE SYNTHETIC GEAR FLUID

Product Description

SYF-1200 High performance, 100% Synthetic industrial gear oils are designed to provide optimum equipment protection and oil life even under extreme conditions. Poly alpha olefin (PAO) technology has been selected for its exceptional oxidation resistance and thermal properties, naturally high viscosity index, excellent low temperature fluidity and absence of undesirable compounds that are often found in mineral oils. The high viscosity index and low traction coefficient of this oil combine to help provide significant reduction in power consumption in many gear drives. SYF-1200 lubricants contain an advanced and carefully blended proprietary additive system designed to provide excellent protection against conventional wear modes such as scuffing and provide a high level of resistance against micro pitting fatigue. In addition, compared to conventional gear oil chemistries, they offer the potential for improved lubrication of gearbox rolling element bearings. SYF-1200 products offer outstanding rust and corrosion protection in applications where salt water and acidic water protection are required. These products provide outstanding filter life even when moderately wet and have excellent compatibility with ferrous and non-ferrous metals even at elevated temperatures.

Specially Designed For Stone Processing And Mining Machines Like Liner Polish Machine, Gantry Crane (50Ton) And Epoxy Resin Line.

SYF-1200 lubricants are recommended for enclosed industrial gear drives including steel-on-steel spur, helical, and bevel gears. They are highly recommended in applications that may be subject to micro pitting; especially heavily loaded gearboxes with surface-hardened tooth metallurgies. They may also be used in gear applications where extreme low and/or high temperatures are encountered and applications where corrosion may be severe. Because of their unique mix of properties, including resistance to micro pitting wear, and their performance in tough applications and wide temperature range.

Benefits

- Superb protection from micro pitting fatigue wears as well as high resistance to traditional scuffing wear.
- Excellent resistance to degradation at high temperatures.
- Low traction PAO base stocks for improved gear efficiency.
- High viscosity index base stocks reduce viscosity change with temperature.
- Excellent resistance to rust and corrosion and very good demulsibility
- Outstanding filter life, even in presence of water.
- Excellent compatibility with common gearbox materials of construction and with mineral-based gear oils.

Applications

Application Considerations: While the SYF-1200 is compatible with mineral oil based products, admixture may detract from their performance. Consequently it is recommended that before changing a system to one of the SYF-1200, it should be thoroughly cleaned out and flushed to achieve the maximum performance benefits. Modern, highly loaded gearboxes used in the paper, steel, oil, textile, lumber and cement industries where gear protection and optimum oil life are required.

Typical Properties

PROPERTY	TEMPERATURE			
	15°C (60°F)	38°C (100°F)	260°C (500°F)	316°C (600°F)
Density, kg/L (lb./ft ³)	0.868 (54.2)	0.854 (53.3)	0.716 (44.7)	0.681 (42.5)
Thermal Conductivity, W/m K (BTU/hr.°F.Ft)	0.138 (0.080)	0.136 (0.079)	0.124 (0.072)	0.121 (0.070)
Heat Capacity, kJ/kg K (BTU/lb. °F)	1.87 (0.45)	1.94 (0.46)	2.69 (0.64)	2.88 (0.69)
Vapour Pressure, kPa (psia)	0.00 (0.00)	0.00 (0.00)	3.01 (0.44)	14.28(2.05)

Performance

DIN 51517 Part 3, U.S. Steel 224, AGMA 9005-E02, ISO 12925-1 CKC/CKD, David Brown S1.53.101, GM LS 2EP Gear Oil, Fives Cincinnati Machine Gear

Technical Data Sheet

Technical Data

PROPERTIES	SHC-100	SHC-150	SHC-220	SHC-320	SHC-460	SHC-680
ISO Viscosity Grade	100	150	220	320	460	680
Viscosity, ASTM D 445						
cSt @ 40°C Mm2/s	99	150	220	316	460	680
cSt @ 100° °C Mm2/s	14	19.5	26	35	45.6	62.2
Viscosity Index, ASTM D 2270	140	150	150	155	155	160
Pour Point, °C, ASTM D 97	-45	-45	-36	-33	30	-20
Flash Point, °C, ASTM D 92	250	250	250	250	300	300
Specific Gravity @15.6°C kg/l, ASTM D 4052	0.86	0.86	0.87	0.88	0.89	0.9
FZG Scuffing, DIN 51345 (mod) A/16.6/90, Fail Stage	13+	13+	13+	13+	14+	14+
4-Ball Wear test, ASTM D 4172, mm (Mod 1,800 RPM, 20kg, 54°C, 60 Minutes)	250	250	250	250	250	250
Rust protection, ASTM D665, Sea Water WaterSeperability, ASTM D 1401,Time to 40/37/3 at 82° C, minutes	PASS	PASS	PASS	PASS	PASS	PASS
Foaming Characteristics, ASTM D 892,Seq. II, Tendency/Stability, ml/ml	0/0, 0/0,00	0/0, 0/0,00	0/0, 0/0,00	0/0, 0/0,00	0/0, 0/0,00`	0/0, 0/0,00

Available Packs: 1, 5, 20, 50, 210 Ltr

Shelf Life – 36 Months from the Manufacturing month

Due to continual product research and development, the information contained herein is subject to change without notification. Typical Properties may vary slightly. The Material Safety Data Sheet (MSDS) are available upon request through our sales office.

- All related specifications are meets or exceeds.

PETRELPLUS INC.

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MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product SYF-1200 SYNTHETIC GEAR OIL
SERIES (SHC)
Product Name SYG 1200/PAO GEAR OIL
Supplier Petrelplus Inc. One World Center,
Tower One, 9TH Floor, Senapati Bapat
Marg, Lower Parel, Mumbai-400013,
Maharashtra.
Call # +91 22 6216 7072
(Monday to Friday)
Cell # +91 93522 25457
marketing@petrelplus.com
www.petrelplus.com

2. COMPOSITION

Synthetic PAO Base Oil Proprietary additives.

3. HAZARDS IDENTIFICATION

Not classified as hazardous. Other Hazards:

4. FIRST-AID MEASURES

RESPIRATORY SYSTEM Remove to fresh air and get medical attention.

INGESTION Do not induce vomiting. Wash mouth out with water and obtain medical attention.

EYES Rinse immediately with plenty of water for at least 10 minutes. Get Medical Attention.

SKIN Remove contaminated clothing. Wash affected area with soap and water, get medical attention.

5. FIRE-FIGHTING METHODS

Foam, carbon dioxide or dry power.

6. ACCIDENTAL RELEASE MEASURE

Contain and absorb in sand or earth. Ensure no material enters drains or water courses. Dispose of as solid waste in accordance with the relevant waste disposal regulations.

7. STORAGE AND HANDLING

Storage

Store in delivery packs in a cool dry place.

HANDLING

At ambient temperatures wear gloves overalls and eye protection. The work area should be adequately ventilated. No eating drinking or smoking in the work area.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Standard: The substance with exposure limit is:
Notation 1:

Exposure Standard: 2nd substance with exposure limit is:
Notation 2:

PERSONAL PROTECTION

Respiratory Protection:

Eye Protection: Safety Spectacles

Hand protection: Gloves butyl or nitrile rubber

Industrial Hygiene: No eating drinking or smoking in the work area
Ventilation: At room temperature handle in a well-ventilated area. Use exhaust ventilation if exposure to flume or aerosol can occur.

PROTECTION AGAINST FIRE AND EXPLOSION

Combustible but not readily ignited. No explosion hazard.
EC SAFETY PHRASES not classified as hazardous

9. TYPICAL PROPERTIES:

Viscosity, ASTM D 445
cSt @ 40°C 100 TO 680
cSt @ 100°C 13.7 TO 62
Flash Point, °C, ASTM D 92 250 MIN

10. STABILITY AND REACTIVITY

HAZARDOUS REACTIONS

Comments

HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition produces noxious fumes

11. TOXICOLOGICAL INFORMATION

LD50 Acute Oral Toxicity: > 5000: mg/Kg:Rat

LC50 Acute Inhalation:: mg/1 :

Eye Irritation: No: Rabbit

Skin Irritation: No.: Rabbit

Sensation: No:

Further Information:

12. ECOLOGICAL INFORMATION

LC50 (96 Hour): mg/1 EC50 (24 Hour): mg/1
Biodegradability (Coupled units):

13. DISPOSAL CONSIDERATIONS

Solid material should be incinerated. Material absorbed on sand should be disposed of as solid waste.

14. TRANSPORT INFORMATION

IMDG No.: Not classified

Packing Groups: IATA-DGR Class No.: Not classified

TREMCARD: Not classified

RID/ADR Class No.: Not classified

Other Information

15. REGULATORY INFORMATION

Classification and labeling according to EC Directives
67/548

Not classified as hazardous.

EC Risk Phrases

Not classified as hazardous.

Other Hazardous

EC Safety Phrases

Not classified as hazardous

16. OTHER INFORMATION: PRODUCT SAFETY

For safety reasons, it is IMPERATIVE that customer: - Ensure that all those within their control who use the products are supplied with all relevant information contained within the Material Safety Data Sheet and Technical Bulletin concerning the applications for which the product is designed and any instructions or warning

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