









SPINPLUS SERIES

Product Description

The SPINPLUS SERIES of oils are premium performance products primarily designed for the lubrication of high-speed spindles in machine tools. They are also used in some critical hydraulic, circulation systems and airline oilers where the appropriate viscosity grade is selected. They are formulated from selected high-quality, low viscosity base oils and additives that impart good resistance to oxidation and protection from rust and corrosion.

They possess very good resistance to foaming and separate readily from water.

Applications

- High speed spindle bearings in machine tools and equipment where high speeds and fine clearances are involved.
- Precision grinders, lathes, jig borers and tracer mechanisms.
- SPINPLUS is recommended for "zero clearance" type spindle bearings which operate with extremely close clearances.
- For sleeve type spindle bearings having greater clearances, the choice of viscosity depends on the relation between clearance and spindle speed.
- Low pressure hydraulic systems where appropriate viscosity is selected.
- For some sensitive instruments such as telescopes, laboratory equipment, etc.

Benefits

- The SPINPLUS SERIES of oils provide exceptional lubrication of close-tolerance bearings which helps keep the bearings running cool and helps to maintain the precision required by many of today's critical machine tools.
- Although the SPINPLUS oils were designed for spindle bearings, they exhibit the required properties to function as low pressure hydraulic and circulating oils as long as the proper viscosity is selected.
- This feature can help minimize inventory costs and reduce the potential for product misapplication.

PETRELPLUS INC.

One World Center, Tower One, 9th Floor, Senapati Bapat Marg, Lower Parel, Mumbai-400013



Typical Properties

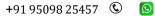
SPINPLUS SERIES						
ISO VG	2	5	10	12	22	32
Viscosity, ASTM D 445						
cSt @ 40°C	2.1	4.83 -6	10 -12	12-15	20-24	30-36
cSt @ 100°C	0.95	1.53	2.62	3.28	4	6
Total Acid Number, ASTM D 974, mg KOH/g	0.06	0.06	0.06	0.06	0.1	0.01
Viscosity Index	100	100	100	100	100	100
Copper Strip Corrosion,3 hours @ 100°C, ASTM D 130	1A	1A	1A	1A	1A	1A
Rust Characteristics, Proc A, ASTM D 665	Pass	Pass	Pass	Pass	Pass	Pass
Pour Point, ^o C, ASTM D97	-36	-25	-22	-20	-20	-20
Flash Point, ⁰ C, ASTMD 92	84	102	180	194	212	250
Density @ 29°C, ASTM D 4052, kg/L	0.802	0.822	0.844	0.854	0.862	0.872
Ash Content (Percentage by mass Part, 4 Sec -1)	0.01max.	0.01max.	0.01max	0.01max.	0.01max.	0.01max.
Saponification Value (Part 55, Sec -1)	1max.	1max.	1max.	1max.	1max.	1max.

Available Packs: -20, 50 and 210 Litres.

Shelf Life - 36 Months from the manufacturing.

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.

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^{*}All related specifications meet or exceed.



Material Safety Data Sheet

PRODUCT AND COMPANY IDENTIFICATION

Product SPINPLUS SERIES 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

COMPOSITION

Composition of base oil and Proprietary additives.

HAZARDS INDENTIFICATION

Not classified as hazardous.

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.

FIRE-FIGHTING METHODS

Foam, carbon dioxide or dry power

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

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.

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:

Type of Cartridge (if Applicable): 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.

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9. TYPICAL PROPERTIES

 $\begin{array}{lll} \mbox{Viscosity} \, @ \, 40^{\circ}\mbox{C, cSt} & -2\mbox{ to } 32 \\ \mbox{Flash Point, COC, }^{\circ}\mbox{C} & -84\mbox{ to } 250 \\ \mbox{Viscosity Index} & -100 \\ \mbox{Rust Protection} & -\mbox{Pass} \end{array}$

10. STABILITY AND REACTIVITY

Stability - Stable

Conditions to avoid - Excessive temperatures Materials to avoid - Strong oxidizers

Hazardous decomposition products - Oxides of carbon and nitrogen

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 INFOMRATION

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





