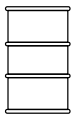
SINOPEC
PERFORMANCE IN MOTION

Product Data Sheet

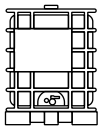
Product	**Sinopec Ester-based Fire-resistant Hydraulic Fluid 4632**
Summary	**Product description** Sinopec Ester-based Fire-resistant Hydraulic Fluid 4632 is a range of polyol ester type hydraulic fluids formulated with selected additives, available in four ISO viscosity grades: 32, 46, 68 and 100. This biodegradable and environmentally responsible fluid, which does not contain water, mineral oil or phosphate esters, can be used in place of a conventional antiwear hydraulic fluid in applications where there is a risk of fire or accidental environmental contamination, where it achieves excellent hydraulic fluid performance.

Available sizes

PAIL – 18L



DRUM – 200L



IBC – 1000L

Also available in bulk

Applications

Sinopec Ester-based Fire-resistant Hydraulic Fluid 4632 is suitable for use in:

- Hydraulic applications where there is a risk of fire or of accidental environmental contamination, where a conventional mineral-oil based antiwear hydraulic fluid would present a fire hazard or pollution hazard.
- Hydraulic applications where a fire-resistant antiwear hydraulic fluid of type ISO 6743/4 HFDU or ISO/FDIS 12922 is required.

Features and benefits

- High flash point (270℃) and fire point (330℃) make the fluid resistant to fire, offering a safer working environment and greater equipment protection.
- Excellent antiwear performance in hydraulic pumps and valves when used in accordance with the equipment manufacturers' recommendations.
- Excellent thermal and oxidation stability reduce the formation of deposits and sludge and prevent valve sticking, ensuring longer system life and extended drain intervals.
- High shear stability means the fluid stays in grade and is not broken down in service.
- Very high viscosity index (VI > 180) provides outstanding viscosity–temperature performance compared to conventional mineral oil (VI ~ 100) and phosphate ester (VI < 0) hydraulic fluids.
- Good lubricity properties, provided by the polyol ester fluid, protect hydraulic components from wear.
- Compatible with iron, steel, and most non-ferrous metals and their alloys.
- Wide operating temperatures range – from –20℃ to 90℃.
- Suitable for use in hydraulic systems operating at a constant pressure of >40 MPa.
- Non-toxic, non-irritating and contains no hazardous ingredients, so safe to use and handle.
- Readily biodegradable and non-toxic to aquatic life, so suitable in applications where accidental spillage or leakage of fluid is possible.
- Excellent storage stability and long product life – comparable to conventional mineral oil fluids or polyglycols.

Typical data

Sinopec Ester-based Fire-resistant Hydraulic Fluid 4632				
ISO viscosity grade	32	46	68	100
Kinematic viscosity@ 40℃, mm^2/s ,ASTM D445	32.0	46.0	68.0	100.0
Kinematic viscosity@ 100℃, mm^2/s ,ASTM D445	>7.0	>9.0	>12.0	>14.0
Viscosity index, ASTM D 2270	>180	>180	>180	>180
Air release at 50℃, mins, ASTM D 3427	10 max	10 max	15 max	15 max
Foaming characteristics, ASTM D 892 sequences I sequences II sequences III	 50/0 max 50/0 50/0	 50/0 max 50/0 50/0	 50/0 max 50/0 50/0	 100/0 max 100/0 100/0
Neutralisation number, mg KOH/g, ASTM D 974	2.0	2.0	2.0	2.0
Rust prevention, ASTM D 665				
distilled water	pass	pass	pass	pass
Copper corrosion, 3 hours @ 100℃, ASTM D 130	1b	1b	1b	1b
Water separability, ASTM D 2711	30 max	30 max	30 max	30 max
Pour point, ℃, ASTM D 97	-20 max	-20 max	-20 max	-20 max
Flash point (COC), ℃, ASTM D 92	>270	>270	>270	>270
Fire point, ℃, ASTM D 92	>330	>330	>330	>330
Manifold ignition test, @ 704℃, CETOP RP 65H	pass	pass	pass	pass
Density @ 20℃, kg/l, ASTM D 4052	0.95 max	0.95 max	0.95 max	0.95 max

These data are given as an indication of typical values and not as exact specifications.

Industry and OEM specifications

Sinopec Ester-based Fire-resistant Hydraulic Fluid 4632 meets the performance requirements of the following industry specifications:	
ISO	6743/4 HFDU (synthetic fluids containing no water, other compositions)
ISO/FDIS	12992

Accuracy of information

Data provided in this PDS is typical and subject to change as a result of continuing product research and development. The information given was correct at the time of printing. The typical values given are subject to variations in the testing procedures and the manufacturing process may also result in slight variations. Sinopec guarantees that its lubricants meet any industry and OEM specifications referred to on this data sheet.

Sinopec cannot be held responsible for any deterioration in the product due to incorrect storage or handling. Information on best practice is available from your local distributor.

Product and environmental safety

This product should not cause any health problems when used in the applications suggested and when the guidance provided in the Material Safety Data Sheet (MSDS) is followed. Please consult the MSDS for more detailed advice on handling; MSDSs are available from your local distributor. Do not use the product in applications other than those suggested.

As with all products, please take care to avoid environmental contamination when disposing of this product. Used oil should be sent for reclamation/recycling or, if not possible, must be disposed of according to relevant government/authority regulations.

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