

SPD Hydraulic HFC / Non-Flame HFC

SPD Hydraulic HFC / Non-Flame HFC is a water-glycol based, fire resistant hydraulic fluid produced to provide greater security to the industry prevent fire hazard in hydraulic systems. This product cannot be used in systems and pumps that use standard mineral oil-based hydraulic system oil. This product can be used in pumps and systems that contain water-based non-flammable hydraulic fluid, and its viscosity should be checked by routine tests during use.

Usage

Flame-retardant Speedol Non-Flame HFC hydraulic fluid should be used in areas where there is a continuous fire hazard due to open fire, molten metal and heating ovens near hydraulic systems. It is recommended to use it wherever it is thought that it may create a fire hazard. It can be used in hydraulic equipment in fire danger places such as die-casting workshops, foundries, steel plants, glass workshops, rolling mills, mines, excavators, vehicles, sewage plants.

Usage Warnings

It is generally not recommended to use a non-flammable hydraulic fluid in a system where a mineral-based hydraulic oil is used, and this switch can lead to some significant problems. The main reasons for this are:

- Change in Lubrication Properties: Mineral-based hydraulic oils have specific lubricating and cooling properties, while non-flammable hydraulic fluids have different viscosity, lubricating properties, and friction behaviors. Therefore, when a non-flammable fluid is used, adequate lubrication may not be provided for pumps, motors, and other components in the system. This can lead to wear and loss of efficiency.
- Chemical Incompatibility: Mineral-based oils and non-flammable hydraulic fluids are chemically different. Non-flammable hydraulic fluids can usually be water-based or ester-based, and these fluids usually contain special additives. Mineral-based oils, on the other hand, contain different additives, and chemical reactions can occur between these fluids. This can negatively affect the performance of the fluids and prevent the hydraulic system from operating efficiently.
- Seals and Sealing Elements in the System: Different hydraulic fluids have different effects on the sealing elements (e.g. seals, gaskets) in the system. Mineral base oils are designed to be compatible with certain sealing materials. However, non-flammable fluids may be incompatible with these materials and may cause seal failure, leakage, and inefficient system operation.
- Fire Safety Risks: Non-flammable hydraulic fluids are generally manufactured with fire-resistant formulas. However, mineral base oils pose a fire hazard. If non-flammable fluids are used in the system, the fire safety properties of these fluids can be weakened by mixing with mineral-based fluids. This increases safety risks.
- Viscosity and Fluidity Changes: Mineral-based oils and non-flammable hydraulic fluids can have different viscosities and fluidity properties. This can affect the flow of the fluids, pump performance, and distribution in the system. If non-flammable fluids have lower or higher viscosity, hydraulic performance in the system may be reduced.
- System Cleaning and Conversion Difficulty: If a mineral-based oil is used in a system and then a non-flammable fluid is to be switched to, the system must be completely cleaned. Otherwise, old mineral-based oils can mix with the new fluid and cause undesirable chemical reactions, which jeopardizes the efficiency and safety of the system.

Conclusion: If a non-flammable hydraulic fluid is to be used in a system using mineral-based hydraulic oil, **the system must first be completely cleaned** and **compatible materials must be used**. In addition, all components in the system (pump, motor, valve, sealing elements, etc.) must be carefully checked for compatibility with the non-flammable fluid. Generally, such transitions are a process that requires expertise and if the correct precautions are not taken, performance and safety problems in the system may increase.

Features

Safe Use: The glycol - water mixture contained in it can be used safely anywhere it is thought to be a fire hazard.
Foam Control: Thanks to the anti-foaming property of the additive system, it exhibits excellent resistance to foam formation.
High Antioxidant Effect: Thanks to the antioxidant additive in it, the system is not oxidized by heat effect, it is long life.
High Corrosion Protection: It is a corrosion inhibitor thanks to the corrosion inhibitor in the additive system.

Anti-Wear Effect: Protect the system against wear by performing the lubrication task.

Technical Specifications

*Kinematic Viscosity @40˚C, cSt	ASTM D 445	32	46
*Colour	Visual	Pink	Pink
*Density, 20°C, g/cm³	ASTM D 4052	1,081	1,085
*pH	ASTM D 1287	9,24	9,3
Pour Point, °C	ASTM D 97	-48	-48
*Freezing Point, °C	ASTM D 1177	-50	-50

**Data given above are typical properties and may vary slightly.*

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