

# Product Data Sheet

## Mobil Pyrogard D Fire Resistant Hydraulic Fluid ( ISO Class HFB )

### Product Description

Mobil Pyrogard D is a ready to use inverted (water-in-oil) emulsion consisting of an oil phase surrounding finely divided water droplets uniformly dispersed throughout the mixture. The inverted emulsion provides better lubricity and significantly higher viscosity than a conventional oil-in-water emulsion. Additives provide resistance to corrosion and the formation of gums and resins.

Mobil Pyrogard D is approved by Factory Mutual as a fire resistant fluid.

### Benefits

Mobil Pyrogard D offers the following benefits:

- Increased safety due to excellent fire resistance
- Easy to install
- Minimum pump and valve wear when used in oil accordance with equipment builder instructions (e.g. high level of wear protection in the Denison 800 series arial piston pump)
- Compatible with seal materials normally used in oil hydraulic systems
- Long-term stability gives minimum maintenance
- Low leakage characteristics
- Good protection against corrosion
- Excellent yellow metal compatibility

### Applications

Mobil Pyrogard D is recommended for use in all types of hydraulic pumps and motors operating in close proximity to a source of ignition, provided the manufacturers instructions are observed. As with all fire resistant fluids containing water, it must not be used in applications involving contact with magnesium, and must be kept above 38% water content to maintain its optimum fire resistant properties.

Mobil Pyrogard D is compatible with both Viton and Buna-N (nitrile) rubber. Do not use it with butyl rubber, leather, natural rubber, cork composition materials, or fabric-reinforced packing.

When charging a hydraulic system with Mobil Pyrogard D it is essential that all residues of petroleum fluids or water glycol mixtures are removed prior to installation. Mobil will be pleased to give advice on flushing procedures.

Due to its water content Mobil Pyrogard D is not recommended for use in systems operating at bulk fluid temperatures above 65°C, or where rapid evaporation is possible.

## Properties

The fire resistant properties of Mobil Pyrogard D result from its water content. Even when the fluid is sprayed at a pressure of over 200 bar from a diesel engine fuel injector nozzle into a propane flame it will not ignite. The water content is important. If it is reduced following long exposure to high temperatures, the fire resistance will be reduced. Eventually when all the water has been evaporated, the resultant fluid, being virtually a mineral oil, will have no fire resistant properties. Under normal operating conditions water evaporation is very slow and water addition to restore fire resistance will only be necessary at extended intervals.

As the water evaporates, the viscosity of the fluid decreases. Increasing the water content thickens the emulsion and increases its viscosity. This peculiar characteristic of water-in-oil emulsions makes it important to maintain the proper water content to ensure the correct viscosity and wear protection, as well as fire resistance.

Although resistance to separation into oil and water is good, there may be slight separation giving a very thin oil layer on top of the emulsion after long idle periods in a machine reservoir. This prevents evaporation of the water and will quickly re-emulsify as soon as the emulsion is agitated.

## Health and Safety

Based on available toxicological information, it has been determined that this product poses no significant health risk when used and handled properly.

Details on handling, as well as health and safety information, can be found in the Material Safety Data Bulletin which can be obtained through Mobil Oil Company Ltd., by telephoning 01372 22 2000.

Typical physical characteristics are given in the table. These are intended as a guide to industry and are not necessarily manufacturing or marketing specifications.

## Product Characteristics

---

	Mobil Pyrogard D
Viscosity, cSt at 40°C	103.5/126.5
Water Content % by weight (IP 74)	43
Colour	White

---

Due to continual product research and development, the information contained herein is subject to change without notice

---

**Mobil Oil Company Limited**  
Acting as Agent for Mobil Lubricants UK Limited  
ExxonMobil House, Ermyn Way  
Leatherhead, Surrey, KT22 8UX  
Telephone: 01372 22 2000

