



Anvol WG 46

Fire resistant hydraulic fluid

Description

Castrol Anvol™ WG 46 is an HF-C type water-glycol fire resistant hydraulic fluid, containing anti-wear additives and corrosion inhibitors. It provides excellent protection against rust and vapor phase corrosion.

In hydraulic pump tests, Anvol WG 46 has shown high levels of anti-wear performance. Its foam resistance, low temperature flow, emulsion stability and storage stability are also excellent.

Application

- Anvol WG 46 is for use in hydraulic systems where, in the event of fluid leakage, there is a significant risk of ignition. Examples of applications include: Furnace doors, Die-casting machines, Forging machinery & Mining equipment.
- It can be used in vane, gear or piston-type pumps with pressures up to 3000 PSI.
- As with any water containing fluid, continuous high temperature leads to excessive evaporation. The water content should be checked regularly in service and any corrections made by addition of distilled or de-ionised water.
- Occasional monitoring of alkalinity is recommended to ensure the correct level of corrosion inhibition.
- Care should be taken to ensure the hydraulic system is designed for using water glycol based fluids.
- Care should also be taken to ensure the compatibility of Anvol WG 46 with paints, seals and metals, and also ensure that the hydraulic pumps and filters used are suitable.
- A thorough draining and flushing procedure should be followed when converting from other fluids to water glycol based solutions.
- Anvol WG 46 is fully compatible with nitrile, neoprene, silicone, nylon, butyl rubber and fluropolymer seal materials.
- Anvol WG 46 meets the fire resistance requirements of: 7th Luxembourg Report FM Global 6930.

Advantages

- Excellent anti-wear performance: gives wear protection and reduces downtime from unscheduled maintenance.
- Excellent Fire resistance: cannot be ignited in spray ignition tests.
- Excellent glycol in water stability: true solution means longer service and storage life.
- Outstanding corrosion protection: provides protection below the liquid surface and in the vapour phase.
- Exceptionally low pour point: ensures consistent performance over a wide temperature range.

Typical Characteristics

Name	Method	Units	Anvol WG 46
Appearance	Visual	-	Bright & Clear
Colour	Visual	-	Yellow
Density @ 20C	Supplier	g/ml	1.087
Water content	Calculated	% m/m	36
pH Concentrate	QCM64	-	9.5
Viscosity, Kinematic 40C	ASTM D445	mm ² /s	46.71

Subject to usual manufacturing tolerances.

Additional Information

Compatibility of Anvol WG 46 with hydraulic components:

- **Metals** – Compatible with all common metals and passes the corrosion tests for Type HF-C fluids as detailed in the SHCMOEI Seventh Luxembourg Report.
- **Seal materials** – Suitable materials are: Nitrile PTFE, Neoprene (Chloroprene) Silicone, Viton Nylon, Natural Rubber Butyl Rubber.
- **Filters** – Most metal types are compatible, but some paper elements can be damaged by water and only types approved for high water content fluids should be used.
- **Paints** – Fire resistant water glycols soften and lift most paints. Vinyl or epoxy resin based are compatible. When changing from mineral oil to water-glycol, all paint in the system should be removed unless it is known to be a compatible type.
- **Fluid maintenance:** In service water can be lost by evaporation and this must be periodically replaced to maintain the correct viscosity and optimum fire resistance. Water content can be determined directly by Laboratory analysis. Only condensate, distilled or de-ionised water should be used for top-up. The required quantity of water should be slowly added to the reservoir with the system running to ensure thorough mixing.
- **Operating temperature range:** From -20 to +60°C. Anvol WG will remain fluid down to approx -50°C, however, the increased viscosity will limit actual low temperature running. Care must be taken at temperatures above 60°C so water evaporation does not occur too readily and reduce fire resistant properties.

Storage

All packages should be stored under cover. Where outside storage is unavoidable drums should be laid horizontally to avoid the possible ingress of water and damage to drum markings. Products should not be stored above 60°C, exposed to hot sun or freezing condition.

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10 Junction Avenue , Parktown , Johannesburg , 2193 , South Africa
+27 11 488 5111, 0860 222 166 (SA), 0800 111 551 (SA)
www.castrol.co.za