



HYDRAULIC SAFETY FLUID

Features

- Factory Mutual approved
- Outstanding fire resistance
- Available in 3 formulations

Benefits

- Excellent lubricity and wear protection
- Excellent stability and oxidation resistance
- Wide temperature range

Irving HYDRAULIC SAFETY FLUIDS are non-explosive hydraulic fluids with a high degree of fire resistance, for use where there are potential sources of ignition. Factory Mutual approved all grades as hydraulic fluids offering reduced fire hazard. Note: these fluids should not be thought of as “non-flammable” but, more correctly, fire-resistant.

HYDRAULIC SAFETY FLUID WG is a water-glycol mix that can be used at temperatures as low as -40°C and as high as 50°C . At higher temperatures, evaporation of the water phase will cause the fluid to thicken rapidly. This can be countered by frequent monitoring and adding de-ionized water as necessary. It is non-toxic and can be disposed of very easily — always check with local regulations. It has excellent lubricity and provides good wear protection for maximum pump life as long as boundary conditions are avoided. Its resistance to oxidation and its stability give the fluid a long life. It can be filtered, which is essential to pump life, using most media except Fuller’s Earth. It is compatible with all common seal materials. However, it will react with certain metals and care should be taken to ensure the system and its filters do not have components that use Zinc, Cadmium, Lead or Aluminum (unanodised).

HYDRAULIC SAFETY FLUID PE is a synthetic tri-aryl phosphate ester that can be used at temperatures up to 65°C . Although it stays fluid down to -35°C , care should be taken not to work the hydraulic system until the bulk fluid temperature reaches about -10°C . It has excellent lubricity and is suitable for hydraulic equipment at higher pressures. It has low toxicity but may require special precautions in disposal — consult local regulations. It is compatible with all metals likely to be found in hydraulic systems and filters but will require suitable seal and hose materials, such as Viton and Butyl rubber. Do not paint internal tank surfaces and avoid contact with any surface covered with an epoxy-based paint.

HYDRAULIC SAFETY FLUID PO is a polyol ester derived from vegetable oils, with excellent thermal stability and a high viscosity index (VI), giving a wide operating temperature range. The excellent resistance to oxidation and corrosion of this product make it ideal for use in high-pressure hydraulic systems where high temperatures of operation are normal.



HYDRAULIC SAFETY FLUID

Typical Performance Results

NAME	WG	PE	PO
TYPE	WATER-GLYCOL	PHOSPHATE ESTER	POLYOL ESTER
COLOUR	RED	GREEN	AMBER
VISCOSITY (D-445) cSt @ 40°C	32	21	66
cSt @ -18°C	600	4500	1922
VISCOSITY INDEX (D-2270)	150	66	>200
POUR POINT (°C) (D-97)	-51	-35	-18
FLASH POINT (°C) (D-92)	NONE	238	268
FIRE POINT (°C) (D-92)	NONE	318	320
Ph	9.89	--	--
TAN	--	--	1.6
SPECIFIC GRAVITY @ 15.6°C	1.07	1.175	0.92
	COMPATIBILITY WITH METALS & SEAL MATERIALS		
ALUMINUM, UNANODISED	NC	C	C
ALUMINUM, ANODISED	C	C	C
BRASS, COPPER	C	C	C
BRONZE	*	C	*
FERROUS METAL	C	C	C
LEAD	NC	C	NC
ZINC	NC	C	C
BUNAN	C	NC	C
BUTYL	C	C	NC
E.P.R.	C	C	NC
NEOPRENE	C	NC	NC
POLYURETHANE	**	NC	C

NC = NON COMPATIBLE

C = COMPATIBLE

* = MARGINALLY COMPATIBLE: BRONZE WITH 20% OR MORE LEAD LIMITED TO 50°C MAX. TEMP.

** = MARGINALLY COMPATIBLE: SOME SOURCES OF POLYURETHANE ARE BETTER THAN OTHERS.

Available Package Sizes

HYDRAULIC SAFETY FLUID PO46

- 205L (54.2 US gal.) Drum

HYDRAULIC SAFETY FLUID PE

- 205L (54.2 US gal.) Drum

HYDRAULIC SAFETY FLUID WG

- 20L (5.28 US gal.) Pail
- 205L (54.2 US gal.) Drum
- 1000L (264 US gal.) Cube



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