

TECHNICAL DATA SHEET 技術資料

PRODUCT NAME NFRA-HF2905/WG
HYDRAULIC FLUID - 防火壓力油

DESCRIPTION NFRA-HF2905/WG is the newest water glycol fire resistant hydraulic fluid formulated specifically for end users who require a phenol response level of less than 100 parts per billion (PPB). NFRA-HF2905/WG raw materials have been carefully selected to provide a phenol response level of 60 PPB maximum while maintaining excellent lubricity, shear stability, rust protection and corrosion resistance. NFRA-HF2905/WG conforms to ASTM D2882 and is factory mutual approved.

APPLICATION -: NFRA-HF2905/WG is designed for use in high pressure applications where fire resistance, conformance to local waste treatment regulations and good pump life are required. NFRA-HF2905/WG is especially well suited for die casters, foundries, steel mills and mines.

FLUID COMPATIBILITIES -: NFRA-HF2905/WG is compatible with most kinds of pumps including vane, piston and gear type units. NFRA-HF2905/WG is safe to use with most packing and seals except polyurethane and silicone. Cork shaft seals should be replaced with Buna N or other synthetic rubber. Leather packings should be avoided; zinc or cadmium plated components should not be used with NFRA-HF2905/WG.

ADVANTAGES -: Exceptionally low phenol response levels for ease of disposal.
-: Excellent rust and corrosion protection which eliminates down time and wear on the system.
-: Factory mutual approval which enables fluid to be used in critical operations
-: Conformance of ASTM D-2882 which enables fluid to be used in demanding operations without fear of excessive pump wear.

CARE AND MAINTENANCE -: To keep NFRA-HF2905/WG operating at maximum performance levels, periodic monitoring should be conducted. Percent water level and alkalinity should be routinely checked to eliminate problems with fire resistance, viscosity variations or rust. Water content can be determined with the use of a refractometer or the Karl Fisher Titration procedure. Alkalinity testing should be determined by titration. All testing can be performed as part of our service maintenance program.

SPECIFICATIONS & TYPICAL PROPERTIES

Appearance	Clear red liquid
Viscosity [(SUS @ 100°F(37.8486°C)]	200 SUS
pH	9.6
Specific Gravity	1.09
Odor	Mild(or faint)
Solubility Description	Soluble in water
Kilo per Litre	0.917
Pounds per gallon	9.03
Freezing point	-55°F(-48.2°C)
Percent water	40%
Boiling Point (°C , range)	>100
Flash Point (°F)	Contains water
Fire Point (°F)	Contains water
ISO Particulate	16/12 max
Reserve Alkalinity	210

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RECOMMENDED ADDITION LEVELS

Viscosity range SUS @ 100°F(37.8486)	Fluid added	Gallons to be added per 100 Gallons of Hydraulic Fluid
140 - 160	Concentrate	10
160 - 180	Concentrate	100
180 - 220	None	5
220 - 300	Water	0
300 - 350	Water	5
350 - 410	Water	10

RECOMMENDED MORPHOLINE ADDITIONS

Reserve Alkalinity*	Quarts of Morpholine to add per 100 Gallons of Hydraulic Fluid
150 – 210	0
125 – 150	1
100 – 125	2
75 – 100	3
<75**	4

*Titration to pH 5.5 with 0.5 HCl.

**Samples showing an alkalinity below 75 should be evaluated for significant acidic contamination

LUBRICITY AND WEAR CHARACTERISTICS

ASTM D-2882 VICKERS PUMP TEST	
Test Conditions	Typical
Pressure, psi	2000
Sump Temperature, °F	150
Pump Speed	1200 RPM (8 gpm)
Test period, hrs	100

MODIFIED ASTM D-4172 FOUR BALL WEAR TEST	
Test Conditions – 1200rpm, 1HR, RT	Scar Diameter, mm
Load	
7.5 kg	0.40
20 kg	0.50
40 kg	0.60

MODIFIED ASTM D-2670 FALEX-PIN & VEE BLOCK WEAR TEST	
Test Conditions	
Direct Load 2000 lb. Pressure Steel Pin & Vee Block	
Total Wear	65 mg

DIE CAST MACHINE	
Typical Operating Pressure	2000 psi
Withstands continuous pressure	3000 psi
Withstand spike pressure	5000 psi
Typical Operating Pressure	2000 psi

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STORAGE ⚙ Avoid long storage under the sun
 ✳ Do not stock the product at a temperature below -48.2 (-55°F)
 Shelf life: Unlimited

DISPOSAL CONSIDERATIONS

WASTE FROM RESIDUES

Do not pour down the drain and the rivers.

Give to an approved recuperator for disposal.

CONTAMINATING PACKAGING

Well clean the packaging before re-use or putting in landfill.

LOCAL REGULATIONS:

ALL MEANS OF DIPOSAL SHOULD COMPLY WITH
NATIONAL OR LOCAL REGULATIONS.

[GERMANY]:

Abfallschluselnr: 544 02

Abfall Bezeichnung: EmulsionsGemische

HEALTH AND SAFETY

NFRA-HF2905/WG harmful , possible risk of irreversible effects if swallowed.
Concentrate may cause irritation to eyes and skin. Further reference is made to the
MATERIAL HEALTH AND SAFETY SHEETS.

REMARK 備註

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter specification within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigation the possibility of infringement of third parties' rights and, if necessary, resolve the matter.

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