



CITGO FR WG-40XD® HYDRAULIC FLUID

Date 06/15

DESCRIPTION: CITGO FR WG-40XD Hydraulic Fluid is a premium water-glycol type fire-resistant fluid designed to provide excellent performance in hydraulic systems requiring fire resistance such as those found in steel industry operations.

QUALITIES: CITGO FR WG-40XD Hydraulic Fluid is specially formulated to provide excellent service over a wide range of operating conditions. It is particularly effective in demanding steel industry applications.

CITGO FR WG-40XD is formulated to provide:

- Factory Mutual approved
- Excellent fire resistance, no flash or fire point
- Meets U.S. Steel Requirement No.171
- Meets ASTM D2882 Sperry-Vickers V104C pump test
- Enhanced lubricity, with wear, foam and corrosion protection
- Excellent heat transfer properties

APPLICATIONS: CITGO FR WG-40XD Hydraulic Fluid may be used in most types of hydraulic systems requiring fire resistance. Applications include steel mills, die casting and power transmission plants. CITGO FR WG-40XD is recommended in fire resistant hydraulic systems operating with Eaton/Vickers, Parker/ Denison, Rexroth and other vane and piston pumps.

Maintenance of viscosity of CITGO FR WG-40XD is recommended as follows:

CITGO FR WG-40XD WATER ADJUSTMENT CHART							
BRIX	VISCOSITY (SUS) AT 100°F	VISCOSITY (cSt) AT 40°C	PERCENT WATER IN UNADJUSTED FLUID	GALLONS OF WATER NEEDED PER 100 GALLONS OF UNADJUSTED FLUID IN SYSTEM	CONDITION		
50.0	412	82.5	28.4	18.1	SEVERE LEVEL		
49.5	394	78.8	29.3	17.1			
49.0	377	75.0	30.2	15.8			
48.5	358	71.2	31.2	14.4			
48.0	342	67.9	32.2	13.0			
47.5	324	64.3	33.3	11.5			
47.0	309	61.3	34.2	10.2			
46.5	294	58.4	35.3	8.8		MODERATE LEVEL	
46.0	280	55.6	36.5	7.3			
45.5	266	52.7	37.7	5.8			
45.0	253	50.1	38.8	4.5			
44.5	241	47.7	40.0	3.0			
44.0	228	45.0	41.5	1.5			NORMAL
43.5	217	43.0	42.7	0.0			
43.0	207	41.0	43.9	0.0			
42.5	197	38.9	44.5	0.0			
42.0	187	37.0	45.5	0.0			
41.5	177	34.5	-	Excess Water			
40.0	153	30.0	-	Excess Water			

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TYPICAL PROPERTIES:

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Material Code	648326001
Specific Gravity, ASTM D 129, at 60/60°F	1.0817
Density, lb/gal	9.018
Flash Point, COC, ASTM D 92, °F (°C)	None
Viscosity, D 2161, SUS at 100°F	200
Viscosity Index, ASTM D 2270	180
Pour Point, ASTM D 97, °F (°C)	-40 (-40)
Color	Pink
pH	9.5
Reserve Alkalinity, ASTM D 1121 ⁽¹⁾	19.0
Four Ball Wear Test, ASTM D 4172, 40 Kg load, Scar Dia., mm ⁽²⁾	0.66
Foam Inhibitor	Yes

Notes: (1) Milliliters of 0.1N hydrochloric acid solution required to neutralize 10 milliliters of fluid to a pH of 5.5.
(2) Test conditions: 1 hour, 130°F, 1800 rpm.

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