C I T G O C I T G E A R® X C O O I L S

Date 1/09

DESCRIPTION: CITGO CITGEAR XCO oils are high quality lubrication oils that provide excellent bearing and gear performance.

BENEFITS: CITGO CITGEAR XCO Oils are formulated with selected high quality paraffinic base oils and contain additive systems that assure excellent oil/water separation characteristics, antiwear properties, rust and corrosion protection, oxidation inhibition, and very low foaming tendencies.

These oils demonstrate outstanding water separation and demulsification characteristics for the removal of water from the gear and bearing systems.

These oils contain thermally stable additive systems that aid in minimizing the formation of heat related sludge and varnishes.

APPLICATIONS: CITGO CITGEAR XCO Oils can be used as gear oils, bearing oils, and circulation oils where the viscosity grade applies. The steel mill industry has applications where these oils will provide very satisfactory performance.

TYPICAL PROPERTIES:

CITGO CITGEAR® XCO OILS

Grade	**220**	**320**	**460**
Material Code	631102001	631103001	631104001
Gravity, ASTM D 4052, °API	27.3	26.7	26.2
Density, lb/gal at 60°F	7.4	7.4	7.5
Flash Point, ASTM D 92, COC, °F(°C)	522 (272)	561 (294)	554 (290)
Viscosity, ASTM D 445, cSt at 40°C	220	320	447
cSt at 100°C	18.6	23.8	29.7
ASTM D 2161, SUS at 100°F	1168	1706	2398
SUS at 210°F	95.2	118.4	145.8
Viscosity Index, ASTM D 2270	94	94	95
Pour Point, ASTM D 97, °F(°C)	10 (-12)	10 (-12)	10 (-12)
Color, ASTM D 1500	L4.0	L4.0	L5.0
Rust Test, ASTM D 665 A and B	Pass	Pass	Pass
Water Separation, ASTM D 1401 at 180°F (ml Emulsion at 30 minutes)	3.0 Max.	3.0 Max.	3.0 Max.
Foam Test, ASTM D 892, Seq. 1 ml	0-0	0-0	0-0
Seq. 2 ml	0-0	30-0	0-0
Seq. 3 ml	0-0	0-0	0-0
Four Ball Wear, ASTM D 4172 mm Scar @ 20 kg	0.34	0.37	0.30