

211M | **Armor Plate with Moly-D** Industrial Multigrade Hydraulic Oil

DESCRIPTION:

Armor Plate with Moly-D No. 211M is formulated with refined base stock oils, combined with special additives, which provide a premium multigrade hydraulic oil capable of operation under widely varying ambient temperature conditions.

COMPOSITION:

This oil contains a blend of base stock oils and VI improvers which maintain excellent low temperature flow properties and also provide high enough viscosity at high operating temperatures to maximize system efficiency. A seal conditioner is also added to help prevent leakage. In addition, it contains the following additives:

- Oxidation Inhibitors
- Anti-foam Agents
- Anti-wear Agents
- Rust Inhibitors
- Corrosion Inhibitors
- Pour Point Depressants

Armor Plate No. 211M contains the superior friction-reducing compound, Moly-D.

PERFORMANCE CHARACTERISTICS:

A good hydraulic oil must accomplish two things: (1) transmit power efficiently, and (2) lubricate adequately. The characteristics of hydraulic oil that are most important pertain to these two requirements. In hydraulic systems, efficient transmission of power depends on an oil maintaining proper viscosity at different operating temperatures. High viscosity index provides the proper viscosity even under drastically changing operating conditions. In addition, in modern hydraulic systems with close tolerance surfaces, positive lubrication is necessary to prevent excessive wear.

Multigrade hydraulic oil can prevent the following conditions:

Caused By Oils Too Light

Excessive Leakage
Lower Volumetric Efficiency at the Pump
Increased Wear
Loss of Pressure
Lack of Positive Hydraulic Control

Caused By Oils Too Heavy

Increased Pressure Drip
Higher Oil Temperatures
Sluggish Operation
Lower Mechanical Efficiency
Higher Power Consumption

Oxidation unchecked is approximately doubled for every 20-degree rise in temperature. Oxidation can clog small orifices and tightly filled parts and lead to corrosion of metal surfaces. Special additives prevent rust and oxidation by forming a protective film on metal surfaces.

211M exceeds the requirements of the Vicker's Pump Test (ASTM D-2882) with a weight loss due to wear of only 3 mg where as much as 50 mg is allowed. They also exceed the requirements of Denison HF-2 and HF-0 and Cincinnati-Milacron as well as virtually all other industrial hydraulic oil requirements.

USES:

All industrial hydraulic applications, especially where great changes in operating temperatures are encountered and where manufacturers specify the use of anti-wear type hydraulic fluids. With high viscosity index and multigrade characteristics, this oil may be used in many applications where ISO grades 68 to 150 are called for.



PRIMROSE PLUS

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APPLICATIONS:

- Drilling Equipment
- Air Compressors
- Construction Equipment
- Deck & Cargo Handling Equipment
- Mining Equipment
- Winches
- Hydraulic Platforms
- Cranes
- Logging Equipment
- Draglines

TYPICAL SPECIFICATIONS:

SAE Viscosity	10W-40
ISO Viscosity Grade	100
Viscosity	
SUS @ 100°F.	422
SUS @ 210°F.	74
cSt @ 40°C.	91
Viscosity Index	160
API Gravity	30.4
Flash COC°F.	405
Fire COC°F.	440
Pour °F.	-20
Demulsibility @ 130°F, Separation, minutes (ASTM D1401)	15
Foam, ASTM D892 Seq. 1, 11, 111	25/0
Oxidation Stability, ASTM D943	2800 hrs.
Rust Test, ASTM D665B	pass
Copper Strip Corrosion 3 hrs @ 212°F, ASTM D130	1
Acid No., ASTM D664	1.3
Timken OK Load (ASTM D2509)	35 lb.
4-Ball Wear Scar, MM (ASTM D2266)	.35
FZG Test, load stages passed	9