



## **RORED HDA SAE 90, 140, 75W-90, 80W-90, 85W-90, 85W-140**

**RORED HDA Series** are high performance heavy duty gear oil which formulated from high quality base oils and selected Extreme Pressure additive.

*RORED HDA Series adalah pelumas roda gigi tugas berat berkemampuan tinggi yang diformulasikan dari base oil bermutu tinggi dan aditif Extreme Pressure.*

TYPICAL CHARACTERISTICS				
Characteristics	Test Method	RORED HDA 90	RORED HDA 140	RORED HDA 75W-90
SAE Viscosity Grade		90	140	75W-90
Density at 15 °C, kg/l	ASTM D - 4052	0.9001	0.9054	0.8970
Kinematic Viscosity at 40 °C, cSt	ASTM D - 445	183.30	412.32	112.00
	ASTM D - 445	17.02	28.45	17.25
Kinematic Viscosity at 100 °C, cSt	ASTM D - 445	17.02	28.45	17.25
	ASTM D - 2270	98	96	169
Viscosity Index	ASTM D - 2270	98	96	169
ASTM Colour	ASTM D - 1500	Green	Green	L 1.0
Flash Point, °C	ASTM D - 92	237	249	180
Pour Point, °C	ASTM D - 5950	-24	-9	-45

TYPICAL CHARACTERISTICS				
Characteristics	Test Method	RORED HDA 80W-90	RORED HDA 85W-90	RORED HDA 85W-140
SAE Viscosity Grade		80W-90	85W-90	85W-140
Density at 15 °C, kg/l	ASTM D - 4052	0.8986	0.9001	0.9053
Kinematic Viscosity at 40 °C, cSt	ASTM D - 445	146.60	210.03	403.84
	ASTM D - 445	14.68	18.83	28.11
Kinematic Viscosity at 100 °C, cSt	ASTM D - 445	14.68	18.83	28.11
	ASTM D - 2270	99	100	96
Viscosity Index	ASTM D - 2270	99	100	96
ASTM Colour	ASTM D - 1500	L 2.5	L 2.5	2.5
Flash Point, °C	ASTM D - 92	205	205	213
Pour Point, °C	ASTM D - 5950	-35	-24	-24

### **PERFORMANCE LEVELS**

**RORED HDA Series** comply with specification API GL-5, MB 235.0, MIL-L-2105D, Volvo 97310 & 97316, Voith 3.325.339, and MAN 342 M-1

**RORED HDA 90** is especially approved with Mercedes Benz 235.0 sheet requirement.

### **APPLICATIONS**

**RORED HDA Series** are recommended for lubrication of heavy duty hypoid gears and spiral bevel gear on final drive of motor vehicles.

### **TINGKATAN MUTU**

**RORED HDA Series** memenuhi persyaratan kerja dari API GL-5, MB 235.0, MIL-L-2105D, Volvo 97310 & 97316, Voith 3.325.339, and MAN 342 M-1.

**RORED HDA 90** telah mendapatkan approval Mercedes Benz Sheet 235.0.

### **PENGGUNAAN**

**RORED HDA Series** digunakan untuk melumasi roda gigi jenis hypoid atau spiral bevel pada gardan dan rumah/kotak kemudi kendaraan bermotor yang mempunyai persyaratan kerja tugas berat.