



## PRODUCT SPECIFICATION

SPECIFICATION

### Product Name

# GRADO 20W-50

### PRIMARY TESTS

	METHOD	SPECIFICATION		
		MIN	TYP	MAX
Appearance	Visual		Clear and Bright	
Colour	ASTM D1500 / TS 1713 ISO 2049	2	2.5	4
Density 15°C, g/ml	ASTM D4052 / TS EN ISO 12185	0.870	0.890	0.900
Viscosity 100 °C, mm <sup>2</sup> /s	ASTM D445 / TS EN ISO 3104	18	19	21
Viscosity 40 °C, mm <sup>2</sup> /s	ASTM D445 / TS EN ISO 3104	150	160	190
Viscosity Index	ASTM D2270 / TS ISO 2909	120	122	
T.B.N. mgKOH/g	ASTM D2896 / TS ISO 3771	6		

### SECONDARY TESTS

	METHOD	SPECIFICATION		
		MIN	TYP	MAX
Pour Point, °C	ASTM D97 / TS EN ISO 3016			-21
Flash Point, °C (COC)	ASTM D92 / TS EN ISO 2592	220		
Cold Cracking -15°C, cp	ASTM D5293 / TS 1896			9500
Evaporation Loss, %m/m	TS 13489			15
Predicting the Borderline Pump.Temp.'C(-20°C)	TS 4409			60000
Foaming Characteristic ( II Kd.) ml/ml	ASTM D892 / TS 1834 ISO 6247			50/0
Sulfated Ash %m/m	ASTM D874 / TS ISO 3987			3
Copper Corrossion (100°C, 3 hours)	ASTM D130 / TS 2741 EN ISO 2160			1b
Tapered Bearing Viscosity, 150°C,mm <sup>2</sup> /s	TS 8416	3,7		
Metal Con. (Ca,Zn,Ba,Mg,N,P,S)%m/m	ASTM D4951			To be reported

**PERFORMANCE LEVELS : API : SJ / CF**

\* As the defined values are typical values, there can be some little changes according to the production. M Oil keeps all the rights to update and change the formulations of products without making any announcements. For the updated informations and technical datas about the products and product packagings, please contact with M Oil.