PRODUCT SPECIFICATION

SPECIFICATION

Product Name: GRADO PREMIUM LL-04 5W-30

PRIMARY TESTS	METHOD	SPECIFICATION		
		MIN	TYP	MAX
Appearence	Visual		Clear and Bright	
Colour	ASTM D1500 / TS 1713 ISO 2049	2	3	4
Density 15 °C, g/ml	ASTM D4052 / TS EN ISO 12185	0.840	0.850	0.870
Kinematic Viscosity 100 °C, mm^2/s	ASTM D445 / TS EN ISO 3104	9.3	11	12.5
Kinematic Viscosity 40 °C, mm^2/s	ASTM D445 / TS EN ISO 3104	45	65	85
Viscosity Index	ASTM D2270 / TS ISO 2909	155		
T.B.N. mgKOH/g	ASTM D2896 / TS ISO 3771	7		
Cold Cracking (-30 °C), cp	ASTM D5293 / TS 1896			6600

SECONDARY TESTS	METHOD	SPECIFICATION
Pour Point, °C	ASTM D97 / TS EN ISO 3016	-33
Flash Point, °C (COC)	ASTM D92 / TS EN ISO 2592	220
Evaporation Loss, %m/m	ASTM D5800 / TS 13489	15
Predicting the Borderline Pump. Temp. °C (-35 °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	1
Copper Corrossion (100 °C, 3 hours)	ASTM D130 / TS 2741 EN ISO 2160	1b
Tapered Bearing Viscosity, 150 °C, mm^2/s	TS 8416	2.9

PERFORMANCE LEVELS: API SN/CF, ACEA C2/C3, MB 229.31, MB 229.51, MB 229.52 , VW 505.01/505.00, BMW LL-04, OV 0401547, GM dexos TM 2

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* 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.