

**\*\*CERTIFICATE of QUALITY\*\***

Control No: 273/2007

Draw certificate date:

04/02/07

Publish date:

16/02/07

For:  
Packing, Tank  
Reservoir: 15S021  
Batch:

002

LOTOS SEMISYNTETIC SL/CF 10W/40

V

Lp.	PROPERTY	TEST METHOD	UNITS	RESULTS
1	Viscosity at 100 C	EN-ISO 3104:1999	mm <sup>2</sup> /s	14.60
2	Pour Point	ASTM D 5950-02	deg C	-36
3	Flash Point COC	ASTM D 92-02b	deg C	226
4	Density, at 15 deg C	EN ISO 12185:1996	g/cm <sup>3</sup>	0.8778
5	Viscosity CCS temp. -25 C	ASTM D 5293	mPa*s	6460
6	Viscosity at 40 C	ASTM D 445-04	mm <sup>2</sup> /s	98.24
7	Viscosity HTHS at 150 C (at 10 <sup>6</sup> s <sup>-1</sup> )	ASTM D 4741	mPa*s	3.80
8	Shear Stability	IP 294		
	-Visc.kinem.temp.100C, 30 Shear Cycles	ASTM D 445-04	mm <sup>2</sup> /s	13.69
9	Viscosity Index	ASTM D 2270-04		154
10	Water	ASTM D 95-99		none
11	Total Base Number (TBN)	ASTM D 2896-03	mg KOH/g	7.91
12	Sulfated Ash	ASTM D 874-00	% wt	0.93
13	Calcium	DIN 51391 T-1	% wt	0.212
14	Magnesium	DIN 51431	% wt	0.017
15	Phosphorus	ASTM D 1091	% wt	0.137
16	Zinc	DIN 51391 T-1	% wt	0.156
17	Copper corrosion	ASTM D 130-04	Class	1
18	Evaporation loss Noack	DIN 51581	% wt	13.0
19	Foaming	ASTM D 892		
	-tendency at 25 deg C		ml	0
	-tendency at 95 deg C		ml	10
	-tendency at 25 deg C ex 95 deg C		ml	0
20	Stability -10 min.	ASTM D 892		
	-at 25 deg C		ml	0
	-at 95 deg C		ml	0
	-at 25 deg C ex 95 deg C		ml	0

Certificate of Quality may be duplicated only as a whole.

Test were run in LOTOS Lab Sp. z o.o.

Product does meet requirements of the contract: WT 8/05 wyd.1

Confirm certificate - name: :I.Kacprowicz

Publish certificate - name: :S.Gliwiński