

Date: 18 June 2013

TECHNICAL SHEET

ALL SEASON UNIVERSAL ENGINE OILS

LUKOIL STANDARD, API SF/CC

- LUKOIL STANDARD are all season universal engine oils obtained from highly refined paraffinic base oils and specific additives providing the API SF/CC additivation level.
- They are used for the lubrication of gasoline or diesel engines, in accordance with the instructions from the technical manual of the engine.
- Performance level : API SF/CC
- Approvals: GAZ
- Quality conditions for LUKOIL STANDARD oils, extracted from ST-4/2008:

Item No.	CHARACTERISTICS	ADMISSIBILITY CONDITIONS			TEST METHOD
		STANDARD SAE 10W-40, API SF/CC Synthetic	STANDARD SAE 15W-40, API SF/CC Mineral	STANDARD SAE 20W-50, API SF/CC Mineral	
1	Kinematic viscosity at 100°C, mm ² s ⁻¹ (cSt)	12.5...16.3		Min. 17	SR EN ISO 3104/AC ASTM D 445 ASTM D 7042
2	Viscosity index, min.	120	115	110	SR ISO 2909 ASTM D 2270 ASTM D 7042
3	Base number, mg KOH/g, min.	5.0		5.5	SR ISO 3771 ASTM D 2896
4	Flash point, open cup, °C, min.	205	210		SR EN ISO 2592 ASTM D 92
5	* Apparent (dynamic) viscosity, determined using a Cold Cranking Simulator (CCS), at -25°C, cP, max. at -20°C, cP, max. at -15°C, cP, max.	7000 - -	- 7000 -	- - 9500	ASTM D 5293
6	* Apparent (dynamic) viscosity, determined using a Mini-Rotary Viscometer (MRV), at -30°C, cP, max. at -25°C, cP, max. at -20°C, cP, max.	60000 - -	- 60000 -	- - 60000	ASTM D 4684
7	*Sulphated ash, %, max.	1.2			ASTM D 874
8	Water content, %	nil			SR 13484 ASTM D 95
9	Substances insoluble in organic solvents, %, max.	0.015			STAS 33
10	Pour point, °C, max.	-35	-30	-25	SR 13552 ASTM D 97
11	*Noack volatility, %, max.	17	15	13	STAS 8465 ASTM D 5800
12	*Active element content:	To be determined			STAS 8428 STAS 7717
13	Calcium, %				
14	Density at 20°C, Kg/m ³	To be determined			SR EN ISO 3675/C91 ASTM D 1298 ASTM D 7042
15	*Phosphorus content, %, max.	0.12			STAS 7330

* This characteristic is warranted by means of the manufacturing technology / is determined in accordance with the normative document in force

- Accuracy evaluation of the test methods from this technical sheet should meet the requirements of Standard SR EN ISO 4259:2007 "Petroleum products – determining and applying the accuracy values regarding the test methods".
- Samples shall be taken in accordance with SR EN ISO 3170:2004/C91:2005 "Liquid petroleum products. Manual sampling".
- Packaging, marking, storage, transport and handling are performed according to the regulations in force (decisions, regulations, etc. specified in the product safety data sheet) and to LUKOIL LUBRICANTS EAST EUROPE S.R.L.'s instructions/internal procedures.
- For details, see the Safety Data Sheet (SDS).
- Storage life is of 5 years from the manufacture date.