

## Test Report / Certificate of Analysis

**Customer:**

Ravenol Russland GmbH  
Kurchatova Str. 4a  
Rostov-am-Don, 344020  
Russland

**Order-No.:** AB-22-04322

**Product:** RAVENOL Expert SHPD SAE 10W-40

**Article Number:** 1122105

**Quantity:** 100 pcs. à 208 L

**Customs Tariff Number:** 27101981

**Batch No.:** L22015769

**Production Date:** 10.08.2022

**Sample:** as received

**Sampling Date:** 10.08.2022

**Test Date:** 10.08.2022

**Shelflife:** 3 years

**Test Values:**

Characteristics	unit	Typical	Result	test according to	
<b>Appearance</b>		Clear and bright	pass	visual	
<b>*Colour</b>		2,0-5,5	L5,5	DIN ISO 2049 (2001-06)	
<b>*Density</b>	at 20 °C	kg/m <sup>3</sup>	850-880	862,9	EN ISO 12185 (1997-11)
<b>*Viscosity</b>	at 40 °C	mm <sup>2</sup> /s	80-110	96,84	DIN 51562-1 (1999-01)
<b>*Viscosity</b>	at 100 °C	mm <sup>2</sup> /s	12,5-<16,3	14,34	DIN 51562-1 (1999-01)
<b>*Viscosity index</b>			>140	153	DIN ISO 2909 (2004-08)
<b>*Pourpoint</b>		°C	<-27	-36	DIN ISO 3016 (2019-09)
<b>+Flashpoint</b>	COC	°C	>180	234	DIN ISO 2592 (2018-01)
<b>*Viscosity</b>	at -25°C	mm <sup>2</sup> /s	<7000	5600	ASTM D5293-20

\*Laboratory accredited acc. to DIN EN ISO/IEC 17025:2018

Decision Rule: no consideration of the measurement uncertainty

The analyses marked with (+) were performed by an external laboratory.

The submitted samples comply with the given accredited requirements.

Statement of Compliance: We agree that our product complies with the requirements of national and international standards which are specified in the test report.

Product complies with the following standards: API CL-4, API SL, ACEA E7, ACEA E4; ACEA A3/B4

Volatile organic compounds VOC ore organic solvents according Council Directive 1999/13/EC of 11 March 1999 are not included.

Ingredients: See Material Safety Data Sheet Section 3

List of equipment:

Name of apparatus	Name of related test	Manufacturer Name	Model number	Test method
Lovibond PFX 195	Colour	Tintometer Ltd	PFX195/3187	DIN ISO 2049 (2001-06)
DMA 38	Density	Anton Paar GmbH	880084	EN ISO 12185 (1997-11)
AVS 370	Viscosity and Viscosity Index	Schott Geräte GmbH	109066	DIN 51562-1 (1999-01) and DIN ISO 2909 (2004-08)
Lin-Tech Automatic Pour Point Analyser Newlab 300/2	Pourpoint	Linetric Technologies SA	N-0104-300-155	DIN ISO 3016 (2019-09)
IR Spectra FT/IR 4600LE	IR	Jasco	E109261786	DIN 51451 (2020-02)
CCS 2100	CCS	Cannon Instruments Company	3297-A1305	ASTM D5293-20
Titroline alpha plus	Total Base Number TBN	Schott Instruments GmbH	473307	ASTM D2896-21
NCK2 5G	Noack	ISL	U 24001	ASTM D5800-21

The test results refer exclusively to the aforementioned samples.  
 A partial duplication of the test report must be made by written consent of the testing laboratory.

End of the report

Tested and approved:  
 Regine Windmann  
 Laboratory Director  
 20. November 2023



Report 1122105/L22015769-72579

This Certificate of Analysis is for information only. It does not release the receiver from performing the adequate inspection of incoming shipments.

For query with this Certificate, please contact our Sales Department.  
 +49 5203 9719 30 or +49 5203 9719 18 or kontakt@ravenol.de

Ravensberger Schmierstoffvertrieb GmbH, Jöllenbecker Str.2, 33824 Werther, Germany  
 Managing Director: Paul Becher  
 District Court: Amtsgericht Gütersloh HRB 5470