



UNIMOT PALIWA SP. Z O O.  
 Ul.Swierklanska 2A  
 47-120 ZAWADZKIE  
 POLAND

**ANALYTICAL REPORT VR-6366255.01.A02**

grade	PROPANE
discharge	GMV "SOPHIA KOSAN"
at	HES Terminal Wilhelmshaven
reference no.	SAP 7376210

sample 200	sample marked: Sophia Kosan, pump circulation shore tank 97 , 12 april 2025
sample 201	sample marked: Sophia Kosan, pump circulation shore tank 98 , 12 april 2025
sample 202	sample marked: Sophia Kosan, pump circulation shore tank 99 , 12 april 2025
sample 203	sample marked: Sophia Kosan, pump circulation shore tank 100, 12 april 2025
date received	15.04.2025 & 14.04.2025

TEST	200	201	202	203
<u>Gaschromatographic analysis</u> (EN 27941)				
- Methane, % wt	<0.1	<0.1	<0.1	<0.1
- Ethane, wt %	1.0	1.2	1.1	1.1
- Ethene, wt %	<0.1	<0.1	<0.1	<0.1
- Propane, wt %	98.1	97.9	97.9	98.0
- Propene, wt %	0.1	0.1	0.1	0.1
- n-Butane, % wt	0.1	0.1	0.1	0.1
- i-Butane, % wt	0.7	0.7	0.7	0.7
- 1-Butene, wt %	<0.1	<0.1	<0.1	<0.1
- i-Butene, % wt	<0.1	<0.1	<0.1	<0.1
- cis-2-Butene, % wt	<0.1	<0.1	<0.1	<0.1
- trans-2-Butene, % wt	<0.1	<0.1	<0.1	<0.1
- 1,2-Butadiene, % wt	<0.1	<0.1	<0.1	<0.1
- 1,3-Butadiene, % wt	<0.1	<0.1	<0.1	<0.1
- n-Pentane, % wt	<0.1	<0.1	<0.1	<0.1
- i-Pentane, % wt	<0.1	<0.1	<0.1	<0.1
- neo-Pentane, % wt	<0.1	<0.1	<0.1	<0.1
- Total dienes, % wt	<0.1	<0.1	<0.1	<0.1
<u>Density at 15°C, kg/L</u> (ISO 8973)	0.5061	0.5057	0.5058	0.5058
<u>Density at 15.6°C, kg/L (calculated)</u> (ASTM D 2598)	0.506	0.505	0.505	0.505
<u>Vapor Pressure (gauge) at -15°C, kPa</u> (SGS LP/LAB/F/001)	402	408	406	406
<u>Vapor Pressure (absolute) at -15°C, kPa</u>	503	509	508	508

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(SGS LP/LAB/F/001)				
<u>Vapour pressure at 40°C (gauge), kPa</u> (ISO 8973)	1305	1319	1316	1316
<u>Vapour pressure (absolute) at 40°C, kPa</u> (ISO 8973)	1407	1420	1417	1417
<u>Vapour Pressure Absolute</u> (EN 589)				
- at 40°C, kPa	1408	1421	1418	1418
<u>Vapour pressure (gauge) at 70°C, kPa</u> (ISO 8973)	2614	2634	2630	2630
<u>Vapour pressure (absolute) at 70°C, kPa</u> (ISO 8973)	2716	2736	2731	2731
<u>Temperature at 150 kPa, °C</u> (SGS LP/LAB/F/001)	-35.2	-35.6	-35.6	-35.6
<u>MON (Calculated)</u> (EN 589, annex B)	95.4	95.3	95.3	95.4
<u>Sulphur, mg/kg</u> (ASTM D 6667)	3.3	3.2	3.4	3.1
<u>Copper corrosion, 1 hour at 40°C</u> (ISO 6251)	1	1	1	1
# <u>Non volatile residue, mg/kg</u> (ASTM D 1025 modified)	<5	<5	<5	<5
<u>Odour</u> (Organoleptic evaluation)	(01)	(01)	(01)	(01)
<u>Hydrogensulphide, mg/kg</u> (ASTM D 4490)	<0.5	<0.5	<0.5	<0.5
<u>Calorific Value, gross, MJ/kg</u> (ASTM D 3588)	50.37	50.37	50.37	50.37
<u>Calorific Value, nett, MJ/kg</u> (ASTM D 3588)	46.34	46.35	46.34	46.35
<u>Water,</u> (DIN 15469)	negative	negative	negative	negative
<u>Water content, mg/kg</u> (ASTM D 5454)	28	13	20	28

**(01)** characteristic: unpleasant & distinctive

# This result is reported as requested. The determination is made outside of the scope as defined by the method, and as such, the precision is not defined

\*\*\*End of analytical results\*\*\*

Wlissingen, the 15th April 2025

K. Spaas

Manager Laboratory

The results shown in this test report specifically refer to the sample(s) tested as received unless otherwise stated. All tests have been performed using the latest revision of the methods indicated, unless specifically marked otherwise on the report. Precision parameters apply in the determination of the above results. Users of analytical results, when establishing conformance with commercial or regulatory requirements should note the full provisions of ASTM D3244, IP 367 and ISO 4259 in that context, the default confidence level of petroleum testing having been set at the 95% confidence level. Your attention is specifically drawn to Sections 7.3.6., 7.3.7 and 7.3.8 of ASTM D3244. SGS' sole responsibility is to its client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Warning: The sample(s) to which the findings recorded herein (the 'Findings') relate was (were) drawn and / or provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.