

# Test Report: RY19-01242.001

Date: 06/Aug/2019

SEPCO INDUSTRIES COMPANY LIMITED  
19/87-90 CONDO SUKHUMVIT SUITE 11TH FLOOR SOI  
SUKHUMVIT 13(SEANGCHAN), KLONGTEOUY NEU,  
WATTANA, BANGKOK 10110

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 below 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. With respect to the UOP methods listed in the report below the user is referred to the method and the statement within it specifying that the precision statements were determined using UOP Method 999. This Test Report is issued under the Company's General Conditions of Service (copy available upon request or on the company website at www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. This report shall not be reproduced except in full, without the written approval of the laboratory. Any holder of this document is advised that should client or third party information be supplied with respect to the goods or sample, SGS may, at its discretion, attach or indicate such information to the report but SGS makes no warranties or accepts no liability for the veracity or lack thereof of such information. This report shall not be reproduced except in full, without the written approval of the laboratory. The sample(s) are retained for 90 days only.

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Please note in the below test report that the scope of the method UOP 938 limits the range of the lower detectable limit as follows: "lower limit of quantitation is 0.3 ng/mL (m/v-ppb)". Additionally, the precision of the method is not fully established; specifically, no reproducibility has yet been published.

CLIENT ORDER NUMBER :	N/A	SGS ORDER NO.:	2019-01516/1-1
LOCATION :	N/A	PRODUCT DESCRIPTION :	PYROLYSIS OIL
SAMPLE SOURCE :	N/A		
SAMPLE TYPE :	As submitted	SAMPLE BY :	Client
SAMPLED :	--	RECEIVED :	22/Jul/2019
ANALYSED :	25/Jul/2019 - 06/Aug/2019	COMPLETED :	06/Aug/2019
REPORT COMMENT :	<b>The sample contained in plastic bottle and kept at room temperature. (Sample container not appropriate for all analysis item.)</b>		

SGS OG&C makes no representation and assumes no responsibility for the reliability of analysis by a Non-SGS Sub-Contract Laboratory. The laboratory analysis for the Sub-Contract Laboratory tests are provided by:

S1 - Subcontracted to a non-SGS Laboratory

PROPERTY	METHOD	RESULT UNITS
ASTM Colour	ASTM D1500-12(2017)	L7.5 ---
Density at 15°C (measured @30.00 degC)	ASTM D4052-18a	806.1 kg/m <sup>3</sup>
Flash Point by PMCC	ASTM D93-18 (Procedure B)	<40.0 °C
Copper Strip corrosion (3h / 50°C {122°F})	ASTM D130-19	1b Rating
Kinematic Viscosity at 40°C	ASTM D445-19	2.684 mm <sup>2</sup> /s
Carbon Residue - Micro Method	ASTM D4530-15	<0.10 % (m/m)
Ash	ASTM D482-13	0.001 % (m/m)
Water and Sediment	ASTM D1796-11(2016)	0.00 % (V/V)
Net Calorific Value	ASTM D4868-17	10330 kcal/kg
Acid Number (Inflection end-point)	ASTM D664-18e2 (Method A)	0.4 mg KOH/g
Cold Filter Plugging Point (CFPP)	ASTM D6371-17a	N/A °C
Upper Pour Point	ASTM D97-17b	24 °C
Elements	IP 501/05	
Nickel		<1 mg/kg
Zinc		3 mg/kg
Calcium		<3 mg/kg
Phosphorus		<1 mg/kg
Vanadium		<1 mg/kg
Chromium §		<1 mg/kg

§ - Analyte/Report Unit not in published method scope and/ or rounding is outside of test method

AUTHORISED SIGNATORY



SANDRA MARIA DOPP  
OGC Laboratory Manager

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PROPERTY	METHOD	RESULT UNITS	
Cadmium §		<1 mg/kg	
Lead §		<1 mg/kg	
Nitrogen	ASTM D4629-17	1100 mg/kg	#
Mercury (Hg)	UOP 938-10	6.61 ppb (m/m)	
S1 - Total Sulfur Content	ASTM D4294-10	0.0310 % (m/m)	
<b>** End of Analytical Results **</b>			

§ - Analyte/Report Unit not in published method scope and/ or rounding is outside of test method

# - Result is outside of test method limits and/or analytical range used in method precision study

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AUTHORISED SIGNATORY



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