

Test Report

No. 4036421-CH01-R1

Date: September 20, 2016 Page 1 of 5

Permawick Company
3110 Permawick Drive
Columbus, Indiana 47201
United States

This report supersedes all previous documents bearing the test report number 4036421-CH01.

The following sample(s) was/were submitted and identified by/on behalf of the client as:

Motor Lubricant
Model/Part #: PSL Series, SHC Series, LT200,
PS207, HT300, AR456, AR465, Syn440, PWS &
PDM Series
Country of Destination: USA

Sample Received Date: **9/8/2016**
 Testing Period: **9/13/2016-9/15/2016**
 Revision Summary: Updated sample description

Test Requested : Please refer to the test results.

Test Method & Results : Please refer to next page(s).

Result Summary :


Test Requested	Comment
1. RoHS Directive 2011/65/EU Annex II [amended by Directive (EU) 2015/863]	PASS

Signed for and on behalf of SGS North America, Inc.



Manoj Aluri
 Sr. Laboratory Supervisor, Chemistry Laboratory

Prepared By:



Jennifer Valal
 Laboratory Operations Supervisor, Chemistry Laboratory

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1. RoHS Directive 2011/65/EU Annex II [amended by Directive (EU) 2015/863]

Test Item(s):	Unit	Test Method	Results	MDL	Limit
			1		
Cadmium(Cd)	mg/kg	With reference to IEC 62321-5:2013 (Determination of Cd and Pb by ICP-OES and /or ICP-MS)	ND	2	100
Lead (Pb)	mg/kg		ND	2	1000
Mercury (Hg)	mg/kg	With reference to IEC 62321-4:2013 (Determination of Hg by ICP-OES and/ or ICP-MS)	ND	2	1000
Hexavalent Chromium (CrVI)	mg/kg	With reference to IEC 62321:2008 (Determination of CrVI by UV-VIS)	ND*	0.10	-
Sum of PBBs	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB and PBDE by GC-MS)	ND	-	1000
Monobromobiphenyl	mg/kg		ND	5	-
Dibromobiphenyl	mg/kg		ND	5	-
Tribromobiphenyl	mg/kg		ND	5	-
Tetrabromobiphenyl	mg/kg		ND	5	-
Hexabromobiphenyl	mg/kg		ND	5	-
Pentabromobiphenyl	mg/kg		ND	5	-
Heptabromobiphenyl	mg/kg		ND	5	-
Octabromobiphenyl	mg/kg		ND	5	-
Nonabromobiphenyl	mg/kg		ND	5	-
Decabromobiphenyl	mg/kg		ND	5	-
Sum of PBDEs	mg/kg		ND	-	1000
Monobromodiphenyl ether	mg/kg		ND	5	-
Dibromodiphenyl ether	mg/kg		ND	5	-
Tribromodiphenyl ether	mg/kg		ND	5	-
Tetrabromodiphenyl ether	mg/kg		ND	5	-
Pentabromodiphenyl ether	mg/kg		ND	5	-
Hexabromodiphenyl ether	mg/kg		ND	5	-
Heptabromodiphenyl ether	mg/kg		ND	5	-
Octabromodiphenyl ether	mg/kg		ND	5	-
Nonabromodiphenyl ether	mg/kg	ND	5	-	
Decabromodiphenyl ether	mg/kg	ND	5	-	
Conclusion	/	/	PASS	/	/

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Sample Description:

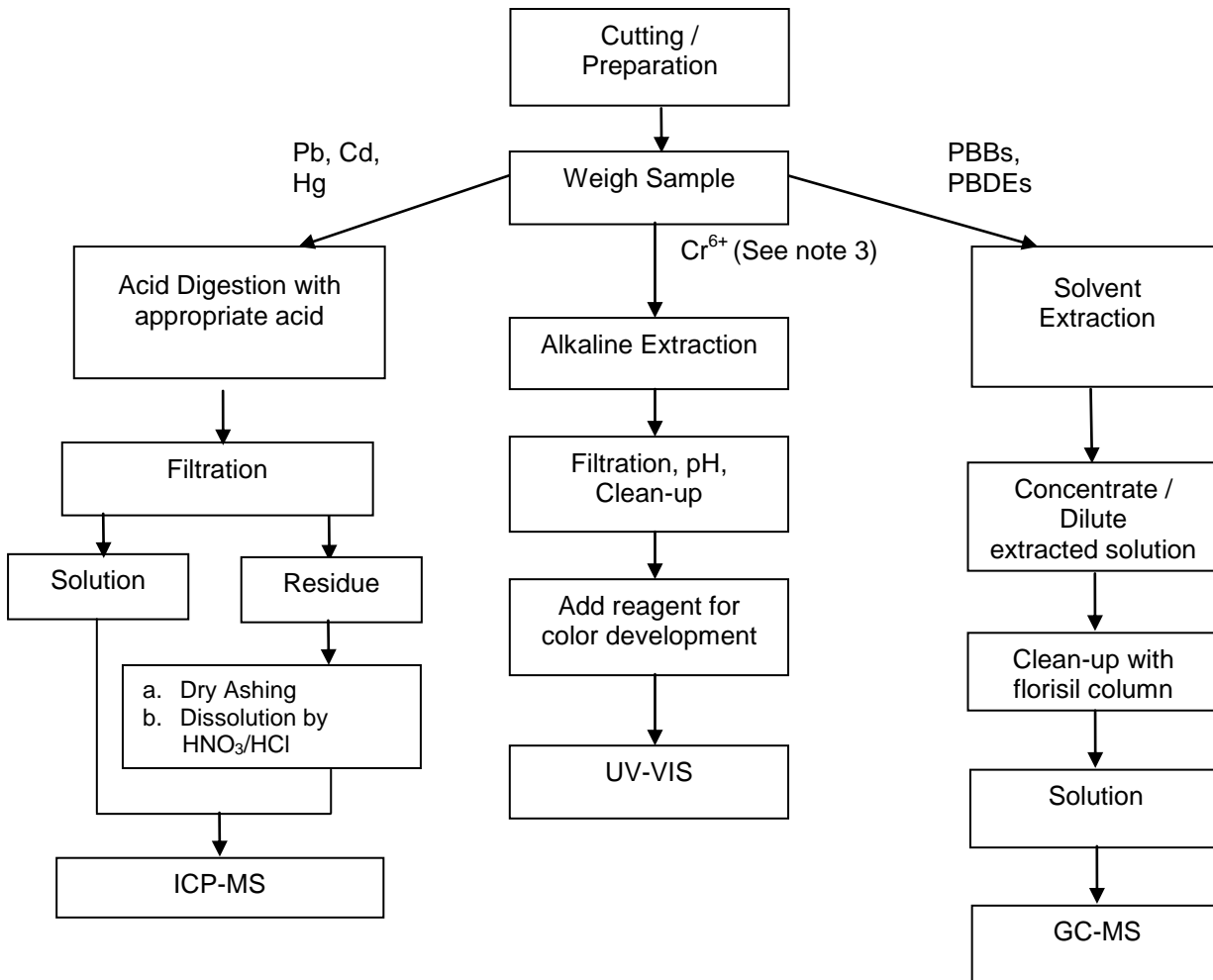
1. Motor Lubricant, Model/Part #: PSL Series, SHC Series, LT200, PS207, HT300, AR456, AR465, Syn440, PWS & PDM Series

Note :

- a. mg/kg = ppm ; 0.1wt% = 1000ppm
- b. ND= not detected
- c. MDL = Method Detection Limit
- d. - = not regulated
- e. * = Total Chromium analysis by ICP-MS and/or ICP-OES was not detected in submitted sample. Therefore, Hexavalent Chromium determination using UV-Visible Spectroscopy was not performed.
- f. IEC 62321 series is equivalent to EN 62321 series
http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25

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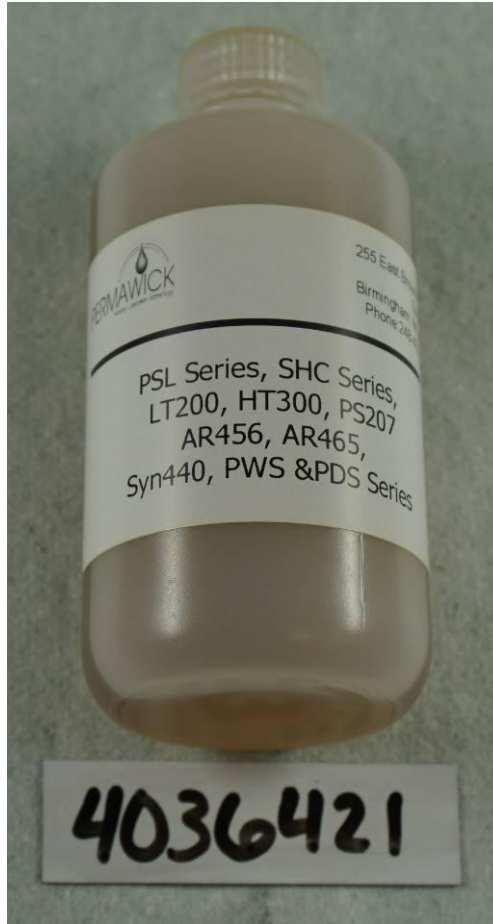
Flowchart for RoHS:



- Note : 1. For Cr(VI), spot test is adopted for metal sample.
 2. The Cd, Pb and Hg contents test on polymeric samples were dissolved totally by pre-conditioning method according to above flow chart.
 3. Cr⁶⁺ is performed only when total Cr is detected

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Sample Photo:



SGS authenticates the photo on the original report only

*** End of Report ***

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