



## Test Report

No. 4195684-CH01

Date: August 31, 2017

Page 1 of 6

Permawick Company  
3110 Permawick Dr  
Columbus IN 47201  
United States

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

**Motor Lubricant**  
**Model# P2AO Series, Mineral Oil Series, 280-PW280SR-284 antileak-285-286, 415, 420, TFL18, PMO300, PHC Series, DM Series**  
**Country of Destination: USA**

Sample Received Date:

8/24/2017

Testing Period:

8/24/2017 – 8/31/2017

Test Requested : Please refer to the result summary.

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

Result Summary :

Test Requested	Comment
1. <b>RoHS Directive 2011/65/EU Annex II</b> [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:

Monica Rana  
Laboratory Coordinator, 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
Hexavalent Chromium (CrVI)	mg/kg	With reference to IEC 62321:2008 (Determination of CrVI by UV-VIS)	ND*	2	1000
<b>Sum of PBBs</b>	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	-
<b>Sum of PBDEs</b>	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	-	
Bis (2-ethylhexyl) phthalate (DEHP)	mg/kg	IEC 6232-8:2017 (Determination of DEHP, BBP, DBP and DIBP by GC-MS)	ND	50	1000
Butyl benzyl phthalate (BBP)	mg/kg		ND	50	1000
Dibutyl phthalate (DBP)	mg/kg		ND	50	1000
Diisobutyl phthalate (DIBP)	mg/kg		ND	50	1000
<b>Conclusion</b>	/	/	PASS	/	/

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Sample Description:

1. Motor Lubricant - P2AO Series, Mineral Oil Series, 280-PW280SR-284 antileak-285-286, 415, 420, TFL18, PMO300, PHC Series, DM Series

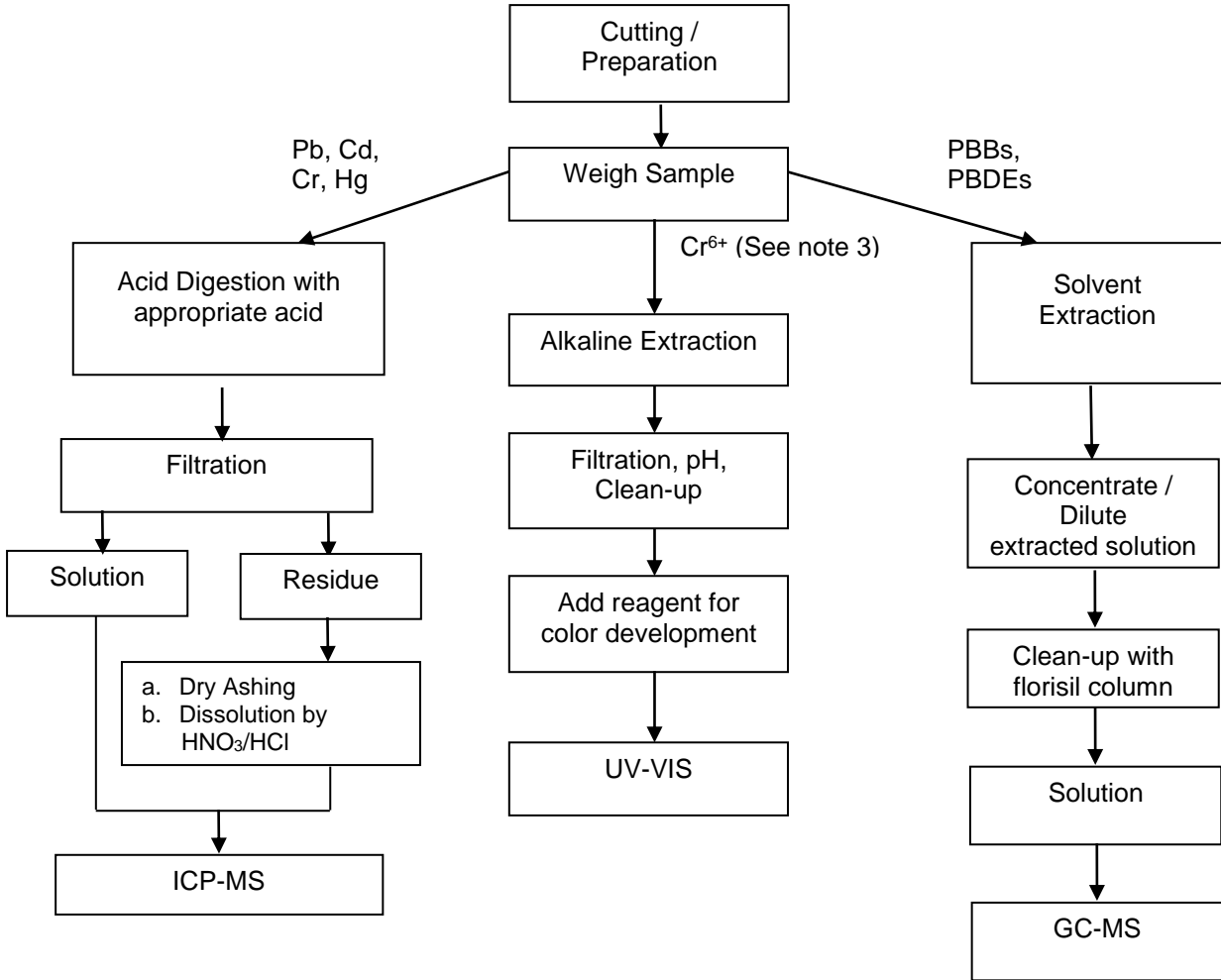
## Note :

- (a) mg/kg = ppm ; 0.1wt% = 1000ppm
- (b) ND= not detected/
- (c) MDL = Method De/tection 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.

[http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP\\_ORG\\_ID,FSP\\_LANG\\_ID:1258637,25](http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25)

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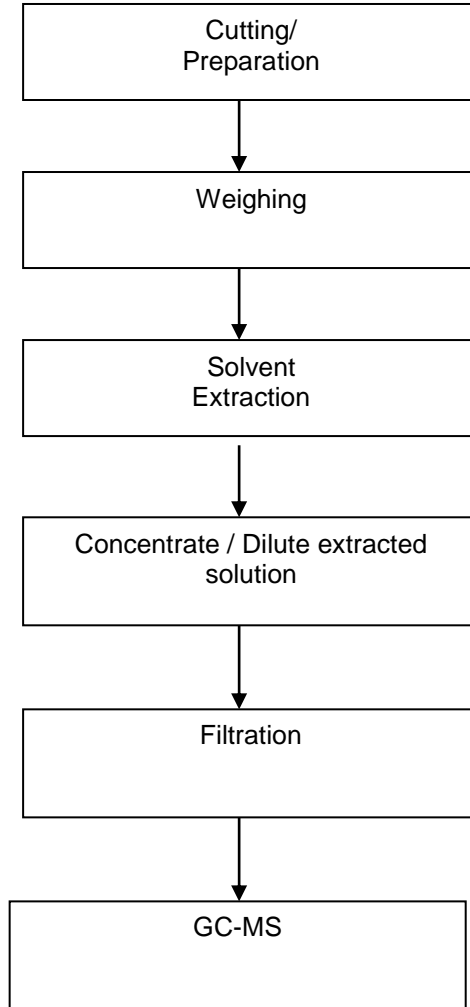
**Flowchart for RoHS Testing:**



- Note : 1. For Cr(VI), spot test is adopted for metal sample.  
 2. The Cd, Pb, Hg and Cr contents test on all samples were dissolved totally by pre-conditioning method according to above flow chart.  
 3. Cr<sup>6+</sup> is performed only when total Cr is detected

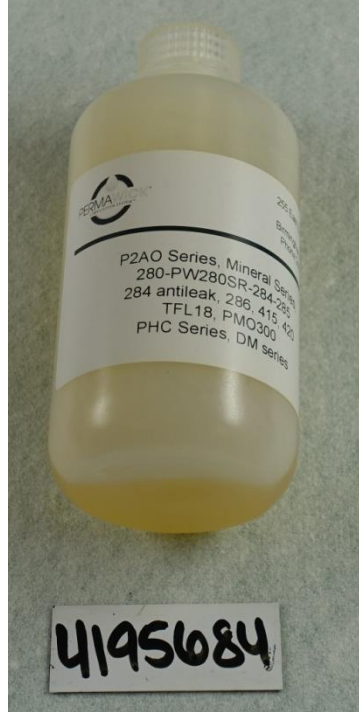
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Flowchart for Phthalates



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**Sample Photo:**



SGS authenticates the photo on the original report only

\*\*\* End of Report \*\*\*

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