



# Test Report

No. 4653312-CH02-R1

Date: August 7, 2020

Page 1 of 7

Permawick Company  
3110 Permawick Drive  
Columbus, IN 47201  
United States

"This report supersedes all previous documents bearing the test report number 4653312-CH02."

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

**Electric Motor Lubricant**  
**Model/Part No.: P2AO Series, Mineral Oil Series, P2AG Series, P2FE Series, 263, 280, PW280SR, 284 (Antileak), 285, 286, 400, 415, 420, TFL18, PMO300, PHC Series, DM Series, PermaGel NP, NPW, PP, HH, FHH Mixture**  
**Country of Destination: All**

Sample Received Date: **7/24/2020**

Testing Period: **7/28/2020 – 8/6/2020**

Revision Summary : Sample description updated.

Test Requested : Please refer to the test results.

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

Result Summary :

Test Requested	Conclusion
1. RoHS Directive 2011/65/EU Annex II	PASS
2. Directive (EU) 2015/863 of amending RoHS Directive 2011/65/EU	PASS

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

Prepared By:

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**1. RoHS Directive 2011/65/EU Annex II**

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 62321-7-2:2017 (Determination of CrVI by UV-Vis)	ND*	8	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	-
Pentabromobiphenyl	mg/kg		ND	5	-
Hexabromobiphenyl	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	-	
<b>Conclusion</b>	/	/	PASS	/	/

**Sample Description:**

1. Electric Motor Lubricant

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## 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](http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25)

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**2. Directive (EU) 2015/863 of amending RoHS Directive 2011/65/EU**

Test Item(s):	Unit	Test Method	Results	MDL	Limit
			1		
Bis (2-ethylhexyl) Phthalate (DEHP)	mg/kg	IEC 62321-8:2017 (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	/	/

**Sample Description:**

1. Electric Motor Lubricant

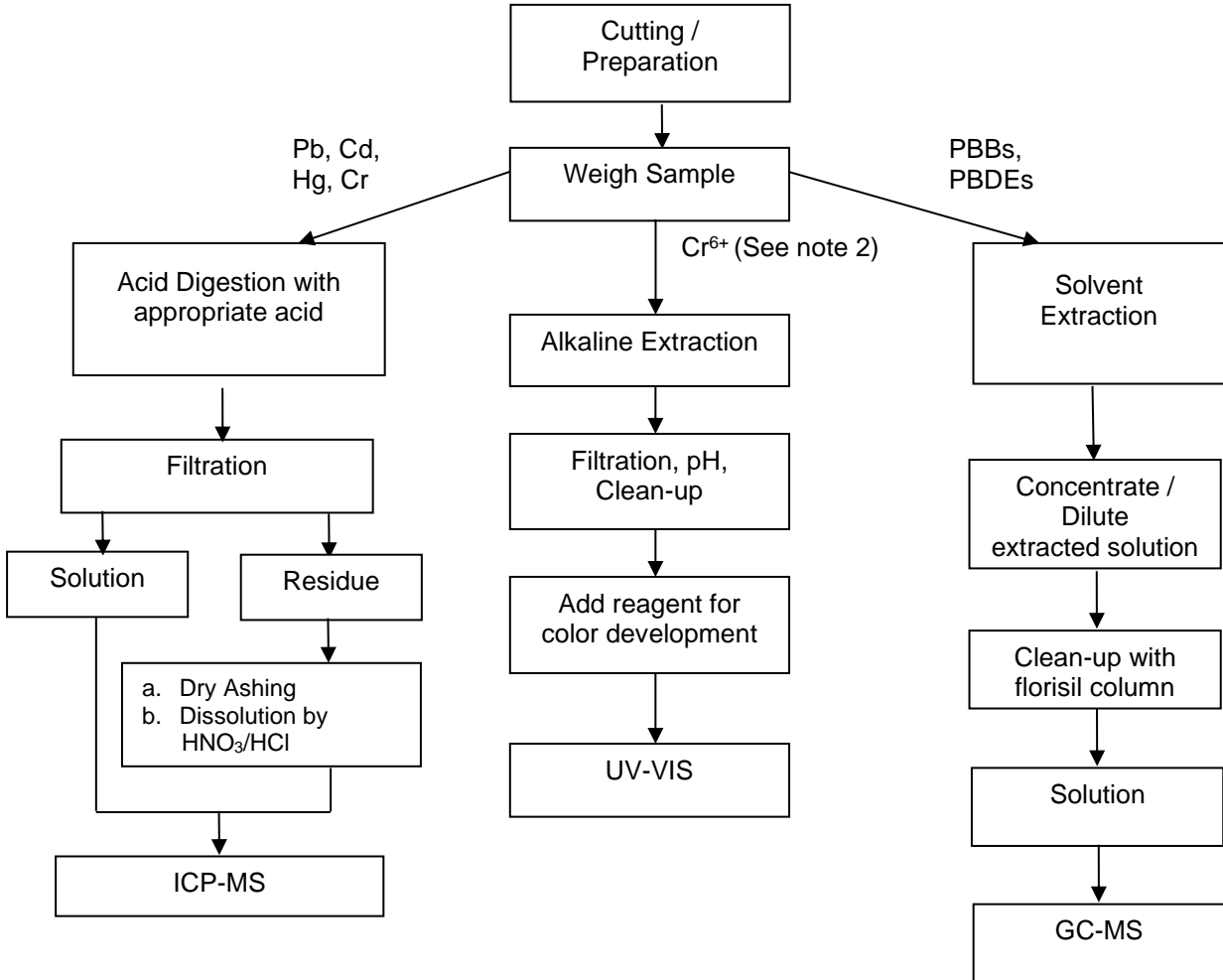
**Note :**

- (a) mg/kg = ppm ; 0.1wt% = 1000ppm
- (b) ND= not detected
- (c) MDL = Method Detection Limit
- (d) - = not regulated
- (e) 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](http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25)

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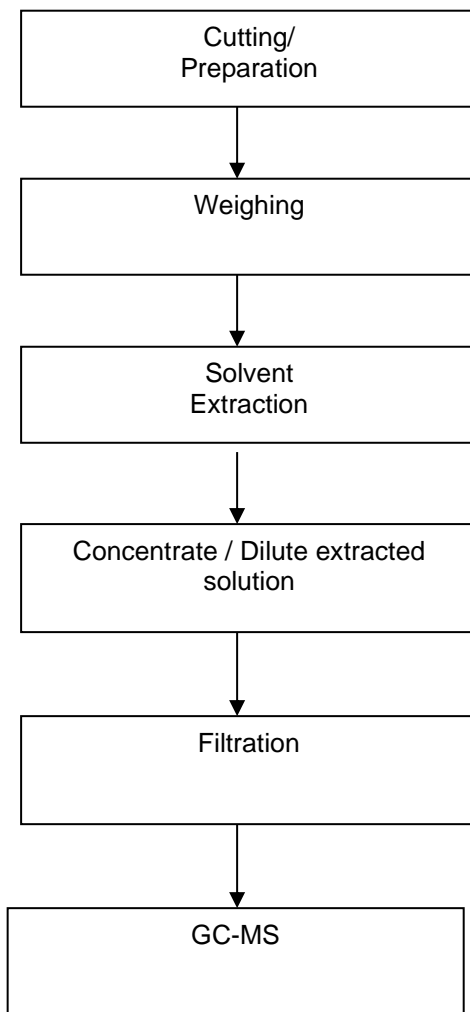
**Flowchart for RoHS:**



- Note : 1. The Cr, Cd, Pb and Hg contents test on polymeric samples were dissolved totally by pre-conditioning method according to above flow chart.  
 2. Cr<sup>6+</sup> is performed only when total Cr is detected

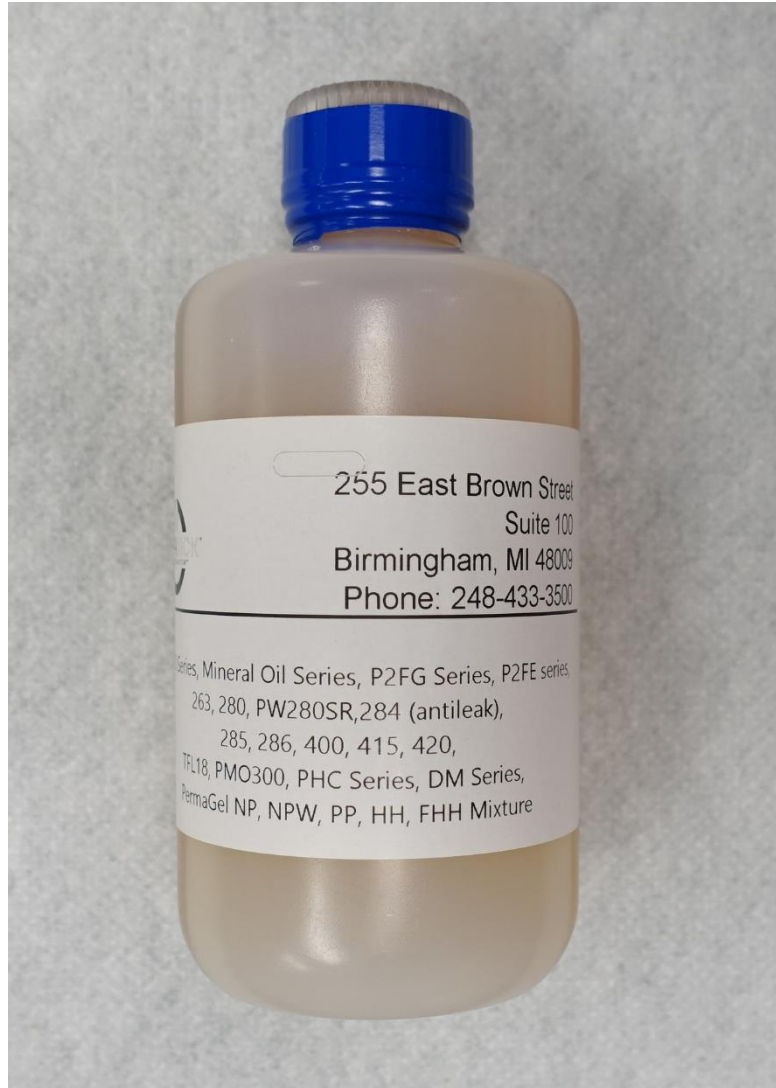
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Flowchart for Phthalates



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**Sample Photo:**



SGS authenticates the photo on the original report only

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

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