

Test Report

No. 4346137-02_rev01

Date: 06/DEC/2017

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mtm plastics GmbH
 Ms. Anja Meyer
 Bahnhofstr. 106
 99759 Niedergebra
 GERMANY



The following samples were submitted and identified by/on behalf of the client as

SGS Job file : 4346137
 Order date : 06/NOV/2017
 Order number : -
 Sample receiving Date : 07/NOV/2017
 Testing period : 07/NOV/2017 - 27/NOV/2017

Sample No	Sample designation
171183473	Purpolen PP grey

Test requested : In accordance with the RoHS Directive 2011/65/EU and subsequent amendments
 Test Method(s) : (1) Determination of Cadmium by ICP-OES, acc. IEC 62321-5:2013
 (2) Determination of Lead by ICP-OES, acc. IEC 62321-5:2013
 (3) Determination of Mercury by CV-AAS, acc. IEC 62321-4:2013
 (4) Determination of Chromium by ICP-OES, acc. IEC 62321-5:2013
 (5) Determination of Chromium (VI) acc. IEC 62321 :
 A) (metal samples) Determination after extraction with hot water and derivatisation with 1,5-diphenyl-carbazide based on IEC 62321-7-1:2015 (metal samples), ion chromatography
 B) (non-metallic samples) Determination after alkaline extraction and derivatisation with 1,5-diphenyl-carbazide based on IEC 62321, Ed1, 2008, C5 (polymer and electronic samples), ion chromatography
Remark: Due to its highly reactive nature the concentration of CrVI in a corrosion-protection changes drastically with time and storage conditions. The results obtained by IEC 62321-7-1:2015 can therefore only give an indication of the presence/absence of Cr(VI) within the limitations of the method at the time of testing.
 (6) Determination of PBB/PBDE by GC/MS, acc. IEC 62321-6:2015
Remark: Please note that acc. to IEC the testing of metals for PBB/PBDE is gratuitous
 (7) Determination of Phthalates by GC/MS
 In-house method , GC-MS after extraction with toluene

Test Result(s) : Please refer to next page(s)

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Member of the SGS Group (Société Générale de Surveillance)

Die Prüfergebnisse beziehen sich auf die untersuchten Proben. Die Veröffentlichung und Vervielfältigung unserer Prüfberichte und Gutachten zu Werbezwecken sowie deren auszugsweise Verwendung in sonstigen Fällen bedürfen unserer schriftlichen Genehmigung. Alle Dienstleistungen werden auf Grundlage der anwendbaren Allgemeinen Geschäftsbedingungen der SGS, die auf Anfrage zur Verfügung gestellt werden, erbracht.

Geschäftsführer: Stefan Steinhardt, Aufsichtsratsvorsitzender: Dirk Hellemans, Sitz der Gesellschaft: Taunusstein, HRB 21543 Amtsgericht Wiesbaden

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Conclusion : Based on the performed tests on submitted sample(s), the test results of Lead, Mercury, Cadmium, hexavalent Chromium, Polybrominated Biphenyls (PBB) and Polybrominated Diphenyl Ethers (PBDE) **comply with** the limits as set by RoHS Directive 2011/65/EU, Annex 2 and subsequent amendments

Note: Sample contains traces of cadmium and lead. Conclusion is valid on condition that sample material is homogenous.

Based on the performed tests on submitted sample(s), the test results of Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP), and Diisobutyl phthalate (DIBP) **comply with** the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

This report supersedes the previous document bearing the test report number 4346137-01 which was issued on 27/NOV/2017. The name of the sample was corrected acc. to customer declaration of 04/DEC/2017.

Signed for and on behalf of

SGS INSTITUT FRESENIUS GmbH

i.V.



Wera Leonhard /tp
Projektleiterin / Project Manager

i.A.



Annkatrin Kuhl
Projektleiterin / Project Manager

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Test results by chemical method (Unit: mg/kg)

Sample No.		171183473		
Test Item(s):	Method (refer to)		RL	RoHS Limit
Cadmium(Cd)	(1)	30	1	100
Lead (Pb)	(2)	78	10	1000
Mercury (Hg)	(3)	n.d.	0,5	1000
Chromium, hexavalent (Cr(VI))	(5 B)	n.d.	1	1000
Sum of PBDEs	(6)	-	-	1000 (Sum of polybrominated diphenyl ether)
Monobromodiphenyl ether		n.d.	50	
Dibromodiphenyl ether		n.d.	50	
Tribromodiphenyl ether		n.d.	50	
Tetrabromodiphenyl ether		n.d.	50	
Pentabromodiphenyl ether		n.d.	50	
Hexabromodiphenyl ether		n.d.	50	
Heptabromodiphenyl ether		n.d.	50	
Octabromodiphenyl ether		n.d.	50	
Nonabromodiphenyl ether		n.d.	50	
Decabromodiphenyl ether		n.d.	50	
Sum of PBBs		-	-	1000 (Sum of polybrominated biphenyls)
Monobromobiphenyl		n.d.	50	
Dibromobiphenyl		n.d.	50	
Tribromobiphenyl		n.d.	50	
Tetrabromobiphenyl		n.d.	50	
Hexabromobiphenyl		n.d.	50	
Pentabromobiphenyl		n.d.	50	
Heptabromobiphenyl		n.d.	50	
Octabromobiphenyl		n.d.	50	
Nonabromobiphenyl		n.d.	50	
Decabromobiphenyl		n.d.	50	
Phthalates	(7)			
Bis(2-ethylhexyl) phthalate (DEHP) (117-81-7)		n.d.	100	1000#
Butyl benzyl phthalate (BBP) (85-68-7)		n.d.	100	1000#
Dibutyl phthalate (DBP) (84-74-2)		n.d.	100	1000#
Diisobutyl phthalate (DIBP) (84-69-5)		n.d.	100	1000#

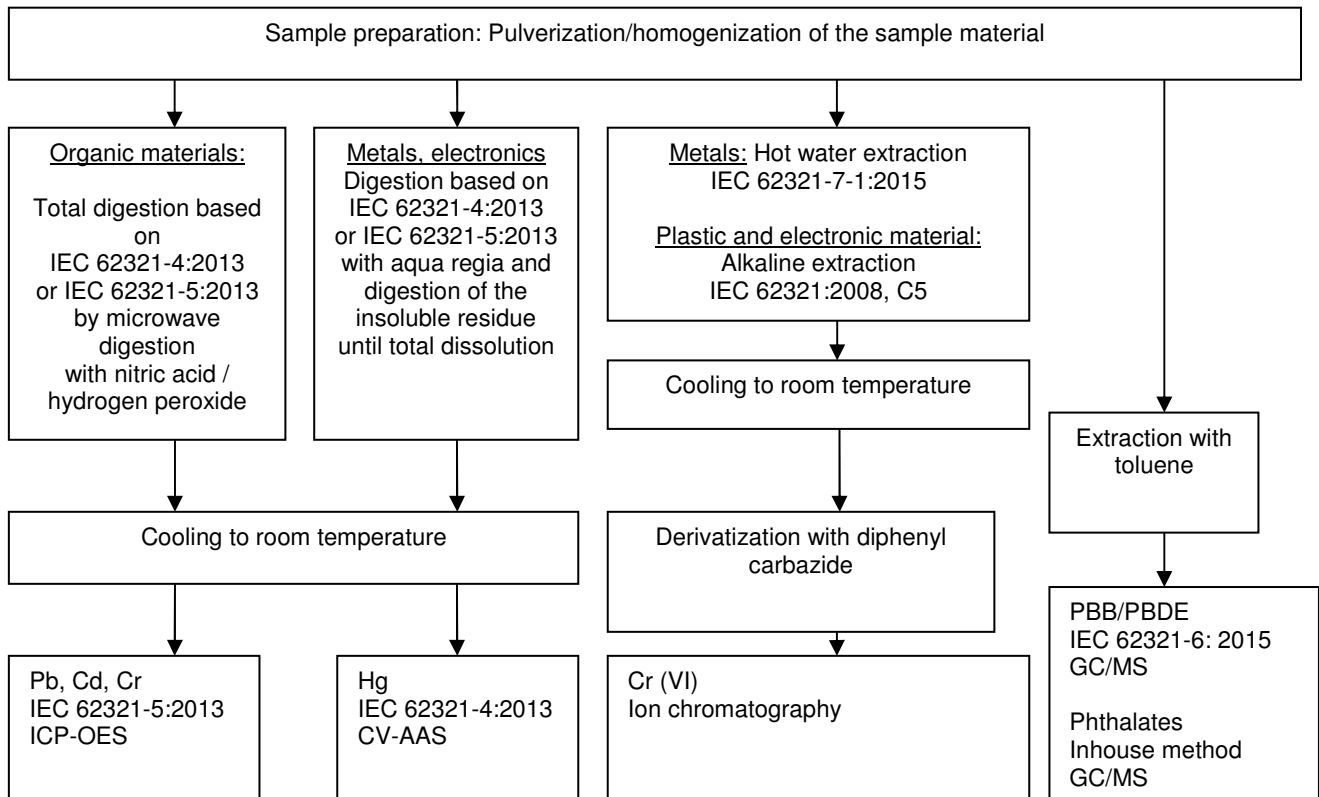
Note: mg/kg = ppm n.d.= not Detected RL = Report Limit n.a.= not analyzed
 **= elevated reporting limit due to matrix interferences
 # = limit valid from 22/JUL/2019

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Flow Chart for the working flow of the performed analysis



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Sample Photo(s)



End of Report

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