



Prüfbericht - Nr.: 238488097a 001		Seite 1 von 5			
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Auftraggeber:	STMicroelectronics SAS				
<i>Client:</i>	190 Avenue Celestin Coq, Rousset, France				
Gegenstand der Prüfung:	STM32WB5MMG				
<i>Test Item:</i>					
Bezeichnung:	32WB5M				
<i>Identification:</i>					
Anlieferungszustand:	apparent good	Eingangsdatum:	2020-07-02		
<i>Delivery condition:</i>		<i>Date of Receipt:</i>			
Prüfart:	TÜV Rheinland Hong Kong Ltd.				
<i>Testing location:</i>					
Prüfgrundlage:	According to RoHS (recast): Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, 2011/65/EU Annex II and its amendment Directive (EU) 2015/863: Total Content of Lead, Cadmium, Mercury, Chromium VI, Polybrominated Biphenyls, Polybrominated Diphenyl Ethers; and Benzylbutyl phthalate (BBP), Dibutyl phthalate (DBP), Bis(2-ethylhexyl) phthalate (DEHP), Diisobutyl phthalate (DIBP)				
<i>Test specification:</i>					
Prüfresultat:	According to the kind and extend of tests performed the above mentioned test item passed the test specification.				
<i>Test result:</i>					
geprüft: tested by:	kontrolliert: checked by:				
					
2020-07-17	Fanny Lin	2020-07-17	Arthur Cheng		
	/Project Coordinator		/Project Manager		
Datum	Name/Stellung	Unterschrift	Datum	Name/Stellung	Unterschrift
<i>Date</i>	<i>Name/Position</i>	<i>Signature</i>	<i>Date</i>	<i>Name/Position</i>	<i>Signature</i>
Sonstiges/ Other Aspects:					
Test period: 2020-07-02 – 2020-07-15					
Abkürzungen: ok / P = entspricht Prüfgrundlage fail / F = entspricht nicht Prüfgrundlage n.a. / N = nicht anwendbar					
Abbreviations: ok / P = passed fail / F = failed n.a. / N = not applicable					
<p>Produktinformationen werden vom Kunden bereitgestellt. Das Testergebnis wird nach Art und Umfang der durchgeführten Tests gezogen. Dieser Prüfbericht bezieht sich auf das oben genannte Prüfmuster. Ohne Genehmigung des Testzentrums darf dieser Testbericht nicht in Auszügen vervielfacht werden. Dieser Prüfbericht berechtigt nicht zum Tragen eines Prüfzeichens auf diesem oder ähnlichen Produkten.</p> <p><i>Sample information is provided by customer. Test result is drawn according to the kind and extent of tests performed. This test report relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.</i></p>					

Test Report No. : 238488097a 001 2020-07-17
 Customer : STMicroelectronics SAS
 Test Method : Total Cadmium, Lead, Mercury, Chromium
 - Ref. to IEC 62321-4:2013 and IEC 62321-5:2013
 Chromium (VI)
 - For Metal material - Ref. to IEC 62321-7-1:2015
 - For Plastic or Electronic material - Ref. to IEC 62321-7-2:2017
 - For Leather material - Ref. to EN ISO 17075-1:2017
 PBBs, PBDEs - Ref. to IEC 62321-6:2015

Sample Material Lab.-No.		RL	STM32WB5MMG electronic component / multicolor TCL200702-05
Cadmium (Cd)	mg/kg	2	< RL
Lead (Pb)	mg/kg	2	< RL
Mercury (Hg)	mg/kg	2	< RL
Chromium VI (Cr VI)*	mg/kg	8	< RL
Sum of Polybrominated biphenyls (PBBs)	mg/kg	-	< RL
Monobromobiphenyl	mg/kg	5	< RL
Dibromobiphenyl	mg/kg	5	< RL
Tribromobiphenyl	mg/kg	5	< RL
Tetrabromobiphenyl	mg/kg	5	< RL
Pentabromobiphenyl	mg/kg	5	< RL
Hexabromobiphenyl	mg/kg	5	< RL
Heptabromobiphenyl	mg/kg	5	< RL
Octabromobiphenyl	mg/kg	5	< RL
Nonabromobiphenyl	mg/kg	5	< RL
Decabromobiphenyl	mg/kg	5	< RL
Sum of Polybrominated diphenyl ethers (PBDEs)	mg/kg	-	< RL
Monobromodiphenyl ether	mg/kg	5	< RL
Dibromodiphenyl ether	mg/kg	5	< RL
Tribromodiphenyl ether	mg/kg	5	< RL
Tetrabromodiphenyl ether	mg/kg	5	< RL
Pentabromodiphenyl ether	mg/kg	5	< RL
Hexabromodiphenyl ether	mg/kg	5	< RL
Heptabromodiphenyl ether	mg/kg	5	< RL
Octabromodiphenyl ether	mg/kg	5	< RL
Nonabromodiphenyl ether	mg/kg	5	< RL
Decabromodiphenyl ether	mg/kg	5	< RL

Notes:

- < = less than
- RL = Reporting Limit
- n.a. = not applicable
- mg/kg = milligram per kilogram
- * Once the total Cr content in metal/ plastic or electronic sample is found to be exceeded the limit, the Cr (VI) content will be confirmed with reference to IEC 62321-7-1:2015/ IEC 62321-7-2:2017

	Cd	Cr(VI)	Pb	Hg	PBBs	PBDEs
Maximum permissible Limit acc. to 2011/65/EU (mg/kg)	100	1000	1000	1000	1000	1000

Test Report No. : 238488097a 001
 Customer : STMicroelectronics SAS
 Test Method : BBP/DBP/DEHP/DIBP - Ref. to IEC 62321-8:2017

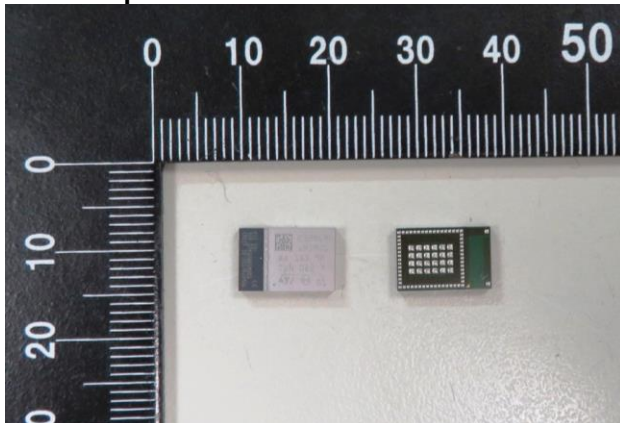
2020-07-17

Sample		RL	STM32WB5MMG
Material			electronic component / multicolor
Lab.-No.			TCL200702-05
Benzylbutylphthalate (BBP)	mg/kg	50	< RL
Dibutylphthalate (DBP)	mg/kg	50	< RL
Diethylhexylphthalate (DEHP)	mg/kg	50	< RL
Diisobutylphthalate (DIBP)	mg/kg	50	< RL

Notes:

- < = less than
- RL = Reporting Limit
- n.a. = not applicable
- mg/kg = milligram per kilogram

	BBP	DBP	DEHP	DIBP
Maximum permissible Limit acc. to (EU) 2015/863 (mg/kg)	1000	1000	1000	1000

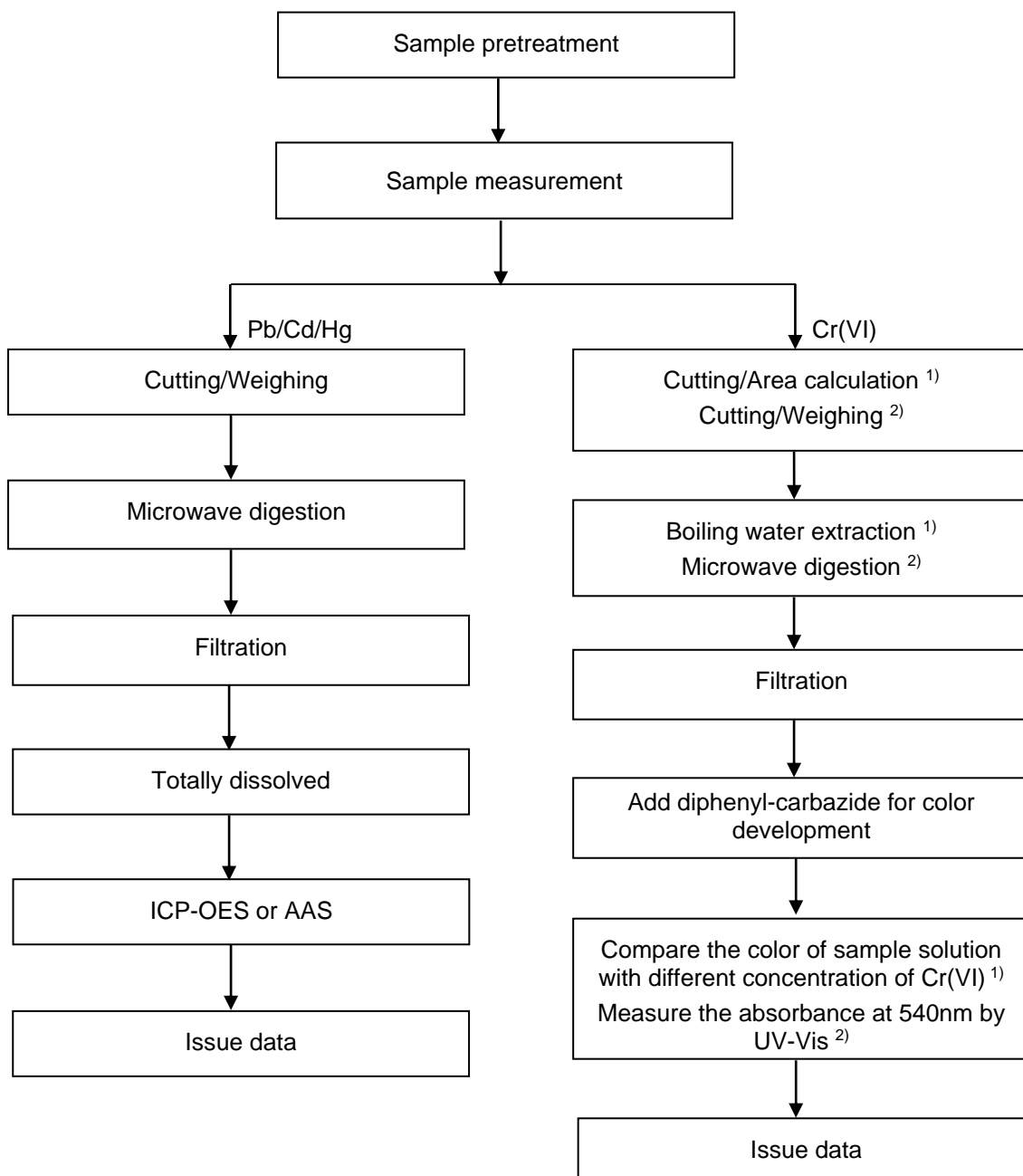
Test Sample


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2020-07-17

Testing procedure:

RoHS (Pb, Cd, Hg, Cr(VI))



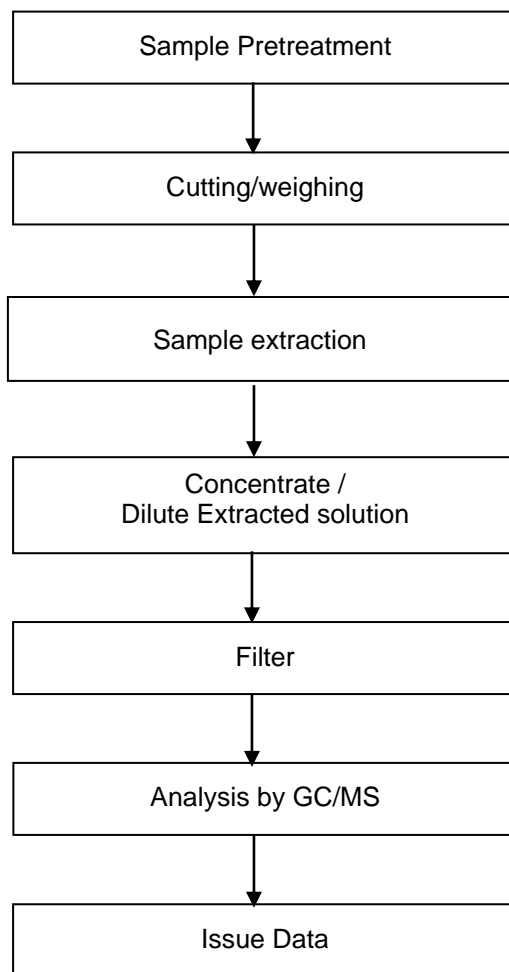
Notes: ¹⁾ For metallic material
²⁾ For non-metallic material

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Testing procedure:

RoHS (PBBs/PBDEs, DEHP/DBP/BBP/DIBP)



--- End of Test-Report ---