GLOBALFOUNDRIES SINGAPORE PTE LTD
60 WOODLANDS INDUSTRIAL PARK D STREET 2, SINGAPORE 738406

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

Sample Name	:	One (1) 300mm die-patterned wafer
Fab	:	7
Technode	:	0.11um/0.13um/0.13um 8SW/90nm

SGS Order No.	:	10599471
Sample ID	:	SGA25-0000088-0001
Sample Receiving Date	:	12-Feb-2025
Testing Period	:	12-Feb-2025 to 24-Feb-2025
Test Requested	:	Selected test(s) as requested by the client
Test Method(s)	:	Please refer to next page(s)
Test Result(s)	:	Please refer to next page(s)
Conclusion	:	Based on the performed tests on submitted sample(s), the results of Cadmium, Lead, Mercury, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as 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.

Signed for and on behalf of
SGS Testing & Control Services Singapore Pte Ltd

Tan Si Jing (Ms.)
Senior Chemist, Multi-Lab
FOLDER NUMBER : SGA25-0000088

Test Result(s) :

Sample Description : WAFER

Test Item(s)	Unit	Method	Results	MDL	Limit
Lead (Pb)	mg/kg	With reference to IEC 62321-5:2013. Analysis was performed by ICP/OES	ND	2	<1000
Mercury (Hg)	mg/kg	With reference to IEC 62321-4 :2013 +AMD1:2017. Analysis was performed by ICP/OES	ND	2	<1000
Cadmium(Cd)	mg/kg	With reference to IEC 62321-5:2013. Analysis was performed by ICP/OES	ND	2	<100
Hexavalent Chromium (Cr(VI))	mg/kg	With reference to IEC 62321-7-2:2017, analysis was performed by UV-Vis.	ND	8	<1000
Polybromobiphenyl (PBBs)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	-	<1000
Monobromobiphenyl (MonoBB)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	5	-
Dibromobiphenyl (DiBB)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	5	-
Tribromobiphenyl (TriBB)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	5	-
Tetrabromobiphenyl (TetraBB)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	5	-
Pentabromobiphenyl (PentaBB)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	5	-
Hexabromobiphenyl (HexaBB)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	5	-
Heptabromobiphenyl (HeptaBB)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	5	-
Octabromobiphenyl (OctaBB)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	5	-
Nonabromobiphenyl (NonaBB)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	5	-
Decabromobiphenyl (DecaBB)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	5	-
Polybromodiphenyl ether(PBDEs)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	-	<1000

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Test Item(s)	Unit	Method	Results	MDL	Limit
Monobromodiphenylether (MonoBDE)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	5	-
Dibromodiphenylether (DiBDE)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	5	-
Tribromodiphenylether (TriBDE)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	5	-
Tetrabromodiphenylether (TetraBDE)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	5	-
Pentabromodiphenylether (PentaBDE)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	5	-
Hexabromodiphenylether (HexaBDE)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	5	-
Heptabromodiphenylether (HeptaBDE)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	5	-
Octabromodiphenylether (OctaBDE)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	5	-
Nonabromodiphenylether (NonaBDE)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	5	-
Decabromodiphenylether (DecaBDE)	mg/kg	With reference to IEC62321-6 :2015. Analysis was performed by GC/MS	ND	5	-
Bis-(2-ethylhexyl) Phthalate(DEHP)	mg/kg	With reference to IEC62321-8 :2017. Analysis was performed by GC/MS	ND	50	<1000
Benzyl Butyl Phthalate(BBP)	mg/kg	With reference to IEC62321-8 :2017. Analysis was performed by GC/MS	ND	50	<1000
Dibutyl Phthalate(DBP)	mg/kg	With reference to IEC62321-8 :2017. Analysis was performed by GC/MS	ND	50	<1000
Diisobutyl Phthalate(DIBP)	mg/kg	With reference to IEC62321-8 :2017. Analysis was performed by GC/MS	ND	50	<1000

Remarks:

(1) mg/kg = ppm ; 0.1wt% = 1000ppm
(2) ND = Not Detected (Less than MDL)
(3) MDL = Method Detection Limit
(4) "-" = Not regulated

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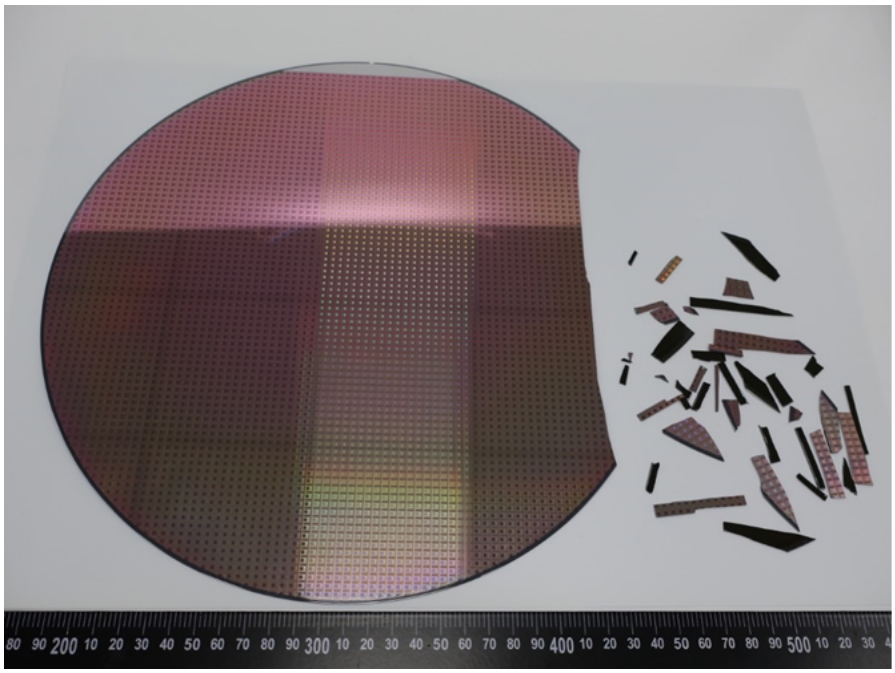
Notes:

(1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
(2) IEC 62321 series is equivalent to EN 62321 series.
(3) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019. According to this rule, the judgement of conformity is based on the comparing test results with limits.

Sample Photo:



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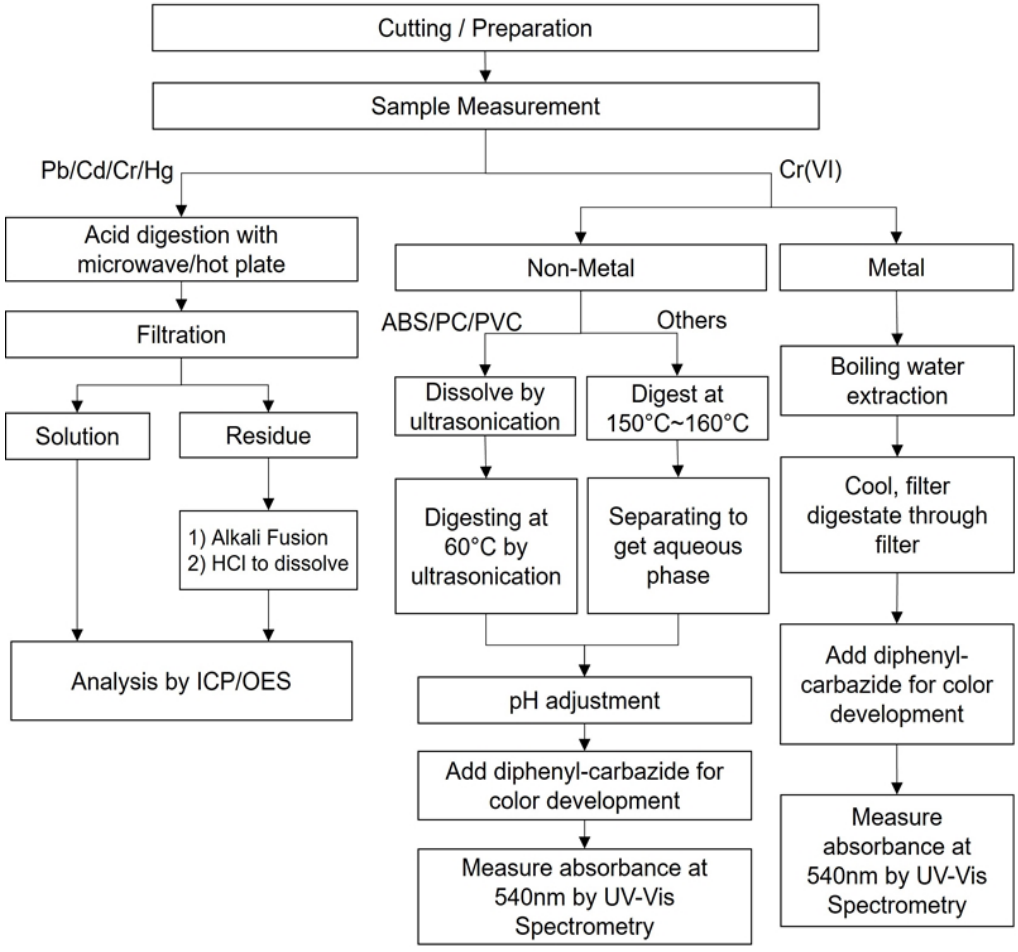
SGS authenticate the photo on original report only

Analytical flow chart - Heavy metals

Sample received was totally dissolved by preconditioning method.
[Cr(VI) test method excluded]



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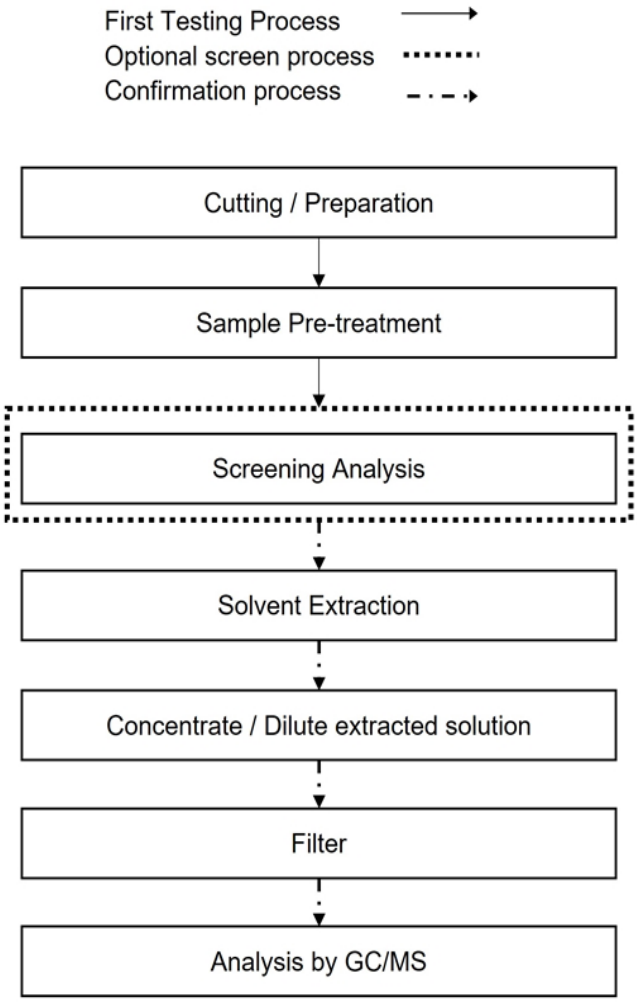
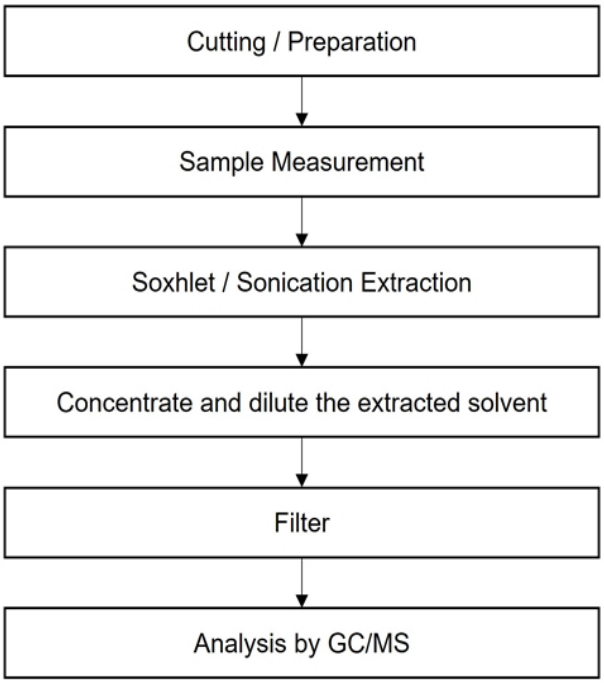
Analytical flow chart - PBBs and PBDEs



Analytical flow chart – Phthalates (IEC 62321)



End of Report