

## TEST REPORT

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**TEST REPORT NUMBER :** TURT220134902      **DATE:** 30 November, 2022

**APPLICANT:** Güvenir Elektrik İth. İhr. San. Tic. Ltd. Şti.  
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**Attention:** Necla Uyanık (ocm@guvenir.com)

**SAMPLE DESCRIPTION :** SEE ATTACHMENT

**DATE IN :** 21 November, 2022 (13:18)

**DATE OUT :** 30 November, 2022

**REQUEST :** Rohs Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

**CONCLUSION :** SEE ATTACHMENT

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Ezgi Aleyna Arı  
Senior Customer Care Executive

Zeynep Akın  
Chemical Laboratory Manager

PART NO	DESCRIPTION	CONCLUSION
	<b>PLASTIC SWITCH</b>	
1.1	WHITE BUTTON UPPER PART	PASS
1.2	WHITE BUTTON BOTTOM PART	PASS
1.3	WHITE BUTTON	PASS
1.4	WHITE BIG BUTTON INNER PART	PASS
1.5	WHITE PLASTIC STICK	PASS
1.6	WHITE PLASTIC PANEL	PASS
1.7	WHITE PLUG BODY	PASS
1.8	WHITE CARCAS	PASS
1.9	WHITE CABLE END PART	PASS
1.10	WHITE CABLE	PASS
1.11	BROWN CABLE	PASS
1.12	BLUE CABLE	PASS
1.13	WHITE CLIPS	PASS
1.14	BLACK CLIPS WIRE	PASS
1.15	BLACK SCREW	PASS
1.16	SILVER PLUG TIP	PASS
1.17	BLACK SPRING	PASS
1.18	GOLD BIG LEG	PASS
1.19	GOLD SMALL LEG	PASS
1.20	COPPER LEG	PASS
1.21	COPPER WIRE	PASS
1.22	BLACK CERAMIC PART	PASS
1.23	BEIGE CERAMIC PART	PASS
1.24	TRANSPARENT GLASS BALL	PASS
1.25	TRANSPARENT BIG LAMP	PASS
1.26	TRANSPARENT SMALL LAMP	PASS

**(A) TEST RESULT SUMMARY ACCORDING TO IEC 62321**

TESTING ITEM	RESULT		
	Part		
	1.1	1.2	1.3
Cadmium (Cd) Content	ND	ND	ND
Chromium VI (Cr+6) Content (ppm) (for non metal)	ND	ND	ND
Chromium VI (Cr+6) Content (µg/cm <sup>2</sup> ) (for metal)	NA	NA	NA
Lead (Pb) Content	ND	ND	ND
Mercury (Hg) Content	ND	ND	ND
Flame Retardants			
<b>Polybrominated Biphenyls (PBB)</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>
Monobromobiphenyl (MonoBB)	ND	ND	ND
Dibromobiphenyl (DiBB)	ND	ND	ND
Tribromobiphenyl (TriBB)	ND	ND	ND
Tetrabromobiphenyl (TetraBB)	ND	ND	ND
Pentabromobiphenyl (PentaBB)	ND	ND	ND
Hexabromobiphenyl (HexaBB)	ND	ND	ND
Heptabromobiphenyl (HeptaBB)	ND	ND	ND
Octabromobiphenyl (OctaBB)	ND	ND	ND
Nonabromobiphenyl (NonaBB)	ND	ND	ND
Decabromobiphenyl (DecaBB)	ND	ND	ND
<b>Polybrominated Diphenyl Ethers (PBDE)</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>
Monobromodiphenyl Ether (MonoBDE)	ND	ND	ND
Dibromodiphenyl Ether (DiBDE)	ND	ND	ND
Tribromodiphenyl Ether (TriBDE)	ND	ND	ND
Tetrabromodiphenyl Ether (TetraBDE)	ND	ND	ND
Pentabromodiphenyl Ether (PentaBDE)	ND	ND	ND
Hexabromodiphenyl Ether (HexaBDE)	ND	ND	ND
Heptabromodiphenyl Ether (HeptaBDE)	ND	ND	ND
Octabromodiphenyl Ether (OctaBDE)	ND	ND	ND
Nonabromodiphenyl Ether (NonaBDE)	ND	ND	ND
Decabromodiphenyl Ether (DecaBDE)	421 ppm	459 ppm	309 ppm
<b>Phthalates</b>			
Dibutyl Phthalate (DBP)	ND	ND	ND
Diethyl Hexyl Phthalate (DEHP)	ND	ND	ND
Benzyl Butyl Phthalate (BBP)	ND	ND	ND
Diisobutyl Phthalate (DIBP)	ND	ND	ND

Remarks : ppm=Parts per million based on dry weight of sample  
µg/cm<sup>2</sup>=Microgram per square centimetre  
mg/kg with 50 cm<sup>2</sup>=Milligram per kilogram with 50 square centimetre  
ND =Not detected      NA =Not applicable      NR =Not requested

Estimated Total Uncertainty = (Heavy Metal: ±7% , PBB/PBDE: ±6%, Phthalates: ±6%)

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**(A) TEST RESULT SUMMARY ACCORDING TO IEC 62321**

TESTING ITEM	RESULT		
	Part		
	1.4	1.5	1.6
Cadmium (Cd) Content	ND	ND	ND
Chromium VI (Cr+6) Content(ppm) (for non metal)	ND	ND	ND
Chromium VI (Cr+6) Content(µg/cm <sup>2</sup> ) (for metal)	NA	NA	NA
Lead (Pb) Content	ND	ND	ND
Mercury (Hg) Content	ND	ND	ND
Flame Retardants			
<b>Polybrominated Biphenyls (PBB)</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>
Monobromobiphenyl (MonoBB)	ND	ND	ND
Dibromobiphenyl (DiBB)	ND	ND	ND
Tribromobiphenyl (TriBB)	ND	ND	ND
Tetrabromobiphenyl (TetraBB)	ND	ND	ND
Pentabromobiphenyl (PentaBB)	ND	ND	ND
Hexabromobiphenyl (HexaBB)	ND	ND	ND
Heptabromobiphenyl (HeptaBB)	ND	ND	ND
Octabromobiphenyl (OctaBB)	ND	ND	ND
Nonabromobiphenyl (NonaBB)	ND	ND	ND
Decabromobiphenyl (DecaBB)	ND	ND	ND
<b>Polybrominated Diphenyl Ethers (PBDE)</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>
Monobromodiphenyl Ether (MonoBDE)	ND	ND	ND
Dibromodiphenyl Ether (DiBDE)	ND	ND	ND
Tribromodiphenyl Ether (TriBDE)	ND	ND	ND
Tetrabromodiphenyl Ether (TetraBDE)	ND	ND	ND
Pentabromodiphenyl Ether (PentaBDE)	ND	ND	ND
Hexabromodiphenyl Ether (HexaBDE)	ND	ND	ND
Heptabromodiphenyl Ether (HeptaBDE)	ND	ND	ND
Octabromodiphenyl Ether (OctaBDE)	ND	ND	ND
Nonabromodiphenyl Ether (NonaBDE)	ND	ND	ND
Decabromodiphenyl Ether (DecaBDE)	ND	ND	ND
<b>Phthalates</b>			
Dibutyl Phthalate (DBP)	ND	ND	ND
Diethyl Hexyl Phthalate (DEHP)	ND	ND	ND
Benzyl Butyl Phthalate (BBP)	ND	ND	ND
Diisobutyl Phthalate (DIBP)	ND	ND	ND

Remarks : ppm=Parts per million based on dry weight of sample  
µg/cm<sup>2</sup>=Microgram per square centimetre  
mg/kg with 50 cm<sup>2</sup>=Milligram per kilogram with 50 square centimetre  
ND =Not detected      NA =Not applicable      NR =Not requested

Estimated Total Uncertainty = (Heavy Metal: ±7% , PBB/PBDE: ±6%, Phthalates: ±6%)

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**(A) TEST RESULT SUMMARY ACCORDING TO IEC 62321**

TESTING ITEM	RESULT		
	Part		
	1.7	1.8	1.9
Cadmium (Cd) Content	ND	ND	ND
Chromium VI (Cr+6) Content(ppm) (for non metal)	ND	ND	ND
Chromium VI (Cr+6) Content(µg/cm <sup>2</sup> ) (for metal)	NA	NA	NA
Lead (Pb) Content	ND	ND	ND
Mercury (Hg) Content	ND	ND	ND
Flame Retardants			
<b>Polybrominated Biphenyls (PBB)</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>
Monobromobiphenyl (MonoBB)	ND	ND	ND
Dibromobiphenyl (DiBB)	ND	ND	ND
Tribromobiphenyl (TriBB)	ND	ND	ND
Tetrabromobiphenyl (TetraBB)	ND	ND	ND
Pentabromobiphenyl (PentaBB)	ND	ND	ND
Hexabromobiphenyl (HexaBB)	ND	ND	ND
Heptabromobiphenyl (HeptaBB)	ND	ND	ND
Octabromobiphenyl (OctaBB)	ND	ND	ND
Nonabromobiphenyl (NonaBB)	ND	ND	ND
Decabromobiphenyl (DecaBB)	ND	ND	ND
<b>Polybrominated Diphenyl Ethers (PBDE)</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>
Monobromodiphenyl Ether (MonoBDE)	ND	ND	ND
Dibromodiphenyl Ether (DiBDE)	ND	ND	ND
Tribromodiphenyl Ether (TriBDE)	ND	ND	ND
Tetrabromodiphenyl Ether (TetraBDE)	ND	ND	ND
Pentabromodiphenyl Ether (PentaBDE)	ND	ND	ND
Hexabromodiphenyl Ether (HexaBDE)	ND	ND	ND
Heptabromodiphenyl Ether (HeptaBDE)	ND	ND	ND
Octabromodiphenyl Ether (OctaBDE)	ND	ND	ND
Nonabromodiphenyl Ether (NonaBDE)	ND	ND	ND
Decabromodiphenyl Ether (DecaBDE)	ND	ND	ND
<b>Phthalates</b>			
Dibutyl Phthalate (DBP)	ND	ND	ND
Diethyl Hexyl Phthalate (DEHP)	ND	ND	ND
Benzyl Butyl Phthalate (BBP)	ND	ND	ND
Diisobutyl Phthalate (DIBP)	ND	ND	ND

Remarks : ppm=Parts per million based on dry weight of sample  
µg/cm<sup>2</sup>=Microgram per square centimetre  
mg/kg with 50 cm<sup>2</sup>=Milligram per kilogram with 50 square centimetre  
ND =Not detected      NA =Not applicable      NR =Not requested

Estimated Total Uncertainty = (Heavy Metal: ±7% , PBB/PBDE: ±6%, Phthalates: ±6%)

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**(A) TEST RESULT SUMMARY ACCORDING TO IEC 62321**

TESTING ITEM	RESULT		
	Part		
	1.10	1.11	1.12
Cadmium (Cd) Content	ND	ND	ND
Chromium VI (Cr+6) Content(ppm) (for non metal)	ND	ND	ND
Chromium VI (Cr+6) Content(µg/cm <sup>2</sup> ) (for metal)	NA	NA	NA
Lead (Pb) Content	ND	ND	ND
Mercury (Hg) Content	ND	ND	ND
Flame Retardants			
<b>Polybrominated Biphenyls (PBB)</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>
Monobromobiphenyl (MonoBB)	ND	ND	ND
Dibromobiphenyl (DiBB)	ND	ND	ND
Tribromobiphenyl (TriBB)	ND	ND	ND
Tetrabromobiphenyl (TetraBB)	ND	ND	ND
Pentabromobiphenyl (PentaBB)	ND	ND	ND
Hexabromobiphenyl (HexaBB)	ND	ND	ND
Heptabromobiphenyl (HeptaBB)	ND	ND	ND
Octabromobiphenyl (OctaBB)	ND	ND	ND
Nonabromobiphenyl (NonaBB)	ND	ND	ND
Decabromobiphenyl (DecaBB)	ND	ND	ND
<b>Polybrominated Diphenyl Ethers (PBDE)</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>
Monobromodiphenyl Ether (MonoBDE)	ND	ND	ND
Dibromodiphenyl Ether (DiBDE)	ND	ND	ND
Tribromodiphenyl Ether (TriBDE)	ND	ND	ND
Tetrabromodiphenyl Ether (TetraBDE)	ND	ND	ND
Pentabromodiphenyl Ether (PentaBDE)	ND	ND	ND
Hexabromodiphenyl Ether (HexaBDE)	ND	ND	ND
Heptabromodiphenyl Ether (HeptaBDE)	ND	ND	ND
Octabromodiphenyl Ether (OctaBDE)	ND	ND	ND
Nonabromodiphenyl Ether (NonaBDE)	ND	ND	ND
Decabromodiphenyl Ether (DecaBDE)	ND	ND	ND
<b>Phthalates</b>			
Dibutyl Phthalate (DBP)	ND	ND	ND
Diethyl Hexyl Phthalate (DEHP)	ND	ND	ND
Benzyl Butyl Phthalate (BBP)	ND	ND	ND
Diisobutyl Phthalate (DIBP)	ND	ND	ND

Remarks : ppm=Parts per million based on dry weight of sample  
µg/cm<sup>2</sup>=Microgram per square centimetre  
mg/kg with 50 cm<sup>2</sup>=Milligram per kilogram with 50 square centimetre  
ND =Not detected      NA =Not applicable      NR =Not requested

Estimated Total Uncertainty = (Heavy Metal: ±7% , PBB/PBDE: ±6%, Phthalates: ±6%)

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**(A) TEST RESULT SUMMARY ACCORDING TO IEC 62321**

TESTING ITEM	RESULT		
	Part		
	1.13	1.14	1.15
Cadmium (Cd) Content	ND	ND	ND
Chromium VI (Cr+6) Content(ppm) (for non metal)	ND	NA	NA
Chromium VI (Cr+6) Content(µg/cm <sup>2</sup> ) (for metal)	NA	ND	ND
Lead (Pb) Content	ND	ND	ND
Mercury (Hg) Content	ND	ND	ND
Flame Retardants			
<b>Polybrominated Biphenyls (PBB)</b>	<b>ND</b>	<b>NA</b>	<b>NA</b>
Monobromobiphenyl (MonoBB)	ND	NA	NA
Dibromobiphenyl (DiBB)	ND	NA	NA
Tribromobiphenyl (TriBB)	ND	NA	NA
Tetrabromobiphenyl (TetraBB)	ND	NA	NA
Pentabromobiphenyl (PentaBB)	ND	NA	NA
Hexabromobiphenyl (HexaBB)	ND	NA	NA
Heptabromobiphenyl (HeptaBB)	ND	NA	NA
Octabromobiphenyl (OctaBB)	ND	NA	NA
Nonabromobiphenyl (NonaBB)	ND	NA	NA
Decabromobiphenyl (DecaBB)	ND	NA	NA
<b>Polybrominated Diphenyl Ethers (PBDE)</b>	<b>ND</b>	<b>NA</b>	<b>NA</b>
Monobromodiphenyl Ether (MonoBDE)	ND	NA	NA
Dibromodiphenyl Ether (DiBDE)	ND	NA	NA
Tribromodiphenyl Ether (TriBDE)	ND	NA	NA
Tetrabromodiphenyl Ether (TetraBDE)	ND	NA	NA
Pentabromodiphenyl Ether (PentaBDE)	ND	NA	NA
Hexabromodiphenyl Ether (HexaBDE)	ND	NA	NA
Heptabromodiphenyl Ether (HeptaBDE)	ND	NA	NA
Octabromodiphenyl Ether (OctaBDE)	ND	NA	NA
Nonabromodiphenyl Ether (NonaBDE)	ND	NA	NA
Decabromodiphenyl Ether (DecaBDE)	ND	NA	NA
<b>Phthalates</b>			
Dibutyl Phthalate (DBP)	ND	NA	NA
Diethyl Hexyl Phthalate (DEHP)	ND	NA	NA
Benzyl Butyl Phthalate (BBP)	ND	NA	NA
Diisobutyl Phthalate (DIBP)	ND	NA	NA

Remarks : ppm=Parts per million based on dry weight of sample  
µg/cm<sup>2</sup>=Microgram per square centimetre  
mg/kg with 50 cm<sup>2</sup>=Milligram per kilogram with 50 square centimetre  
ND =Not detected      NA =Not applicable      NR =Not requested

Estimated Total Uncertainty = (Heavy Metal: ±7% , PBB/PBDE: ±6%, Phthalates: ±6%)

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**(A) TEST RESULT SUMMARY ACCORDING TO IEC 62321**

TESTING ITEM	RESULT		
	Part		
	1.16	1.17	1.18
Cadmium (Cd) Content	ND	ND	ND
Chromium VI (Cr+6) Content(ppm) (for non metal)	NA	NA	NA
Chromium VI (Cr+6) Content(µg/cm <sup>2</sup> ) (for metal)	ND	ND	ND
Lead (Pb) Content	ND	ND	ND
Mercury (Hg) Content	ND	ND	ND
Flame Retardants			
<b>Polybrominated Biphenyls (PBB)</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
Monobromobiphenyl (MonoBB)	NA	NA	NA
Dibromobiphenyl (DiBB)	NA	NA	NA
Tribromobiphenyl (TriBB)	NA	NA	NA
Tetrabromobiphenyl (TetraBB)	NA	NA	NA
Pentabromobiphenyl (PentaBB)	NA	NA	NA
Hexabromobiphenyl (HexaBB)	NA	NA	NA
Heptabromobiphenyl (HeptaBB)	NA	NA	NA
Octabromobiphenyl (OctaBB)	NA	NA	NA
Nonabromobiphenyl (NonaBB)	NA	NA	NA
Decabromobiphenyl (DecaBB)	NA	NA	NA
<b>Polybrominated Diphenyl Ethers (PBDE)</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
Monobromodiphenyl Ether (MonoBDE)	NA	NA	NA
Dibromodiphenyl Ether (DiBDE)	NA	NA	NA
Tribromodiphenyl Ether (TriBDE)	NA	NA	NA
Tetrabromodiphenyl Ether (TetraBDE)	NA	NA	NA
Pentabromodiphenyl Ether (PentaBDE)	NA	NA	NA
Hexabromodiphenyl Ether (HexaBDE)	NA	NA	NA
Heptabromodiphenyl Ether (HeptaBDE)	NA	NA	NA
Octabromodiphenyl Ether (OctaBDE)	NA	NA	NA
Nonabromodiphenyl Ether (NonaBDE)	NA	NA	NA
Decabromodiphenyl Ether (DecaBDE)	NA	NA	NA
<b>Phthalates</b>			
Dibutyl Phthalate (DBP)	NA	NA	NA
Diethyl Hexyl Phthalate (DEHP)	NA	NA	NA
Benzyl Butyl Phthalate (BBP)	NA	NA	NA
Diisobutyl Phthalate (DIBP)	NA	NA	NA

Remarks : ppm=Parts per million based on dry weight of sample  
µg/cm<sup>2</sup>=Microgram per square centimetre  
mg/kg with 50 cm<sup>2</sup>=Milligram per kilogram with 50 square centimetre  
ND =Not detected      NA =Not applicable      NR =Not requested

Estimated Total Uncertainty = (Heavy Metal: ±7% , PBB/PBDE: ±6%, Phthalates: ±6%)

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**(A) TEST RESULT SUMMARY ACCORDING TO IEC 62321**

TESTING ITEM	RESULT		
	Part		
	1.19	1.20	1.21
Cadmium (Cd) Content	ND	ND	ND
Chromium VI (Cr+6) Content(ppm) (for non metal)	NA	NA	NA
Chromium VI (Cr+6) Content( $\mu\text{g}/\text{cm}^2$ ) (for metal)	ND	ND	ND
Lead (Pb) Content	ND	ND	ND
Mercury (Hg) Content	ND	ND	ND
Flame Retardants			
<b>Polybrominated Biphenyls (PBB)</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
Monobromobiphenyl (MonoBB)	NA	NA	NA
Dibromobiphenyl (DiBB)	NA	NA	NA
Tribromobiphenyl (TriBB)	NA	NA	NA
Tetrabromobiphenyl (TetraBB)	NA	NA	NA
Pentabromobiphenyl (PentaBB)	NA	NA	NA
Hexabromobiphenyl (HexaBB)	NA	NA	NA
Heptabromobiphenyl (HeptaBB)	NA	NA	NA
Octabromobiphenyl (OctaBB)	NA	NA	NA
Nonabromobiphenyl (NonaBB)	NA	NA	NA
Decabromobiphenyl (DecaBB)	NA	NA	NA
<b>Polybrominated Diphenyl Ethers (PBDE)</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
Monobromodiphenyl Ether (MonoBDE)	NA	NA	NA
Dibromodiphenyl Ether (DiBDE)	NA	NA	NA
Tribromodiphenyl Ether (TriBDE)	NA	NA	NA
Tetrabromodiphenyl Ether (TetraBDE)	NA	NA	NA
Pentabromodiphenyl Ether (PentaBDE)	NA	NA	NA
Hexabromodiphenyl Ether (HexaBDE)	NA	NA	NA
Heptabromodiphenyl Ether (HeptaBDE)	NA	NA	NA
Octabromodiphenyl Ether (OctaBDE)	NA	NA	NA
Nonabromodiphenyl Ether (NonaBDE)	NA	NA	NA
Decabromodiphenyl Ether (DecaBDE)	NA	NA	NA
<b>Phthalates</b>			
Dibutyl Phthalate (DBP)	NA	NA	NA
Diethyl Hexyl Phthalate (DEHP)	NA	NA	NA
Benzyl Butyl Phthalate (BBP)	NA	NA	NA
Diisobutyl Phthalate (DIBP)	NA	NA	NA

Remarks : ppm=Parts per million based on dry weight of sample  
 $\mu\text{g}/\text{cm}^2$ =Microgram per square centimetre  
 mg/kg with 50  $\text{cm}^2$ =Milligram per kilogram with 50 square centimetre  
 ND =Not detected      NA =Not applicable      NR =Not requested

Estimated Total Uncertainty = (Heavy Metal:  $\pm 7\%$  , PBB/PBDE:  $\pm 6\%$ , Phthalates:  $\pm 6\%$ )

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**(A) TEST RESULT SUMMARY ACCORDING TO IEC 62321**

TESTING ITEM	RESULT		
	Part		
	1.22	1.23	1.24
Cadmium (Cd) Content	ND	ND	ND
Chromium VI (Cr+6) Content(ppm) (for non metal)	ND	ND	ND
Chromium VI (Cr+6) Content( $\mu\text{g}/\text{cm}^2$ ) (for metal)	NA	NA	NA
Lead (Pb) Content	16729 ppm#	ND	311 ppm
Mercury (Hg) Content	ND	ND	ND
Flame Retardants			
<b>Polybrominated Biphenyls (PBB)</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
Monobromobiphenyl (MonoBB)	NA	NA	NA
Dibromobiphenyl (DiBB)	NA	NA	NA
Tribromobiphenyl (TriBB)	NA	NA	NA
Tetrabromobiphenyl (TetraBB)	NA	NA	NA
Pentabromobiphenyl (PentaBB)	NA	NA	NA
Hexabromobiphenyl (HexaBB)	NA	NA	NA
Heptabromobiphenyl (HeptaBB)	NA	NA	NA
Octabromobiphenyl (OctaBB)	NA	NA	NA
Nonabromobiphenyl (NonaBB)	NA	NA	NA
Decabromobiphenyl (DecaBB)	NA	NA	NA
<b>Polybrominated Diphenyl Ethers (PBDE)</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
Monobromodiphenyl Ether (MonoBDE)	NA	NA	NA
Dibromodiphenyl Ether (DiBDE)	NA	NA	NA
Tribromodiphenyl Ether (TriBDE)	NA	NA	NA
Tetrabromodiphenyl Ether (TetraBDE)	NA	NA	NA
Pentabromodiphenyl Ether (PentaBDE)	NA	NA	NA
Hexabromodiphenyl Ether (HexaBDE)	NA	NA	NA
Heptabromodiphenyl Ether (HeptaBDE)	NA	NA	NA
Octabromodiphenyl Ether (OctaBDE)	NA	NA	NA
Nonabromodiphenyl Ether (NonaBDE)	NA	NA	NA
Decabromodiphenyl Ether (DecaBDE)	NA	NA	NA
<b>Phthalates</b>			
Dibutyl Phthalate (DBP)	NA	NA	NA
Diethyl Hexyl Phthalate (DEHP)	NA	NA	NA
Benzyl Butyl Phthalate (BBP)	NA	NA	NA
Diisobutyl Phthalate (DIBP)	NA	NA	NA

Remarks : ppm=Parts per million based on dry weight of sample  
 $\mu\text{g}/\text{cm}^2$ =Microgram per square centimetre  
 mg/kg with 50  $\text{cm}^2$ =Milligram per kilogram with 50 square centimetre  
 ND =Not detected      NA =Not applicable      NR =Not requested

#Lead (Pb) in electronic ceramic parts is exempted according to ROHS Directive.

Estimated Total Uncertainty = (Heavy Metal:  $\pm 7\%$  , PBB/PBDE:  $\pm 6\%$ , Phthalates:  $\pm 6\%$ )

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**(A) TEST RESULT SUMMARY ACCORDING TO IEC 62321**

TESTING ITEM	RESULT	
	Part	
	1.25	1.26
Cadmium (Cd) Content	ND	ND
Chromium VI (Cr+6) Content (ppm) (for non metal)	ND	ND
Chromium VI (Cr+6) Content (µg/cm <sup>2</sup> ) (for metal)	NA	NA
Lead (Pb) Content	ND	ND
Mercury (Hg) Content	ND	ND
Flame Retardants		
<b>Polybrominated Biphenyls (PBB)</b>	<b>NA</b>	<b>NA</b>
Monobromobiphenyl (MonoBB)	NA	NA
Dibromobiphenyl (DiBB)	NA	NA
Tribromobiphenyl (TriBB)	NA	NA
Tetrabromobiphenyl (TetraBB)	NA	NA
Pentabromobiphenyl (PentaBB)	NA	NA
Hexabromobiphenyl (HexaBB)	NA	NA
Heptabromobiphenyl (HeptaBB)	NA	NA
Octabromobiphenyl (OctaBB)	NA	NA
Nonabromobiphenyl (NonaBB)	NA	NA
Decabromobiphenyl (DecaBB)	NA	NA
<b>Polybrominated Diphenyl Ethers (PBDE)</b>	<b>NA</b>	<b>NA</b>
Monobromodiphenyl Ether (MonoBDE)	NA	NA
Dibromodiphenyl Ether (DiBDE)	NA	NA
Tribromodiphenyl Ether (TriBDE)	NA	NA
Tetrabromodiphenyl Ether (TetraBDE)	NA	NA
Pentabromodiphenyl Ether (PentaBDE)	NA	NA
Hexabromodiphenyl Ether (HexaBDE)	NA	NA
Heptabromodiphenyl Ether (HeptaBDE)	NA	NA
Octabromodiphenyl Ether (OctaBDE)	NA	NA
Nonabromodiphenyl Ether (NonaBDE)	NA	NA
Decabromodiphenyl Ether (DecaBDE)	NA	NA
<b>Phthalates</b>		
Dibutyl Phthalate (DBP)	NA	NA
Diethyl Hexyl Phthalate (DEHP)	NA	NA
Benzyl Butyl Phthalate (BBP)	NA	NA
Diisobutyl Phthalate (DIBP)	NA	NA

Remarks : ppm=Parts per million based on dry weight of sample  
µg/cm<sup>2</sup>=Microgram per square centimetre  
mg/kg with 50 cm<sup>2</sup>=Milligram per kilogram with 50 square centimetre  
ND =Not detected      NA =Not applicable      NR =Not requested

Estimated Total Uncertainty = (Heavy Metal: ±7% , PBB/PBDE: ±6%, Phthalates: ±6%)

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**B) REQUIREMENT :**

SUBSTANCE	LIMITS
Cadmium (Cd) Content	0.01 % (100 ppm)
Chromium VI (Cr+6) Content (ppm) (for non metal)	0.1 % (1000 ppm)
Chromium VI (Cr+6) Content ( $\mu\text{g}/\text{cm}^2$ ) for metal)	Colorimetric result < 0.10 $\mu\text{g}/\text{cm}^2$ ≥ 0.10 $\mu\text{g}/\text{cm}^2$ and ≤ 0.13 $\mu\text{g}/\text{cm}^2$ > 0.13 $\mu\text{g}/\text{cm}^2$ Qualitative Result Negative Inconclusive Positive
Lead (Pb) Content	0.1 % (1000 ppm)
Mercury (Hg) Content	0.1 % (1000 ppm)
Flame Retardants	0.1 % (1000 ppm)
Dibutyl Phthalate (DBP)	0.1 % (1000 ppm)
Diethyl Hexyl Phthalate (DEHP)	0.1 % (1000 ppm)
Benzyl Butyl Phthalate (BBP)	0.1 % (1000 ppm)
Diisobutyl Phthalate (DIBP)	0.1 % (1000 ppm)

**(C) TEST METHOD :**

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd) Content	With reference to IEC 62321-5:2013, by microwave or acid digestion and determined by ICP-OES	Plastic : 10 ppm, Metal : 4 ppm, Ceramic : 5 ppm
Lead (Pb) Content	With reference to IEC 62321-5:2013, by microwave or acid digestion and determined by ICP-OES	Plastic : 10 ppm, Metal : 4 ppm, Ceramic : 5 ppm
Mercury (Hg) Content	With reference to IEC 62321-4:2017, by microwave or acid digestion and determined by ICP-OES	Plastic : 10 ppm, Metal : 10 ppm, Ceramic : 5 ppm
Chromium VI (Cr6+) (For non-metal)	With reference to IEC 62321-7-2:2017, by alkaline digestion and determined by UV-VIS spectrophotometer	Plastic : 25 ppm (PVC based) /8.33 ppm (other)
Chromium VI (Cr6+) (For metal)	With reference to IEC 62321-7-1:2015, by boiling water extraction and determined by UV-VIS spectrophotometer	0.1 ppm with 50 cm <sup>2</sup> (IN TESTING SOLUTION)
PBBs/PBDEs	With reference to IEC 62321-6:2015, by solvent extraction and determined by GC/MS and HPLC	5 ppm
Phthalates	With reference to IEC 62321-8 (111/321/CD), by solvent extraction and determined by GC-MS.	50 ppm



Part 1.1



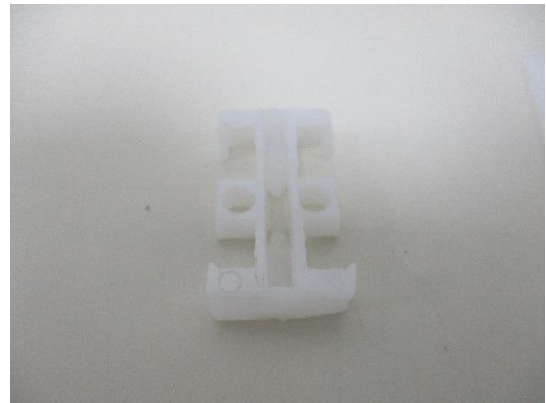
Part 1.2



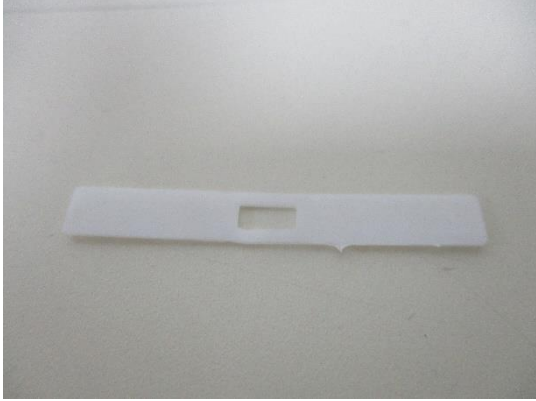
Part 1.3



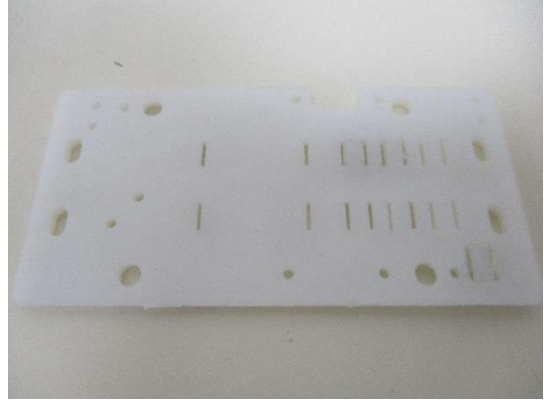
Part 1.4



**Part 1.5**



**Part 1.6**



**Part 1.7**



**Part 1.8**



**Part 1.9**



**Part 1.10**





**Part 1.11**



**Part 1.12**



**Part 1.13**



**Part 1.14**



**Part 1.15**



**Part 1.16**



**Part 1.17**



**Part 1.18**



**Part 1.19**



**Part 1.20**



**Part 1.21**



**Part 1.22**





**Part 1.23**



**Part 1.24**



**Part 1.25**



**Part 1.26**



**## END OF TEST REPORT ##**