Test Report -Products



**PASS** 

Report No.: 244457273b 001 Page 1 of 42

Client: FOXESS CO., LTD.

Contact Information: No.939, Jinhai Third Road, New Airport Industry Area, Longwan District,

Wenzhou, Zhejiang, P. R. China

*Test item(s):* 311 materials

Identification/ Rechargeable Li-ion Battery Module

Model No(s): CM2900, CM4100, CM4300H, CS2900, CS4100, CS4300H

Condition at delivery: Test item complete and undamaged.

Sample Receiving date: 2022-06-06, 2022-07-12, 2022-07-24, 2022-08-11, 2022-08-21

**Testing Period:** 2022-06-15 to 2022-08-25

Place of testing: Chemical laboratory Shenzhen

Test Specification: Test result:

 Cadmium, Lead, Chromium (VI), Mercury, Polybrominated biphenyls (PBB) and Polybrominated diphenyl ethers (PBDE), ROHS Phthalates (BBP, DBP,

DEHP, DIBP)

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

#### Other information:

The tested materials comply with the above listed requirement.

Remark: All data refer to 244422418b 001.

For and on behalf of

2022-11-02

TÜV Rheinland (Shanghai) Co., Ltd.

Ryan Chen / Section Manager

Date Name/Position

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.

'Decision Rule" document announced in our website (https://www.tuv.com/landingpage/en/qm-gcn/) describes the statement of conformity and its rule of enforcement for test results are applicable throughout this test report.



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#### **Material List:**

Item: Rechargeable Li-ion Battery Module

CM2900, CM4100, CM4300H, CS2900, CS4100, CS4300H

Material No.	Material	Color	Location
M001	Coating	Light grey/ dark grey	Refer to photo
M002	Metal	Dull silvery	Refer to photo
M003	Plastic	White	Refer to photo
M004	Plastic + adhesive	Black	Refer to photo
M005	Plastic	Yellow	Refer to photo
M006	Foam + adhesive	Grey	Refer to photo
M007	Plastic	Bright black	Refer to photo
M008-1	Plastic + adhesive	Dull white	Refer to photo (retest M008)
M009	Plastic + adhesive	Red	Refer to photo
M010	Metal	Silvery	Refer to photo
M011	Plastic	White	Refer to photo
M012	Metal	Silvery	Refer to photo
M013	Metal	Silvery	Refer to photo
M014	Metal	Silvery	Refer to photo
M015	Plastic	Black	Refer to photo
M016	Plastic	Dull white	Refer to photo
M017	PCB board	Brown	Refer to photo
M018	PCB board	Green	Refer to photo
M019	Glue	Translucent white	Refer to photo
M020	Solder	Silvery	Refer to photo
M021	Plastic + printing + adhesive	Silvery/ black	Refer to photo
M022	Metal	Silvery	Refer to photo
M023	Plastic	Grey	Refer to photo
M024	Plastic	Black	Refer to photo
M025	Metal	Silvery	Refer to photo
M026	Plastic	Black	Refer to photo
M027	Metal	Silvery	Refer to photo
M028	Metal	Silvery	Refer to photo



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M029         Paper + adhesive         Dark green         Refer to photo           M030         Plastic         Orange         Refer to photo           M031         Metal         Silvery         Refer to photo           M032         Plastic         Orange         Refer to photo           M033         Metal         Silvery         Refer to photo           M034         Metal         Silvery         Refer to photo           M035         Metal         Silvery         Refer to photo           M036         Plastic         Dark red         Refer to photo           M037-1         Metal         Golden         Refer to photo (retest M037)           M038         Plastic         Dark grey         Refer to photo           M039         Metal         Silvery         Refer to photo           M040         Metal         Silvery         Refer to photo           M041         Plastic         Light grey         Refer to photo           M042         Plastic         Light grey         Refer to photo           M043         Plastic + printing + adhesive         Transparent/ black         Refer to photo           M044         Metal         Silvery         Refer to photo           M045				
M031         Metal         Silvery         Refer to photo           M032         Plastic         Orange         Refer to photo           M033         Metal         Silvery         Refer to photo           M034         Metal         Silvery         Refer to photo           M035         Metal         Silvery         Refer to photo           M036         Plastic         Dark red         Refer to photo           M037-1         Metal         Golden         Refer to photo (retest M037)           M038         Plastic         Dark grey         Refer to photo           M039         Metal         Silvery         Refer to photo           M040         Metal         Silvery         Refer to photo           M041         Plastic         Light grey         Refer to photo           M042         Plastic         Light grey         Refer to photo           M043         Plastic         Light grey         Refer to photo           M044         Metal         Silvery         Refer to photo           M045         Plastic + printing + adhesive         Transparent grey         Refer to photo           M046         Plastic + printing + adhesive         Green         Refer to photo	M029	Paper + adhesive	Dark green	Refer to photo
M032 Plastic Orange Refer to photo M033 Metal Silvery Refer to photo M034 Metal Silvery Refer to photo M035 Metal Silvery Refer to photo M036 Plastic Dark red Refer to photo M037-1 Metal Golden Refer to photo (retest M037) M038 Plastic Dark grey Refer to photo M039 Metal Silvery Refer to photo M040 Metal Silvery Refer to photo M041 Plastic Light grey Refer to photo M042 Plastic Light grey Refer to photo M043 Plastic Light grey Refer to photo M044 Metal Silvery Refer to photo M045 Plastic Transparent/ black Refer to photo M046 Plastic Transparent grey Refer to photo M047 Plastic Frinting + adhesive Green Refer to photo M048 Plastic + printing + Black/ white Refer to photo M049 Plastic + printing Black/ white Refer to photo M050 Plastic Black Refer to photo M051 Plastic Transparent/ white/ black Refer to photo M052 Metal Silvery Refer to photo M053 Plastic Transparent Refer to Photo M054 Metal Refer to Photo M055 Metal Silvery Refer to Photo M056 Plastic Transparent Refer to Photo M057 Plastic Plastic Transparent Refer to Photo M057 Plastic Black Refer to Photo M057 Plastic Black Refer to Photo M056 Plastic Transparent Refer to Photo	M030	Plastic	Orange	Refer to photo
M033         Metal         Silvery         Refer to photo           M034         Metal         Silvery         Refer to photo           M035         Metal         Silvery         Refer to photo           M036         Plastic         Dark red         Refer to photo           M037-1         Metal         Golden         Refer to photo (retest M037)           M038         Plastic         Dark grey         Refer to photo           M039         Metal         Silvery         Refer to photo           M040         Metal         Silvery         Refer to photo           M041         Plastic         Light grey         Refer to photo           M042         Plastic         Light grey         Refer to photo           M043         Plastic         Light grey         Refer to photo           M044         Metal         Silvery         Refer to photo           M045         Plastic + printing + adhesive         Refer to photo           M046         Plastic         Transparent grey         Refer to photo           M047         Plastic + printing + adhesive         Green         Refer to photo           M048         Plastic + printing + adhesive         Refer to photo         Refer to photo	M031	Metal	Silvery	Refer to photo
M034         Metal         Silvery         Refer to photo           M035         Metal         Silvery         Refer to photo           M036         Plastic         Dark red         Refer to photo           M037-1         Metal         Golden         Refer to photo (retest M037)           M038         Plastic         Dark grey         Refer to photo           M039         Metal         Silvery         Refer to photo           M040         Metal         Silvery         Refer to photo           M041         Plastic         Light grey         Refer to photo           M042         Plastic         Light grey         Refer to photo           M043         Plastic         Light grey         Refer to photo           M044         Metal         Silvery         Refer to photo           M045         Plastic + printing + adhesive         Transparent/ black         Refer to photo           M046         Plastic         Transparent grey         Refer to photo           M047         Plastic + printing + adhesive         Green         Refer to photo           M048         Plastic + printing + adhesive         Green         Refer to photo           M050         Plastic + printing + adhesive         Refer to pho	M032	Plastic	Orange	Refer to photo
M036         Metal         Silvery         Refer to photo           M036         Plastic         Dark red         Refer to photo           M037-1         Metal         Golden         Refer to photo (retest M037)           M038         Plastic         Dark grey         Refer to photo           M039         Metal         Silvery         Refer to photo           M040         Metal         Silvery         Refer to photo           M041         Plastic         Light grey         Refer to photo           M042         Plastic         Light grey         Refer to photo           M043         Plastic         Light grey         Refer to photo           M044         Metal         Silvery         Refer to photo           M045         Plastic + printing + adhesive         Transparent/ black         Refer to photo           M046         Plastic         Transparent grey         Refer to photo           M047         Plastic + printing + adhesive         Green         Refer to photo           M048         Plastic + printing + adhesive         Green         Refer to photo           M050         Plastic + printing + adhesive         Transparent/ white/ black         Refer to photo           M051         Plastic	M033	Metal	Silvery	Refer to photo
M036         Plastic         Dark red         Refer to photo           M037-1         Metal         Golden         Refer to photo (retest M037)           M038         Plastic         Dark grey         Refer to photo           M039         Metal         Silvery         Refer to photo           M040         Metal         Silvery         Refer to photo           M041         Plastic         Light grey         Refer to photo           M042         Plastic         Light grey         Refer to photo           M043         Plastic         Light grey         Refer to photo           M044         Metal         Silvery         Refer to photo           M045         Plastic + printing + adhesive         Transparent grey         Refer to photo           M046         Plastic         White/ multicolor         Refer to photo           M047         Plastic + printing + adhesive         Green         Refer to photo           M048         Plastic + printing         Black/ white         Refer to photo           M049         Plastic + printing + adhesive         Transparent/ white/ black         Refer to photo           M050         Plastic         Transparent/ white/ black         Refer to photo           M051         Pl	M034	Metal	Silvery	Refer to photo
M037-1         Metal         Golden         Refer to photo (retest M037)           M038         Plastic         Dark grey         Refer to photo           M039         Metal         Silvery         Refer to photo           M040         Metal         Silvery         Refer to photo           M041         Plastic         Light grey         Refer to photo           M042         Plastic         Light grey         Refer to photo           M043         Plastic         Light grey         Refer to photo           M044         Metal         Silvery         Refer to photo           M045         Plastic + printing + adhesive         Transparent/ black         Refer to photo           M046         Plastic         Transparent grey         Refer to photo           M047         Plastic + printing + adhesive         Green         Refer to photo           M048         Plastic + printing + adhesive         Green         Refer to photo           M049         Plastic + printing + adhesive         Black/ white         Refer to photo           M050         Plastic + printing + adhesive         Transparent/ white/ black         Refer to photo           M051         Plastic         Black         Refer to photo           M052	M035	Metal	Silvery	Refer to photo
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M044       Metal       Silvery       Refer to photo         M045       Plastic + printing + adhesive       Transparent/ black       Refer to photo         M046       Plastic       Transparent grey       Refer to photo         M047       Plastic + printing + adhesive       White/ multicolor       Refer to photo         M048       Plastic + adhesive       Green       Refer to photo         M049       Plastic + printing       Black/ white       Refer to photo         M050       Plastic + printing + adhesive       Transparent/ white/ black       Refer to photo         M051       Plastic       Black       Refer to photo         M052       Metal       Silvery       Refer to photo         M053       Plastic       Transparent       Refer to photo         M054       Metal       Golden       Refer to photo         M055       Metal + plating       Silvery/ blue       Refer to photo         M056       Plastic       Transparent       Refer to photo         M057       Plastic       Brown       Refer to photo	M042	Plastic	Light grey	Refer to photo
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M046       Plastic       Transparent grey       Refer to photo         M047       Plastic + printing + adhesive       White/ multicolor       Refer to photo         M048       Plastic + adhesive       Green       Refer to photo         M049       Plastic + printing       Black/ white       Refer to photo         M050       Plastic + printing + adhesive       Transparent/ white/ black       Refer to photo         M051       Plastic       Black       Refer to photo         M052       Metal       Silvery       Refer to photo         M053       Plastic       Transparent       Refer to photo         M054       Metal       Golden       Refer to photo         M055       Metal + plating       Silvery/ blue       Refer to photo         M056       Plastic       Transparent       Refer to photo         M057       Plastic       Brown       Refer to photo	M044	Metal	Silvery	Refer to photo
M047       Plastic + printing + adhesive       White/ multicolor       Refer to photo         M048       Plastic + adhesive       Green       Refer to photo         M049       Plastic + printing       Black/ white       Refer to photo         M050       Plastic + printing + adhesive       Transparent/ white/ black       Refer to photo         M051       Plastic       Black       Refer to photo         M052       Metal       Silvery       Refer to photo         M053       Plastic       Transparent       Refer to photo         M054       Metal       Golden       Refer to photo         M055       Metal + plating       Silvery/ blue       Refer to photo         M056       Plastic       Transparent       Refer to photo         M057       Plastic       Brown       Refer to photo	M045		Transparent/ black	Refer to photo
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M049 Plastic + printing Black/ white Refer to photo  M050 Plastic + printing + adhesive Black Refer to photo  M051 Plastic Black Refer to photo  M052 Metal Silvery Refer to photo  M053 Plastic Transparent Refer to photo  M054 Metal Golden Refer to photo  M055 Metal + plating Silvery/ blue Refer to photo  M056 Plastic Transparent Refer to photo  M057 Plastic Brown Refer to photo	M047		White/ multicolor	Refer to photo
M050Plastic + printing + adhesiveTransparent/ white/ blackRefer to photoM051PlasticBlackRefer to photoM052MetalSilveryRefer to photoM053PlasticTransparentRefer to photoM054MetalGoldenRefer to photoM055Metal + platingSilvery/ blueRefer to photoM056PlasticTransparentRefer to photoM057PlasticBrownRefer to photo	M048	Plastic + adhesive	Green	Refer to photo
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M052MetalSilveryRefer to photoM053PlasticTransparentRefer to photoM054MetalGoldenRefer to photoM055Metal + platingSilvery/ blueRefer to photoM056PlasticTransparentRefer to photoM057PlasticBrownRefer to photo	M050		Transparent/ white/ black	Refer to photo
M053 Plastic Transparent Refer to photo  M054 Metal Golden Refer to photo  M055 Metal + plating Silvery/ blue Refer to photo  M056 Plastic Transparent Refer to photo  M057 Plastic Brown Refer to photo	M051	Plastic	Black	Refer to photo
M054     Metal     Golden     Refer to photo       M055     Metal + plating     Silvery/ blue     Refer to photo       M056     Plastic     Transparent     Refer to photo       M057     Plastic     Brown     Refer to photo	M052	Metal	Silvery	Refer to photo
M055 Metal + plating Silvery/ blue Refer to photo  M056 Plastic Transparent Refer to photo  M057 Plastic Brown Refer to photo	M053	Plastic	Transparent	Refer to photo
M056 Plastic Transparent Refer to photo  M057 Plastic Brown Refer to photo	M054	Metal	Golden	Refer to photo
M057 Plastic Brown Refer to photo	M055	Metal + plating	Silvery/ blue	Refer to photo
	M056	Plastic	Transparent	Refer to photo
M058 Plastic Brown/ white Refer to photo	M057	Plastic	Brown	Refer to photo
	M058	Plastic	Brown/ white	Refer to photo



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M059	Plastic	Blue	Refer to photo
M060	Plastic	Blue/ white	Refer to photo
M061	Plastic	Orange	Refer to photo
M062	Plastic	Orange/ white	Refer to photo
M063	Plastic	Green	Refer to photo
M064	Plastic	Green/ white	Refer to photo
M065	Metal	Coppery	Refer to photo
M066	Metal	Silvery	Refer to photo
M067	Plastic + printing + adhesive	White/ black	Refer to photo
M068	Textile + adhesive	Black	Refer to photo
M069	Plastic	White	Refer to photo
M070	Glue	White	Refer to photo
M071	Metal	Silvery	Refer to photo
M072	Plastic + printing	White/ black	Refer to photo
M073	Plastic	Black	Refer to photo
M074	Plastic	Red	Refer to photo
M075	Plastic + printing	White/ black	Refer to photo
M076	Textile	White	Refer to photo
M077	Plastic	White	Refer to photo
M078	Plastic	Red	Refer to photo
M079	Plastic	Black	Refer to photo
M080	Plastic	Yellow	Refer to photo
M081	Plastic	Purple	Refer to photo
M082	Plastic	Blue	Refer to photo
M083	Plastic	Red	Refer to photo
M084	Metal	Silvery	Refer to photo
M085	Plastic	Light blue	Refer to photo
M086	Plastic	Green	Refer to photo
M087	Plastic	Brown	Refer to photo
M088	Plastic	Grey	Refer to photo
M089	Plastic	Light orange	Refer to photo
M090	Metal	Dull silvery	Refer to photo



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M091	Plastic + printing	White/ black	Refer to photo
M092	Plastic	Yellow/ green	Refer to photo
M093	Plastic	Black	Refer to photo
M094	Plastic	Dark red	Refer to photo
M095	Metal	Silvery	Refer to photo
M096	Plastic	Black	Refer to photo
M097	Plastic	Dark red	Refer to photo
M098	Plastic	Matt black	Refer to photo
M099	Metal	Dull silvery	Refer to photo
M100	Metal	Dull silvery	Refer to photo
M101	Plastic	Black	Refer to photo
M102	Plastic	Dull blue	Refer to photo
M103	Plastic	Dull white	Refer to photo
M104	Plastic	Dull white	Refer to photo
M105	Plastic	Black	Refer to photo
M106	Plastic	Dull white	Refer to photo
M107	Plastic	Red	Refer to photo
M108	Plastic	Black	Refer to photo
M109	Plastic + printing	Black/ white	Refer to photo
M110	Plastic	White	Refer to photo
M111	Plastic	Red	Refer to photo
M112	Plastic	Black	Refer to photo
M113	Plastic	Yellow	Refer to photo
M114	Plastic	Purple	Refer to photo
M115	Plastic	Blue	Refer to photo
M116	Plastic	Orange	Refer to photo
M117	Plastic	Green	Refer to photo
M118-1	Plastic	Black	Refer to photo (retest M118)
M120	Plastic	Black	Refer to photo
M121	Plastic + printing	Black/ white	Refer to photo
M122	Plastic	Yellow/ green	Refer to photo
M123	Plastic	Dark red	Refer to photo



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M124	Plastic + printing	Dull red/ black	Refer to photo
M125	Metal	Golden	Refer to photo
M126	Metal	Silvery	Refer to photo
M127	Metal	Silvery	Refer to photo
M128	Metal	Silvery	Refer to photo
M129	Plastic + printing	Black/ white	Refer to photo
M130	Plastic	Brown	Refer to photo
M131	Plastic	Brown/ white	Refer to photo
M132	Plastic	Green	Refer to photo
M133	Plastic	Green/ white	Refer to photo
M134	Plastic	Blue	Refer to photo
M135	Plastic	Blue/ white	Refer to photo
M136	Plastic	Orange	Refer to photo
M137	Plastic	Orange/ white	Refer to photo
M138	Metal	Silvery	Refer to photo
M140	Plastic	Black	Refer to photo
M141	Plastic	Black	Refer to photo
M142	Plastic	Black	Refer to photo
M143	Glue	Black	Refer to photo
M144	Metal	Silvery	Refer to photo
M145	Metal	Golden	Refer to photo
M146	Solder	Silvery	Refer to photo
M147	PCB board	Green	Refer to photo
M148	Metal	Silvery	Refer to photo
M149	Metal	Silvery	Refer to photo
M150	Plastic	Blue	Refer to photo
M151	Plastic	Translucent white	Refer to photo
M152	Plastic	Translucent	Refer to photo
M153	Plastic	Grey	Refer to photo
M154	Plastic	Blue	Refer to photo
M155	Metal	Silvery	Refer to photo
M156	Plastic	Red	Refer to photo



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M157	Plastic	Black	Refer to photo
M158	Foam + adhesive	Black	Refer to photo
M159	Coating	Black	Refer to photo
M160	Plastic	Transparent	Refer to photo
M161	Metal	Golden	Refer to photo
M162	Plastic	Black	Refer to photo
M163-2	Plastic	Black	Refer to photo (retest M163)
M164	Plastic	Black	Refer to photo
M165	Plastic	Black	Refer to photo
M166	Plastic + adhesive	Black	Refer to photo
M167	Plastic	Black	Refer to photo
M168	Plastic	Blue	Refer to photo
M169	Plastic	Blue	Refer to photo
M170	Plastic	Yellow	Refer to photo
M171	Plastic	White	Refer to photo
M172	Plastic	Translucent white	Refer to photo
M173	Plastic	Black	Refer to photo
M174	Metal	Silvery	Refer to photo
M175	Plastic + printing + adhesive	White/ black	Refer to photo
M176	Sand	Light brown	Refer to photo
M177	Plastic	White	Refer to photo
M178	Plastic + Textile	Black	Refer to photo
M179	Plastic + Textile	White	Refer to photo
M180	Plastic	Light grey	Refer to photo
M181	Plastic	White	Refer to photo
M182	Plastic	Black	Refer to photo
M183	Metal	Silvery	Refer to photo
M184	Glue	Light grey	Refer to photo
M185	Plastic	Beige	Refer to photo
M186	Metal	Silvery	Refer to photo
M187	Metal	Silvery	Refer to photo
M188	Magnet	Silvery	Refer to photo



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M189	Metal	Silvery	Refer to photo
M190	Plastic	Black	Refer to photo
M191	Plastic	White	Refer to photo
M192	Plastic	Beige	Refer to photo
M193	Metal	Silvery	Refer to photo
M194	Metal	Coppery	Refer to photo
M195	Metal	Coppery	Refer to photo
M196	Plastic + adhesive	Transparent yellow	Refer to photo
M197	Metal	Coppery	Refer to photo
M198	Metal	Dull silvery	Refer to photo
M199	Plastic	Beige	Refer to photo
M200	Plastic + printing + adhesive	Multicolor	Refer to photo
M201	Metal	Silvery	Refer to photo
M202	Plastic + adhesive	Light green	Refer to photo
M203	Plastic + printing	Light grey/ black/ green	Refer to photo
M204	Plastic	Dark grey	Refer to photo
M205	Plastic	Green	Refer to photo
M206	Plastic	Beige	Refer to photo
M207	Metal	Silvery	Refer to photo
M208	Paper	Dark green	Refer to photo
M209	Metal	Bright silvery	Refer to photo
M210	Metal	Coppery	Refer to photo
M211	Metal	Silvery	Refer to photo
M212	Metal	Silvery	Refer to photo
M213	Plastic	White	Refer to photo
M214	Plastic	Beige	Refer to photo
M215	Metal	Silvery	Refer to photo
M216	Metal	Coppery/ silvery	Refer to photo
M217	Metal	Coppery	Refer to photo
M218	Plastic	Beige	Refer to photo
M219	Plastic + printing	Light brown/ red/ green	Refer to photo
M220	Metal	Silvery	Refer to photo
		,	'



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M221         Plastic         White         Refer to photo           M222         Metal + plating         Silvery/ black         Refer to photo           M223         Plastic         Dark brown         Refer to photo           M224         Plastic         Black         Refer to photo           M225         Metal         Golden         Refer to photo           M226         Metal + plating         Silvery/ black         Refer to photo           M227         Plastic         Red         Refer to photo           M228         Metal         Silvery         Refer to photo           M229         Metal         Silvery         Refer to photo           M230         Metal         Silvery         Refer to photo           M231         Plastic         Transparent         Refer to photo           M232         Solder         Silvery         Refer to photo           M233         PCB board         Green         Refer to photo           M234         Solder         Silvery         Refer to photo           M235         PCB board         Green         Refer to photo           M236         Solder         Silvery         Refer to photo           M238         Plastic				
M223         Plastic         Dark brown         Refer to photo           M224         Plastic         Black         Refer to photo           M225         Metal         Golden         Refer to photo           M226         Metal + plating         Silvery/ black         Refer to photo           M227         Plastic         Red         Refer to photo           M228         Metal         Silvery         Refer to photo           M229         Metal         Silvery         Refer to photo           M230         Metal         Silvery         Refer to photo           M231         Plastic         Transparent         Refer to photo           M232         Solder         Silvery         Refer to photo           M233         PCB board         Green         Refer to photo           M234         Solder         Silvery         Refer to photo           M235         PCB board         Green         Refer to photo           M236         Solder         Silvery         Refer to photo           M237         PCB board         Green         Refer to photo           M238         Plastic         Ref         Refer to photo           M240         Metal         Silvery <td>M221</td> <td>Plastic</td> <td>White</td> <td>Refer to photo</td>	M221	Plastic	White	Refer to photo
M224         Plastic         Black         Refer to photo           M225         Metal         Golden         Refer to photo           M226         Metal + plating         Silvery/ black         Refer to photo           M227         Plastic         Red         Refer to photo           M228         Metal         Silvery         Refer to photo           M229         Metal         Silvery         Refer to photo           M230         Metal         Silvery         Refer to photo           M231         Plastic         Transparent         Refer to photo           M232         Solder         Silvery         Refer to photo           M233         PCB board         Green         Refer to photo           M234         Solder         Silvery         Refer to photo           M235         PCB board         Green         Refer to photo           M236         Solder         Silvery         Refer to photo           M237         PCB board         Green         Refer to photo           M238         Plastic         Red         Refer to photo           M239         Metal         Silvery         Refer to photo           M240         Metal         Silvery	M222	Metal + plating	Silvery/ black	Refer to photo
M225         Metal         Golden         Refer to photo           M226         Metal + plating         Silvery/ black         Refer to photo           M227         Plastic         Red         Refer to photo           M228         Metal         Silvery         Refer to photo           M229         Metal         Silvery         Refer to photo           M230         Metal         Silvery         Refer to photo           M231         Plastic         Transparent         Refer to photo           M232         Solder         Silvery         Refer to photo           M233         PCB board         Green         Refer to photo           M234         Solder         Silvery         Refer to photo           M235         PCB board         Green         Refer to photo           M236         Solder         Silvery         Refer to photo           M237         PCB board         Green         Refer to photo           M238         Plastic         Red         Refer to photo           M239         Metal         Silvery         Refer to photo           M240         Metal         Silvery         Refer to photo           M241         Plastic         White	M223	Plastic	Dark brown	Refer to photo
M226         Metal + plating         Silvery/ black         Refer to photo           M227         Plastic         Red         Refer to photo           M228         Metal         Silvery         Refer to photo           M229         Metal         Silvery         Refer to photo           M230         Metal         Silvery         Refer to photo           M231         Plastic         Transparent         Refer to photo           M232         Solder         Silvery         Refer to photo           M233         PCB board         Green         Refer to photo           M234         Solder         Silvery         Refer to photo           M235         PCB board         Green         Refer to photo           M236         Solder         Silvery         Refer to photo           M237         PCB board         Green         Refer to photo           M238         Plastic         Red         Refer to photo           M239         Metal         Silvery         Refer to photo           M240         Metal         Silvery         Refer to photo           M241         Plastic         White         Refer to photo           M242         Plastic         Biack	M224	Plastic	Black	Refer to photo
M227         Plastic         Red         Refer to photo           M228         Metal         Silvery         Refer to photo           M229         Metal         Silvery         Refer to photo           M230         Metal         Silvery         Refer to photo           M231         Plastic         Transparent         Refer to photo           M232         Solder         Silvery         Refer to photo           M233         PCB board         Green         Refer to photo           M234         Solder         Silvery         Refer to photo           M235         PCB board         Green         Refer to photo           M236         Solder         Silvery         Refer to photo           M237         PCB board         Green         Refer to photo           M238         Plastic         Red         Refer to photo           M239         Metal         Silvery         Refer to photo           M240         Metal         Silvery         Refer to photo           M241         Plastic         White         Refer to photo           M242         Plastic         Beige         Refer to photo           M243         Plastic         Black         Refer	M225	Metal	Golden	Refer to photo
M228       Metal       Silvery       Refer to photo         M229       Metal       Silvery       Refer to photo         M230       Metal       Silvery       Refer to photo         M231       Plastic       Transparent       Refer to photo         M232       Solder       Silvery       Refer to photo         M233       PCB board       Green       Refer to photo         M234       Solder       Silvery       Refer to photo         M235       PCB board       Green       Refer to photo         M236       Solder       Silvery       Refer to photo         M237       PCB board       Green       Refer to photo         M238       Plastic       Red       Refer to photo         M239       Metal       Silvery       Refer to photo         M240       Metal       Silvery       Refer to photo         M241       Plastic       White       Refer to photo         M242       Plastic       White       Refer to photo         M243       Plastic       Biack       Refer to photo         M244       Plastic       Black       Refer to photo         M245       Plastic       Dark grey       Refer to phot	M226	Metal + plating	Silvery/ black	Refer to photo
M229       Metal       Silvery       Refer to photo         M230       Metal       Silvery       Refer to photo         M231       Plastic       Transparent       Refer to photo         M232       Solder       Silvery       Refer to photo         M233       PCB board       Green       Refer to photo         M234       Solder       Silvery       Refer to photo         M235       PCB board       Green       Refer to photo         M236       Solder       Silvery       Refer to photo         M237       PCB board       Green       Refer to photo         M238       Plastic       Red       Refer to photo         M239       Metal       Silvery       Refer to photo         M240       Metal       Silvery       Refer to photo         M241       Plastic       White       Refer to photo         M242       Plastic       White       Refer to photo         M243       Plastic       Beige       Refer to photo         M244       Plastic       Black       Refer to photo         M245       Plastic       Dark grey       Refer to photo         M246       PCB board       Light green       Refer	M227	Plastic	Red	Refer to photo
M230       Metal       Silvery       Refer to photo         M231       Plastic       Transparent       Refer to photo         M232       Solder       Silvery       Refer to photo         M233       PCB board       Green       Refer to photo         M234       Solder       Silvery       Refer to photo         M235       PCB board       Green       Refer to photo         M236       Solder       Silvery       Refer to photo         M237       PCB board       Green       Refer to photo         M238       Plastic       Red       Refer to photo         M239       Metal       Silvery       Refer to photo         M240       Metal       Silvery       Refer to photo         M241       Plastic       White       Refer to photo         M242       Plastic       White       Refer to photo         M243       Plastic       Beige       Refer to photo         M244       Plastic       Black       Refer to photo         M245       Plastic       Dark grey       Refer to photo         M246       PCB board       Light green       Refer to photo         M247       Solder       Silvery       Refe	M228	Metal	Silvery	Refer to photo
M231       Plastic       Transparent       Refer to photo         M232       Solder       Silvery       Refer to photo         M233       PCB board       Green       Refer to photo         M234       Solder       Silvery       Refer to photo         M235       PCB board       Green       Refer to photo         M236       Solder       Silvery       Refer to photo         M237       PCB board       Green       Refer to photo         M238       Plastic       Red       Refer to photo         M239       Metal       Silvery       Refer to photo         M240       Metal       Silvery       Refer to photo         M241       Plastic       White       Refer to photo         M242       Plastic       White       Refer to photo         M243       Plastic       Beige       Refer to photo         M243       Plastic       Black       Refer to photo         M244       Plastic       Dark grey       Refer to photo         M245       Plastic       Dark grey       Refer to photo         M246       PCB board       Light green       Refer to photo         M247       Solder       Silvery	M229	Metal	Silvery	Refer to photo
M232SolderSilveryRefer to photoM233PCB boardGreenRefer to photoM234SolderSilveryRefer to photoM235PCB boardGreenRefer to photoM236SolderSilveryRefer to photoM237PCB boardGreenRefer to photoM238PlasticRedRefer to photoM239MetalSilveryRefer to photoM240MetalSilveryRefer to photoM241PlasticWhiteRefer to photoM242PlasticWhiteRefer to photoM243PlasticBeigeRefer to photoM244PlasticBlackRefer to photoM245PlasticDark greyRefer to photoM246PCB boardLight greenRefer to photoM247SolderSilveryRefer to photoM248PCB boardGreenRefer to photoM249Electronic componentsBlackRefer to photoM250Electronic componentsBlackRefer to photoM251Electronic componentsOrangeRefer to photo	M230	Metal	Silvery	Refer to photo
M233PCB boardGreenRefer to photoM234SolderSilveryRefer to photoM235PCB boardGreenRefer to photoM236SolderSilveryRefer to photoM237PCB boardGreenRefer to photoM238PlasticRedRefer to photoM240MetalSilveryRefer to photoM241PlasticWhiteRefer to photoM242PlasticWhiteRefer to photoM243PlasticBeigeRefer to photoM244PlasticBlackRefer to photoM245PlasticDark greyRefer to photoM246PCB boardLight greenRefer to photoM247SolderSilveryRefer to photoM248PCB boardGreenRefer to photoM249Electronic componentsBlackRefer to photoM250Electronic componentsBlackRefer to photoM251Electronic componentsOrangeRefer to photo	M231	Plastic	Transparent	Refer to photo
M234       Solder       Silvery       Refer to photo         M235       PCB board       Green       Refer to photo         M236       Solder       Silvery       Refer to photo         M237       PCB board       Green       Refer to photo         M238       Plastic       Red       Refer to photo         M239       Metal       Silvery       Refer to photo         M240       Metal       Silvery       Refer to photo         M241       Plastic       White       Refer to photo         M242       Plastic       White       Refer to photo         M243       Plastic       Beige       Refer to photo         M244       Plastic       Black       Refer to photo         M245       Plastic       Dark grey       Refer to photo         M246       PCB board       Light green       Refer to photo         M247       Solder       Silvery       Refer to photo         M248       PCB board       Green       Refer to photo         M249       Electronic components       Black       Refer to photo         M250       Electronic components       Orange       Refer to photo	M232	Solder	Silvery	Refer to photo
M235       PCB board       Green       Refer to photo         M236       Solder       Silvery       Refer to photo         M237       PCB board       Green       Refer to photo         M238       Plastic       Red       Refer to photo         M239       Metal       Silvery       Refer to photo         M240       Metal       Silvery       Refer to photo         M241       Plastic       White       Refer to photo         M242       Plastic       White       Refer to photo         M243       Plastic       Beige       Refer to photo         M244       Plastic       Black       Refer to photo         M245       Plastic       Dark grey       Refer to photo         M246       PCB board       Light green       Refer to photo         M247       Solder       Silvery       Refer to photo         M248       PCB board       Green       Refer to photo         M249       Electronic components       Black       Refer to photo         M250       Electronic components       Orange       Refer to photo	M233	PCB board	Green	Refer to photo
M236       Solder       Silvery       Refer to photo         M237       PCB board       Green       Refer to photo         M238       Plastic       Red       Refer to photo         M239       Metal       Silvery       Refer to photo         M240       Metal       Silvery       Refer to photo         M241       Plastic       White       Refer to photo         M242       Plastic       White       Refer to photo         M243       Plastic       Beige       Refer to photo         M244       Plastic       Black       Refer to photo         M245       Plastic       Dark grey       Refer to photo         M246       PCB board       Light green       Refer to photo         M247       Solder       Silvery       Refer to photo         M248       PCB board       Green       Refer to photo         M249       Electronic components       Black       Refer to photo         M250       Electronic components       Black       Refer to photo         M251       Electronic components       Orange       Refer to photo	M234	Solder	Silvery	Refer to photo
M237PCB boardGreenRefer to photoM238PlasticRedRefer to photoM239MetalSilveryRefer to photoM240MetalSilveryRefer to photoM241PlasticWhiteRefer to photoM242PlasticWhiteRefer to photoM243PlasticBeigeRefer to photoM244PlasticBlackRefer to photoM245PlasticDark greyRefer to photoM246PCB boardLight greenRefer to photoM247SolderSilveryRefer to photoM248PCB boardGreenRefer to photoM249Electronic componentsBlackRefer to photoM250Electronic componentsBlackRefer to photoM251Electronic componentsOrangeRefer to photo	M235	PCB board	Green	Refer to photo
M238PlasticRedRefer to photoM239MetalSilveryRefer to photoM240MetalSilveryRefer to photoM241PlasticWhiteRefer to photoM242PlasticWhiteRefer to photoM243PlasticBeigeRefer to photoM244PlasticBlackRefer to photoM245PlasticDark greyRefer to photoM246PCB boardLight greenRefer to photoM247SolderSilveryRefer to photoM248PCB boardGreenRefer to photoM249Electronic componentsBlackRefer to photoM250Electronic componentsBlackRefer to photoM251Electronic componentsOrangeRefer to photo	M236	Solder	Silvery	Refer to photo
M239MetalSilveryRefer to photoM240MetalSilveryRefer to photoM241PlasticWhiteRefer to photoM242PlasticWhiteRefer to photoM243PlasticBeigeRefer to photoM244PlasticBlackRefer to photoM245PlasticDark greyRefer to photoM246PCB boardLight greenRefer to photoM247SolderSilveryRefer to photoM248PCB boardGreenRefer to photoM249Electronic componentsBlackRefer to photoM250Electronic componentsBlackRefer to photoM251Electronic componentsOrangeRefer to photo	M237	PCB board	Green	Refer to photo
M240MetalSilveryRefer to photoM241PlasticWhiteRefer to photoM242PlasticWhiteRefer to photoM243PlasticBeigeRefer to photoM244PlasticBlackRefer to photoM245PlasticDark greyRefer to photoM246PCB boardLight greenRefer to photoM247SolderSilveryRefer to photoM248PCB boardGreenRefer to photoM249Electronic componentsBlackRefer to photoM250Electronic componentsBlackRefer to photoM251Electronic componentsOrangeRefer to photo	M238	Plastic	Red	Refer to photo
M241PlasticWhiteRefer to photoM242PlasticWhiteRefer to photoM243PlasticBeigeRefer to photoM244PlasticBlackRefer to photoM245PlasticDark greyRefer to photoM246PCB boardLight greenRefer to photoM247SolderSilveryRefer to photoM248PCB boardGreenRefer to photoM249Electronic componentsBlackRefer to photoM250Electronic componentsBlackRefer to photoM251Electronic componentsOrangeRefer to photo	M239	Metal	Silvery	Refer to photo
M242       Plastic       White       Refer to photo         M243       Plastic       Beige       Refer to photo         M244       Plastic       Black       Refer to photo         M245       Plastic       Dark grey       Refer to photo         M246       PCB board       Light green       Refer to photo         M247       Solder       Silvery       Refer to photo         M248       PCB board       Green       Refer to photo         M249       Electronic components       Black       Refer to photo         M250       Electronic components       Black       Refer to photo         M251       Electronic components       Orange       Refer to photo	M240	Metal	Silvery	Refer to photo
M243       Plastic       Beige       Refer to photo         M244       Plastic       Black       Refer to photo         M245       Plastic       Dark grey       Refer to photo         M246       PCB board       Light green       Refer to photo         M247       Solder       Silvery       Refer to photo         M248       PCB board       Green       Refer to photo         M249       Electronic components       Black       Refer to photo         M250       Electronic components       Black       Refer to photo         M251       Electronic components       Orange       Refer to photo	M241	Plastic	White	Refer to photo
M244PlasticBlackRefer to photoM245PlasticDark greyRefer to photoM246PCB boardLight greenRefer to photoM247SolderSilveryRefer to photoM248PCB boardGreenRefer to photoM249Electronic componentsBlackRefer to photoM250Electronic componentsBlackRefer to photoM251Electronic componentsOrangeRefer to photo	M242	Plastic	White	Refer to photo
M245PlasticDark greyRefer to photoM246PCB boardLight greenRefer to photoM247SolderSilveryRefer to photoM248PCB boardGreenRefer to photoM249Electronic componentsBlackRefer to photoM250Electronic componentsBlackRefer to photoM251Electronic componentsOrangeRefer to photo	M243	Plastic	Beige	Refer to photo
M246PCB boardLight greenRefer to photoM247SolderSilveryRefer to photoM248PCB boardGreenRefer to photoM249Electronic componentsBlackRefer to photoM250Electronic componentsBlackRefer to photoM251Electronic componentsOrangeRefer to photo	M244	Plastic	Black	Refer to photo
M247       Solder       Silvery       Refer to photo         M248       PCB board       Green       Refer to photo         M249       Electronic components       Black       Refer to photo         M250       Electronic components       Black       Refer to photo         M251       Electronic components       Orange       Refer to photo	M245	Plastic	Dark grey	Refer to photo
M248       PCB board       Green       Refer to photo         M249       Electronic components       Black       Refer to photo         M250       Electronic components       Black       Refer to photo         M251       Electronic components       Orange       Refer to photo	M246	PCB board	Light green	Refer to photo
M249     Electronic components     Black     Refer to photo       M250     Electronic components     Black     Refer to photo       M251     Electronic components     Orange     Refer to photo	M247	Solder	Silvery	Refer to photo
M250 Electronic components Black Refer to photo  M251 Electronic components Orange Refer to photo	M248	PCB board	Green	Refer to photo
M251 Electronic components Orange Refer to photo	M249	Electronic components	Black	Refer to photo
· · · · · · · · · · · · · · · · · · ·	M250	Electronic components	Black	Refer to photo
M252 Electronic components Blue Refer to photo	M251	Electronic components	Orange	Refer to photo
	M252	Electronic components	Blue	Refer to photo



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M253	Plastic	Matt black	Refer to photo
M254	Plastic	Dark grey	Refer to photo
M255	Electronic components	White/ dark green	Refer to photo
M256	Plastic	Black	Refer to photo
M257	Metal	Silvery	Refer to photo
M258	Metal	Coppery	Refer to photo
M259	Metal	Silvery/ coppery	Refer to photo
M260	Metal	Coppery	Refer to photo
M261	Metal	Silvery/ coppery	Refer to photo
M262	Plastic	Black	Refer to photo
M263	Plastic + printing	Brown/ white	Refer to photo
M264	Metal	Silvery	Refer to photo
M265	Plastic	Black	Refer to photo
M266	Electronic components	Black/ silvery	Refer to photo
M267	Plastic	Black	Refer to photo
M268	Plastic	White	Refer to photo
M269	Metal	Silvery	Refer to photo
M270	Plastic	Black	Refer to photo
M271	Electronic components	Black	Refer to photo
M272	Plastic	Black	Refer to photo
M273	Electronic components	Black	Refer to photo
M274	Plastic	Black	Refer to photo
M275	Magnet	Black	Refer to photo
M276	Glue	Black	Refer to photo
M277	Solder	Silvery	Refer to photo
M278	PCB board	Green	Refer to photo
M279	Metal	Coppery	Refer to photo
M280	Metal	Silvery	Refer to photo
M281	Electronic components	Black	Refer to photo
M282	Electronic components	Black	Refer to photo
M283	Electronic components	Black	Refer to photo
M284	Metal	Silvery	Refer to photo



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M285	Plastic	Black	Refer to photo
M286	Electronic components	Black	Refer to photo
M287	Electronic components	Black	Refer to photo
M288	Electronic components	Black	Refer to photo
M289	Electronic components	Black	Refer to photo
M290	Magnet	Matt black	Refer to photo
M291	Plastic + printing	Dark blue/ white	Refer to photo
M292	Metal + plating	Silvery/ black	Refer to photo
M293	Plastic	Black	Refer to photo
M294	Plastic	Black	Refer to photo
M295	Magnet	Black	Refer to photo
M296	Plastic	Black	Refer to photo
M297	Plastic + adhesive	Yellow	Refer to photo
M298	Plastic	Translucent	Refer to photo
M299	Plastic + adhesive	Beige	Refer to photo
M300	Plastic	Transparent/ orange	Refer to photo
M301	Metal	Coppery	Refer to photo
M302	Metal	Silvery	Refer to photo
M303	Electronic components	White/ silvery	Refer to photo
M304	Electronic components	Black	Refer to photo
M305	Solder	Silvery	Refer to photo
M306	PCB board	Green	Refer to photo
M307	Electronic components	Brown	Refer to photo
M308	Electronic components	Black/ white	Refer to photo
M309	Electronic components	Black	Refer to photo
M310	Electronic components	Black/ white	Refer to photo
M311	Metal	Silvery	Refer to photo
M312	Metal	Silvery	Refer to photo
M313	Metal	Silvery	Refer to photo



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### 1.Screening Test by XRF spectroscopy

Test Method: Cadmium, Lead, Mercury, Chromium, Bromine

-- With reference to IEC 62321-3-1:2013

#### **Test Result:**

Material No.	Cd	Cr	Pb	Hg	Br
M001	BL	BL	BL	BL	BL
M002	BL	BL	BL	BL	n.a.
M003	BL	BL	BL	BL	BL
M004	BL	BL	BL	BL	BL
M005	BL	BL	BL	BL	d.(*1)
M006	BL	BL	BL	BL	BL
M007	BL	BL	BL	BL	BL
M008-1	BL	BL	BL	BL	BL
M009	BL	BL	BL	BL	BL
M010	BL	BL	BL	BL	n.a.
M011	BL	BL	BL	BL	BL
M012	BL	d.(*1)	BL	BL	n.a.
M013	BL	BL	BL	BL	n.a.
M014	BL	BL	BL	BL	n.a.
M015	BL	BL	BL	BL	BL
M016	BL	BL	BL	BL	d.(*1)
M017	BL	BL	BL	BL	BL
M018	BL	BL	BL	BL	d.(*1)
M019	BL	BL	BL	BL	d.(*1)
M020	BL	BL	BL	BL	n.a.
M021	BL	BL	BL	BL	BL
M022	BL	BL	BL	BL	n.a.
M023	BL	BL	BL	BL	BL
M024	BL	BL	BL	BL	BL
M025	BL	d.(*1)	BL	BL	n.a.
M026	BL	BL	BL	BL	BL
M027	BL	d.(*1)	BL	BL	n.a.
M028	BL	d.(*1)	BL	BL	n.a.
M029	BL	BL	BL	BL	BL
M030	BL	BL	BL	BL	BL
M031	BL	BL	BL	BL	n.a.
M032	BL	BL	BL	BL	d.(*1)
M033	BL	BL	BL	BL	n.a.
M034	BL	d.(*1)	BL	BL	n.a.
M035	BL	BL	BL	BL	n.a.
M036	BL	BL	BL	BL	BL
M037-1	BL	BL	d.(*1)	BL	n.a.



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M038	BL	BL	BL	BL	BL
M039	BL	d.(*1)	BL	BL	n.a.
M040	BL	d.(*1)	BL	BL	n.a.
M041	BL	BL	BL	BL	BL
M042	BL	BL	BL	BL	BL
M043	BL	BL	BL	BL	BL
M044	BL	BL	BL	BL	n.a.
M045	BL	BL	BL	BL	BL
M046	BL	BL	BL	BL	BL
M047	BL	BL	BL	BL	BL
M048	BL	BL	BL	BL	BL
M049	BL	BL	BL	BL	BL
M050	BL	BL	BL	BL	BL
M051	BL	BL	BL	BL	BL
M052	BL	BL	BL	BL	n.a.
M053	BL	BL	BL	BL	BL
M054	BL	BL	BL	BL	n.a.
M055	BL	BL	BL	BL	n.a.
M056	BL	BL	BL	BL	BL
M057	BL	BL	BL	BL	BL
M058	BL	BL	BL	BL	BL
M059	BL	BL	BL	BL	BL
M060	BL	BL	BL	BL	BL
M061	BL	BL	BL	BL	BL
M062	BL	BL	BL	BL	BL
M063	BL	BL	BL	BL	BL
M064	BL	BL	BL	BL	BL
M065	BL	BL	BL	BL	n.a.
M066	BL	BL	BL	BL	n.a.
M067	BL	BL	BL	BL	BL
M068	BL	BL	BL	BL	BL
M069	BL	BL	BL	BL	BL
M070	BL	BL	BL	BL	BL
M071	BL	BL	BL	BL	n.a.
M072	BL	BL	BL	BL	BL
M073	BL	BL	BL	BL	BL
M074	BL	BL	BL	BL	BL
M075	BL	BL	BL	BL	BL
M076	BL	BL	BL	BL	BL
M077	BL	BL	BL	BL	BL
M078	BL	BL	BL	BL	BL
M079	BL	BL	BL	BL	BL
M080	BL	BL	BL	BL	BL
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M081	BL	BL	BL	BL	BL
M082	BL	BL	BL	BL	BL
M083	BL	BL	BL	BL	BL
M084	BL	BL	BL	BL	n.a.
M085	BL	BL	BL	BL	BL
M086	BL	BL	BL	BL	BL
M087	BL	BL	BL	BL	BL
M088	BL	BL	BL	BL	BL
M089	BL	BL	BL	BL	BL
M090	BL	BL	BL	BL	n.a.
M091	BL	BL	BL	BL	BL
M092	BL	BL	BL	BL	BL
M093	BL	BL	BL	BL	BL
M094	BL	BL	BL	BL	BL
M095	BL	BL	BL	BL	n.a.
M096	BL	BL	BL	BL	BL
M097	BL	BL	BL	BL	BL
M098	BL	BL	BL	BL	d.(*1)
M099	BL	BL	BL	BL	n.a.
M100	BL	BL	BL	BL	n.a.
M101	BL	BL	BL	BL	d.(*1)
M102	BL	BL	BL	BL	BL
M103	BL	BL	BL	BL	BL
M104	BL	BL	BL	BL	BL
M105	BL	BL	BL	BL	BL
M106	BL	BL	BL	BL	BL
M107	BL	BL	BL	BL	BL
M108	BL	BL	BL	BL	BL
M109	BL	BL	BL	BL	BL
M110	BL	BL	BL	BL	BL
M111	BL	BL	BL	BL	BL
M112	BL	BL	BL	BL	BL
M113	BL	BL	BL	BL	BL
M114	BL	BL	BL	BL	BL
M115	BL	BL	BL	BL	BL
M116	BL	BL	BL	BL	BL
M117	BL	BL	BL	BL	BL
M118-1	BL	BL	BL	BL	BL
M120	BL	BL	BL	BL	BL
M121	BL	BL	BL	BL	BL
M122	BL	BL	BL	BL	BL
M123	BL	BL	BL	BL	BL
M124	BL	BL	BL	BL	BL



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N440E	_1 /+4\	D.	_1 /+A\	Di	
M125	d.(*1)	BL	d.(*1)	BL	n.a.
M126	BL	BL	d.(*1)	BL	n.a.
M127	BL	BL	d.(*1)	BL	n.a.
M128	BL	BL	BL	BL	n.a.
M129	BL	BL	BL	BL	BL
M130	BL	BL	BL	BL	BL
M131	BL	BL	BL	BL	BL
M132	BL	BL	BL	BL	BL
M133	BL	BL	BL	BL	BL
M134	BL	BL	BL	BL	BL
M135	BL	BL	BL	BL	BL
M136	BL	BL	BL	BL	BL
M137	BL	BL	BL	BL	BL
M138	BL	BL	BL	BL	n.a.
M140	BL	BL	BL	BL	BL
M141	BL	BL	BL	BL	BL
M142	BL	BL	BL	BL	BL
M143	BL	BL	BL	BL	BL
M144	BL	BL	BL	BL	n.a.
M145	BL	BL	BL	BL	n.a.
M146	BL	BL	BL	BL	n.a.
M147	BL	BL	BL	BL	d.(*1)
M148	BL	BL	d.(*1)	BL	n.a.
M149	BL	BL	BL	BL	n.a.
M150	BL	BL	BL	BL	BL
M151	BL	BL	BL	BL	BL
M152	BL	BL	BL	BL	BL
M153	BL	BL	BL	BL	BL
M154	BL	BL	BL	BL	BL
M155	BL	BL	BL	BL	n.a.
M156	BL	BL	BL	BL	BL
M157	BL	BL	BL	BL	BL
M158	BL	BL	BL	BL	BL
M159	BL	BL	BL	BL	BL
M160	BL	BL	BL	BL	BL
M161	BL	BL	d.(*1)	BL	n.a.
M162	BL	BL	BL	BL	BL
M163-2	BL	BL	BL	BL	d.(*1)
M164	BL	BL	BL	BL	d.(*1)
M165	BL	BL	BL	BL	d.(*1)
M166	BL	BL	BL	BL	BL
M167	BL	BL	BL	BL	BL
M168	BL	BL	BL	BL	BL



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M169	BL	BL	BL	BL	BL
M170	BL	BL	BL	BL	BL
M171	BL	BL	BL	BL	BL
M172	BL	BL	BL	BL	BL
M173	BL	BL	BL	BL	d.(*1)
M174	BL	BL	BL	BL	n.a.
M175	BL	BL	BL	BL	BL
M176	BL	BL	BL	BL	BL
M177	BL	BL	BL	BL	BL
M178	BL	BL	BL	BL	BL
M179	BL	BL	BL	BL	BL
M180	BL	BL	BL	BL	d.(*1)
M181	BL	BL	BL	BL	BL
M182	BL	BL	BL	BL	BL
M183	BL	BL	BL	BL	n.a.
M184	BL	BL	BL	BL	BL
M185	BL	BL	BL	BL	d.(*1)
M186	BL	BL	BL	BL	n.a.
M187	BL	BL	BL	BL	n.a.
M188	BL	BL	BL	BL	n.a.
M189	BL	d.(*1)	BL	BL	n.a.
M190	BL	BL	BL	BL	d.(*1)
M191	BL	BL	BL	BL	d.(*1)
M192	BL	BL	BL	BL	d.(*1)
M193	BL	d.(*1)	BL	BL	n.a.
M194	BL	BL	BL	BL	n.a.
M195	BL	BL	BL	BL	n.a.
M196	BL	BL	BL	BL	d.(*1)
M197	BL	BL	BL	BL	n.a.
M198	BL	BL	BL	BL	n.a.
M199	BL	BL	BL	BL	d.(*1)
M200	BL	BL	BL	BL	BL
M201	BL	BL	BL	BL	n.a.
M202	BL	BL	BL	BL	BL
M203	BL	BL	BL	BL	d.(*1)
M204	BL	BL	BL	BL	d.(*1)
M205	BL	BL	BL	BL	BL
M206	BL	BL	BL	BL	BL
M207	BL	BL	BL	BL	n.a.
M208	BL	BL	BL	BL	BL
M209	BL	BL	BL	BL	n.a.
M210	BL	BL	BL	BL	n.a.
M211	BL	d.(*1)	BL	BL	n.a.
•	•				



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M211	BL	d.(*1)	BL	BL	n.a.
M212	BL	d.(*1)	BL	BL	n.a.
M213	BL	BL	BL	BL	d.(*1)
M214	BL	BL	BL	BL	BL
M215	BL	d.(*1)	BL	BL	n.a.
M216	BL	BL	BL	BL	n.a.
M217	BL	BL	BL	BL	n.a.
M218	BL	BL	BL	BL	BL
M219	BL	BL	BL	BL	BL
M220	BL	d.(*1)	BL	BL	n.a.
M221	BL	BL	BL	BL	BL
M222	BL	BL	BL	BL	n.a.
M223	BL	BL	BL	BL	BL
M224	BL	BL	BL	BL	BL
M225	BL	BL	BL	BL	n.a.
M226	BL	BL	BL	BL	n.a.
M227	BL	BL	BL	BL	BL
M228	BL	BL	d.(*1)	BL	n.a.
M229	BL	BL	BL	BL	n.a.
M230	BL	BL	BL	BL	n.a.
M231	BL	BL	BL	BL	BL
M232	BL	BL	BL	BL	n.a.
M233	BL	BL	BL	BL	d.(*1)
M234	BL	BL	BL	BL	n.a.
M235	BL	BL	BL	BL	d.(*1)
M236	BL	BL	BL	BL	n.a.
M237	BL	BL	BL	BL	d.(*1)
M238	BL	BL	BL	BL	BL
M239	BL	d.(*1)	BL	BL	n.a.
M240	BL	BL	d.(*1)	BL	n.a.
M241	BL	BL	BL	BL	BL
M242	BL	BL	BL	BL	d.(*1)
M243	BL	BL	BL	BL	d.(*1)
M244	BL	BL	BL	BL	BL
M245	BL	BL	BL	BL	BL
M246	BL	BL	BL	BL	d.(*1)
M247	BL	BL	BL	BL	n.a.
M248	BL	BL	BL	BL	d.(*1)
M249	BL	BL	BL	BL	d.(*1)
M250	BL	BL	d.(*1)	BL	BL
M251	BL	BL	BL	BL	BL
M252	BL	BL	BL	BL	BL
M253	BL	BL	BL	BL	BL
•					

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M254         BL         B						
M256         BL         BL         BL         BL         BL         BL         n.a.           M257         BL         BL         BL         BL         BL         n.a.           M259         BL         BL         BL         BL         BL         n.a.           M259         BL         BL         BL         BL         BL         n.a.           M260         BL         BL         BL         BL         BL         n.a.           M261         BL         BL         BL         BL         BL         n.a.           M261         BL         BL         BL         BL         BL         BL         n.a.           M262         BL	M254	BL	BL	BL	BL	d.(*1)
M257         BL         BL         BL         BL         BL         n.a.           M258         BL         BL         BL         BL         BL         n.a.           M260         BL         BL         BL         BL         BL         n.a.           M260         BL         BL         BL         BL         BL         n.a.           M261         BL         BL         BL         BL         BL         BL         BL         n.a.           M262         BL         BL <td>M255</td> <td>BL</td> <td>BL</td> <td>BL</td> <td>BL</td> <td>BL</td>	M255	BL	BL	BL	BL	BL
M258         BL         BL         BL         BL         BL         n.a.           M269         BL         BL         BL         BL         BL         n.a.           M261         BL         BL         BL         BL         BL         n.a.           M261         BL         BL         BL         BL         BL         n.a.           M262         BL         BL         BL         BL         BL         BL         d.d.(*1)           M263         BL	M256	BL	BL	BL	BL	d.(*1)
M259         BL         BL         BL         BL         BL         n.a.           M260         BL         BL         BL         BL         BL         n.a.           M261         BL         BL         BL         BL         BL         BL         n.a.           M262         BL	M257	BL	BL	BL	BL	n.a.
M260         BL         BL         BL         BL         n.a.           M261         BL         BL         BL         BL         n.a.           M262         BL         BL         BL         BL         BL         d.(*1)           M263         BL	M258	BL	BL	BL	BL	n.a.
M261         BL         BL         BL         BL         DL         D	M259	BL	BL	BL	BL	n.a.
M262         BL         B	M260	BL	BL	BL	BL	n.a.
M263         BL         MA         M	M261	BL	BL	BL	BL	n.a.
M264         BL         B	M262	BL	BL	BL	BL	d.(*1)
M265         BL         B	M263	BL	BL	BL	BL	BL
M266         BL         BL         BL         BL         BL         BL         BL         BL         ML         M	M264	BL	BL	BL	BL	n.a.
M267         BL         BL         BL         BL         d.(*1)           M268         BL         BL         BL         BL         BL         d.(*1)           M269         BL         BL         BL         BL         BL         DL	M265	BL	BL	BL	BL	BL
M268         BL         BL         BL         BL         BL         d.(*1)           M269         BL         BL         BL         BL         BL         BL         n.a.           M270         BL	M266	BL	BL	BL	BL	BL
M269         BL         B	M267	BL	BL	BL	BL	d.(*1)
M270         BL         B	M268	BL	BL	BL	BL	d.(*1)
M271         BL         ML         M	M269	BL	BL	BL	BL	n.a.
M272         BL         B	M270	BL	BL	BL	BL	BL
M273         BL         C(*1)         M275         BL	M271	BL	BL	BL	BL	BL
M274         BL         BL         BL         BL         BL         d.(*1)           M275         BL         BL         BL         BL         BL         BL         n.a.           M276         BL	M272	BL	BL	BL	BL	d.(*1)
M275         BL         B	M273	BL	BL	BL	BL	BL
M276         BL         BL         BL         BL         BL         BL         BL         BL         ML         M	M274	BL	BL	BL	BL	d.(*1)
M277         BL         DL         D	M275	BL	BL	BL	BL	n.a.
M278         BL         RL         R	M276	BL	BL	BL	BL	BL
M279         BL         BL         BL         BL         n.a.           M280         BL         BL         BL         BL         n.a.           M281         BL         BL         BL         BL         BL         BL           M282         BL	M277	BL	BL	BL	BL	n.a.
M280         BL         B	M278	BL	BL	BL	BL	BL
M281         BL         B	M279	BL	BL	BL	BL	n.a.
M282         BL         B	M280	BL	BL	BL	BL	n.a.
M283         BL         BL         BL         BL         BL         BL         BL         BL         BL         DL         D	M281	BL	BL	BL	BL	BL
M284         BL         BL         BL         BL         n.a.           M285         BL         BL         BL         BL         BL         BL           M286         BL         <	M282	BL	BL	BL	BL	BL
M285         BL         B	M283	BL	BL	BL	BL	BL
M286         BL         B	M284	BL	BL	BL	BL	n.a.
M287         BL         BL         d.(*1)         BL         BL           M288         BL         BL         BL         BL         BL           M289         BL         BL         BL         BL         BL           M290         BL         d.(*1)         BL         BL         BL         n.a.           M291         BL         BL         BL         BL         BL         BL           M292         BL         BL         BL         BL         BL         BL           M293         BL         BL         BL         BL         BL         BL           M294         BL         BL         BL         BL         BL         BL           M295         BL         BL         BL         BL         BL         n.a.	M285	BL	BL	BL	BL	BL
M288         BL         DL         D	M286	BL	BL	BL	BL	BL
M289         BL         BL         BL         BL         BL         BL         BL         ML         M	M287	BL	BL	d.(*1)	BL	BL
M290         BL         d.(*1)         BL         BL         n.a.           M291         BL         BL         BL         BL         BL         BL           M292         BL         BL         BL         BL         n.a.         n.a.           M293         BL         BL         BL         BL         BL         BL           M294         BL         BL         BL         BL         BL         BL           M295         BL         BL         BL         BL         BL         n.a.	M288	BL	BL	BL	BL	BL
M291         BL         BL         BL         BL         BL         BL         BL         ML         M	M289	BL	BL	BL	BL	BL
M292         BL         BL         BL         BL         n.a.           M293         BL         BL         BL         BL         BL           M294         BL         BL         BL         BL         BL           M295         BL         BL         BL         BL         n.a.	M290	BL	d.(*1)	BL	BL	n.a.
M293         BL         BL         BL         BL         BL           M294         BL         BL         BL         BL         BL           M295         BL         BL         BL         BL         n.a.	M291	BL	BL	BL	BL	BL
M294         BL         BL         BL         BL         BL           M295         BL         BL         BL         BL         n.a.	M292	BL	BL	BL	BL	n.a.
M295 BL BL BL n.a.	M293	BL	BL	BL	BL	BL
	M294	BL	BL	BL	BL	BL
M296 BL BL BL BL	M295	BL	BL	BL	BL	n.a.
	M296	BL	BL	BL	BL	BL



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M297	BL	BL	BL	BL	BL
M298	BL	BL	BL	BL	BL
M299	BL	BL	BL	BL	BL
M300	BL	BL	BL	BL	BL
M301	BL	BL	BL	BL	n.a.
M302	BL	d.(*1)	BL	BL	n.a.
M303	BL	BL	BL	BL	BL
M304	BL	d.(*1)	d.(*1)	BL	BL
M305	BL	BL	BL	BL	n.a.
M306	BL	BL	BL	BL	d.(*1)
M307	BL	BL	BL	BL	BL
M308	BL	BL	BL	BL	BL
M309	BL	BL	d.(*1)	BL	BL
M310	BL	BL	BL	BL	BL
M311	BL	BL	BL	BL	n.a.
M312	BL	d.(*1)	BL	BL	n.a.
M313	BL	d.(*1)	BL	BL	n.a.

Abbreviation: Pb = Lead

Cd Cadmium Hg Mercury Chromium Cr **Bromine** Br Not appliable n.a. = Below limit  $\mathsf{BL}$ = Over limit OL = Detected d.



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#### Remark:

- (\*1) The screening result was detected in the inconclusive region or over limits, thus the further wet chemistry tests are suggested.
- (\*2) Component(s)/ materials(s) with an area of less than 2 mm x 2 mm will not be selected for testing according to RoHS Directive 2011/65/EU due to technical reason. For the test sample does not have detail materials information provided by client, visually identical materials (e.g. wire insulation, solder points, etc.) will be considered as the same material. Solder points on a printing circuit board will be examined several times based on optical anomalies or discoloration of the solder point(s) unless the solder point(s) is obviously generated automatically during production. All other materials will be sampled and tested at one test point representatively.
- (\*3) The Chromium (Cr) and Bromine (Br) in the above result table indicate the total chromium and total bromine by means of XRF screening. PBBs, or PBDEs content shall be further confirmed with reference to IEC 62321-6:2015. Chromium (VI) shall be further confirmed with reference to IEC 62321-7-1:2015, IEC 62321-7-2:2017 or EN ISO 17075-1:2017.

#### XRF Screening limits for different matrices :

		Concentration (%)					
Material	Cd	Cr	Pb	Hg	Br		
Polymeric	BL≤0.006 <x<0.014≤ OL</x<0.014≤ 	BL≤0.064 <x< th=""><th>BL≤0.067<x<0.133≤ OL</x<0.133≤ </th><th>BL≤0.066<x< 0.134≤OL</x< </th><th>BL≤0.029<x< th=""></x<></th></x<>	BL≤0.067 <x<0.133≤ OL</x<0.133≤ 	BL≤0.066 <x< 0.134≤OL</x< 	BL≤0.029 <x< th=""></x<>		
Metallic	BL≤0.006 <x<0.014≤ OL</x<0.014≤ 	BL≤0.064 <x< th=""><th>BL≤0.067<x<0.133≤ OL</x<0.133≤ </th><th>BL≤0.066<x< 0.134≤OL</x< </th><th>n.a.</th></x<>	BL≤0.067 <x<0.133≤ OL</x<0.133≤ 	BL≤0.066 <x< 0.134≤OL</x< 	n.a.		
Composite materials	BL≤0.004 <x<0.016≤ OL</x<0.016≤ 	BL≤0.044 <x< th=""><th>BL≤0.047<x<0.153≤ OL</x<0.153≤ </th><th>BL≤0.046<x< 0.154≤OL</x< </th><th>BL≤0.024<x< th=""></x<></th></x<>	BL≤0.047 <x<0.153≤ OL</x<0.153≤ 	BL≤0.046 <x< 0.154≤OL</x< 	BL≤0.024 <x< th=""></x<>		

Remark: The symbol "X" marks the region where further investigation is necessary.



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# Cadmium, Lead, Chromium (VI), Mercury, Polybrominated biphenyls (PBB) and Polybrominated diphenyl ethers (PBDE)

Test Method: Total Cadmium, Lead, Mercury, Chromium

- Ref. to IEC 62321-4:2013+AMD1:2017 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

#### **Test Result:**

	Cd	Cr(VI)	Pb	Hg	PBBs (*)	PBDEs (*)
Maximum Permissible Limit (%)	0.01	0.1	0.1	0.1	0.1	0.1

			(%	<b>)</b>		
Material No.	Cd	Cr^	Pb	Hg	PBBs (*)	PBDEs (*)
material ivo.			RL (	%)		
	0.001	0.001	0.001	0.001	0.01	0.01
M005	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M016	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M018	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M019	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M032	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M037-1	n.a.	n.a.	2.82(*4)	n.a.	n.a.	n.a.
M098	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M101	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M125	0.0086	n.a.	2.70(*4)	n.a.	n.a.	n.a.
M126	n.a.	n.a.	2.96(*4)	n.a.	n.a.	n.a.
M127	n.a.	n.a.	1.80(*4)	n.a.	n.a.	n.a.
M147	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M148	n.a.	n.a.	2.48(*4)	n.a.	n.a.	n.a.
M161	n.a.	n.a.	1.76(*4)	n.a.	n.a.	n.a.
M163-2	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M164	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M165	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M173	n.a.	n.a.	n.a.	n.a.	< RL	< RL



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M180	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M185	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M190	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M191	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M192	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M196	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M199	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M203	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M204	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M213	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M228	n.a.	n.a.	3.22(*4)	n.a.	n.a.	n.a.
M233	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M235	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M237	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M240	n.a.	n.a.	3.08(*4)	n.a.	n.a.	n.a.
M242	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M243	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M246	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M248	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M249	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M250	n.a.	n.a.	3.46(*5)	n.a.	n.a.	n.a.
M254	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M256	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M262	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M267	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M268	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M272	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M274	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M287	n.a.	n.a.	0.584(*5)	n.a.	n.a.	n.a.
M304	n.a.	n.a.	1.09(*5)	n.a.	n.a.	n.a.
M306	n.a.	n.a.	n.a.	n.a.	< RL	< RL
M309	n.a.	n.a.	< RL	n.a.	n.a.	n.a.



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Material No.	Hexavalent Chromium Content (μg/cm²) (*1) RL: 0.10 μg/cm²
M012	negative
M025	negative
M027	negative
M028	negative
M034	negative
M039	negative
M040	negative
M189	negative
M193	negative
M211	negative
M212	negative
M215	negative
M220	negative
M239	negative
M290	negative
M302	negative
M312	negative
M313	negative

Material No.	Hexavalent Chromium Content (%) (*2) RL: 0.01%
M304	< RL

**Abbreviation:** Pb = Lead

Cd = Cadmium
Hg = Mercury
Cr = Chromium
Cr (VI) = Chromium (VI)

PBBs = Total Polybrominated Biphenyls PBDEs = Total Polybrominated Diphenyl Ethers

= Less thanRL = Reporting Limitn.a. = Not Applicable

^ = The total Chromium have been determined

% = Percentage



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#### Remark:

(\*) The reporting limit for each individual PBBs and individual PBDEs are :

Reporting Limit (%)					
	Bromobiphenyl	0.01			
	Dibromobiphenyl	0.01			
	Tribromobiphenyl	0.01			
	Tetrabromobiphenyl	0.01			
PBBs	Pentabromobiphenyl	0.01			
	Hexabromobiphenyl	0.01			
	Heptabromobiphenly	0.01			
	Octabromobiphenyl	0.01			
	Nonabromobiphenyl	0.01			
	Decabromobiphenyl	0.01			
	Bromodiphenylether	0.01			
	Dibromodiphenyl ether	0.01			
	Tribromodiphenyl ether	0.01			
	Tetrabromodiphenyl ether	0.01			
PBDEs	Pentabromodiphenyl ether	0.01			
	Hexabromodiphenyl ether	0.01			
	Heptabromodiphenyl ether	0.01			
	Octabromodiphenyl ether	0.01			
	Nonabromodiphenyl ether	0.01			
	Decabromodiphenyl ether	0.01			

(\*1) The total chromium content in Metal sample was found to be exceeded the maximum permissible limit (0.1%). Thus, the Chromium (VI) content in surface layer have been confirmed with reference to IEC 62321-7-1:2015 Annex.

	Chromium (VI) concentration	Qualitative result
Negative	<0.1µg/cm²	The sample is negative (-ve) for Cr(VI). The Cr(VI) concentration is below the limit of quantification. The coating is considered a non-Cr(VI) based coating
Inconclusive	≥0.1µg/cm² and ≤0.13 µg/cm²	The result is considered to be inconclusive. Unavoidable coating variations may influence the determination. Recommendation: if additional samples are available, perform a total of 3 trials to increase sampling surface area. Use the averaged result of the 3 trails for the final determination.
Positive	>0.13 µg/cm²	The sample is positive (+ve) for Cr(VI). Concentration is above the limit of quantification and the statistical margin of error. The sample coating is considered to contain Cr(VI).

<sup>\*2</sup> The total chromium content in plastic sample or electronic sample was found to be exceeded the maximum permissible limit (0.1%). Thus, the Chromium (VI) content have been confirmed with reference to IEC 62321-7-2:2017



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- \*4 According to (EU) 2018/741 and Annex III of directive 2011/65/EU, 6(c), as a copper alloy containing up to 4% lead by weight are exempted from requirement. This exemption applies to testing sample No.: M037-1, M125, M126, M127, M148, M161, M228, M240, M318.
- \*5 According to (EU) 2018/736 and Annex III of directive 2011/65/EU, 7(c)-I, Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound is exempted from requirement. This exemption applies to testing sample No.: M250, M287, M304.



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### BBP, DBP, DEHP, DIBP content

Test Method: IEC 62321-8:2017

#### **Test Result:**

	BBP	DBP	DEHP	DIBP
Maximum permissible Limit (%)	0.1	0.1	0.1	0.1

	Material No.	(%)				
Test No.		BBP	DBP	DEHP	DIBP	
			RL (%)			
		0.005	0.005	0.005	0.005	
T001	M001 + M159	< RL	< RL	< RL	< RL	
T002	M003 + M041 + M043	< RL	< RL	< RL	< RL	
T003	M004 + M005 + M007	< RL	< RL	< RL	< RL	
T004	M006 + M158	< RL	< RL	< RL	< RL	
T005	M011 + M016 + M069	< RL	< RL	< RL	< RL	
T006	M015 + M017 + M018	< RL	< RL	< RL	< RL	
T007	M019 + M070 + M143	< RL	< RL	< RL	< RL	
T008	M021 + M047 + M048	< RL	< RL	< RL	< RL	
T009	M023 + M024 + M029	< RL	< RL	< RL	< RL	
T010	M026 + M030 + M032	< RL	< RL	< RL	< RL	
T011	M036 + M038 + M042	< RL	< RL	< RL	< RL	
T012	M046 + M053 + M056	< RL	< RL	< RL	< RL	
T013	M049 + M051 + M129	< RL	< RL	< RL	< RL	
T014	M057 + M058 + M059	< RL	< RL	< RL	< RL	
T015	M060 + M061 + M062	< RL	< RL	< RL	< RL	
T016	M063 + M064 + M130	< RL	< RL	< RL	< RL	
T017	M067 + M068 + M076	< RL	< RL	< RL	< RL	
T018	M072 + M075 + M091	< RL	< RL	< RL	< RL	
T019	M073 + M074 + M077	< RL	< RL	0.007	< RL	
T020	M078 + M079 + M080	< RL	< RL	< RL	< RL	
T021	M081 + M082 + M083	< RL	< RL	< RL	< RL	



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T022	M085 + M086 + M087	< RL	< RL	< RL	< RL
T023	M088 + M089 + M110	< RL	< RL	< RL	< RL
T024	M092 + M093 + M094	< RL	< RL	< RL	< RL
T025	M096 + M097 + M111	< RL	0.029	< RL	< RL
T026	M098 + M101 + M102	< RL	< RL	< RL	< RL
T027	M103 + M104 + M106	< RL	< RL	< RL	< RL
T028	M105 + M108 + M120	< RL	< RL	< RL	< RL
T029	M107 + M156 + M227	< RL	< RL	< RL	< RL
T031	M112 + M113 + M114	< RL	< RL	< RL	< RL
T032	M115 + M116 + M117	< RL	< RL	< RL	< RL
T034	M122 + M123 + M124	< RL	< RL	< RL	< RL
T035	M131 + M132 + M133	< RL	< RL	< RL	< RL
T036	M134 + M135 + M136	< RL	< RL	< RL	< RL
T037	M137 + M181 + M182	< RL	< RL	< RL	< RL
T038	M140 + M142 + M147	< RL	< RL	< RL	< RL
T039	M150 + M151 + M154	< RL	< RL	< RL	< RL
T041	M157 + M160 + M162	< RL	< RL	< RL	< RL
T042	M164 + M165 + M170	< RL	< RL	< RL	< RL
T043	M166 + M167 + M172	< RL	< RL	< RL	< RL
T044	M168 + M169 + M265	< RL	< RL	< RL	< RL
T045	M171 + M173 + M180	< RL	< RL	< RL	< RL
T046	M175 + M177 + M184	< RL	< RL	< RL	< RL
T047	M185 + M192 + M199	< RL	< RL	< RL	< RL
T048	M190 + M191 + M196	< RL	< RL	< RL	< RL
T049	M203 + M204 + M205	< RL	< RL	< RL	< RL
T050	M206 + M208 + M213	< RL	< RL	< RL	< RL
T051	M214 + M218 + M221	< RL	< RL	< RL	< RL
T052	M219 + M238 + M241	< RL	< RL	< RL	< RL
T053	M231 + M242 + M243	< RL	< RL	< RL	< RL

TÜV Rheinland (Shanghai) Co., Ltd., Shanghai TÜV Rheinland Building, No. 177 , Lane 777, West Guangzhong Road, Jing'an District, Shanghai, 200072, P.R.China
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<b>T</b> 0=4	M233 + M235 +	-	Б.	Б.	Б.	

T054	M233 + M235 + M237	< RL	< RL	< RL	< RL
T055	M248 + M254 + M306	< RL	< RL	< RL	< RL
T056	M253 + M256 + M262	< RL	< RL	< RL	< RL
T057	M263 + M268 + M291	< RL	< RL	< RL	< RL
T058	M272 + M296 + M297	< RL	< RL	< RL	< RL
T059	M274 + M276 + M278	< RL	< RL	< RL	< RL
T060	M298 + M299 + M300	< RL	< RL	< RL	< RL
T061	M244 + M245 + M246	< RL	< RL	< RL	< RL
T062	M223 + M224 + M267	< RL	< RL	< RL	< RL
T063	M270 + M285 + M293	< RL	< RL	< RL	< RL
T065	M045 + M050	< RL	< RL	< RL	< RL
T066	M153 + M200 + M202	< RL	< RL	< RL	< RL
T067	M109	< RL	< RL	0.011	< RL
T069	M121	< RL	< RL	0.022	< RL
T071	M178	< RL	< RL	< RL	< RL
T072	M179	< RL	< RL	< RL	< RL
T073	M141	< RL	< RL	< RL	< RL
T074	M152	< RL	< RL	< RL	< RL
T077	M009	< RL	< RL	0.052	< RL
T078	M294	< RL	< RL	< RL	< RL
T080	M118-1	< RL	< RL	< RL	0.006
T082	M008-1	< RL	< RL	< RL	< RL
T084	M163-2	< RL	< RL	< RL	< RL

**Abbreviation:** BBP= Benzylbutyl phthalate

DBP= Dibutyl phthalate

DEHP= Bis(2-ethylhexyl) phthalate

DIBP= Diisobutyl phthalate

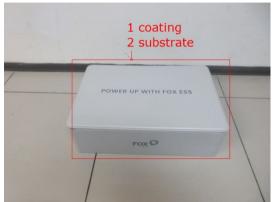
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RL = Reporting Limit N.A. = Not Applicable

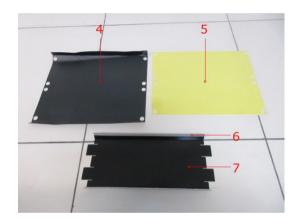
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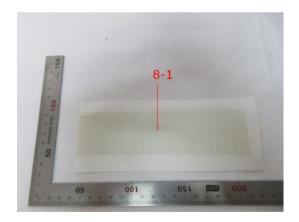
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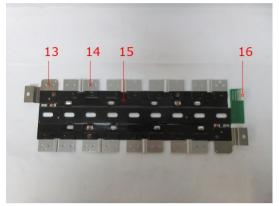


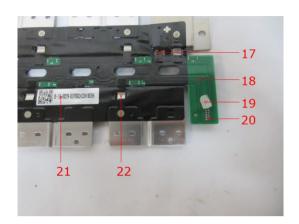


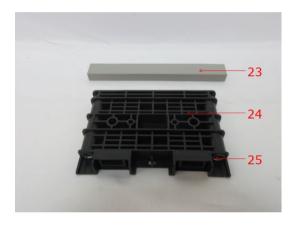




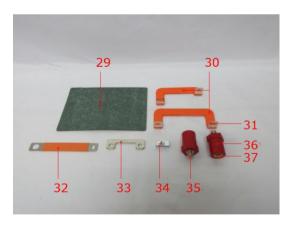
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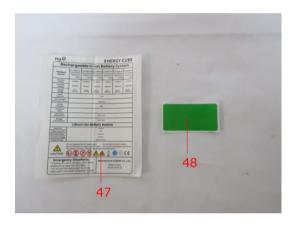




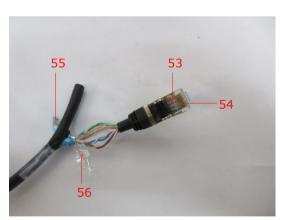
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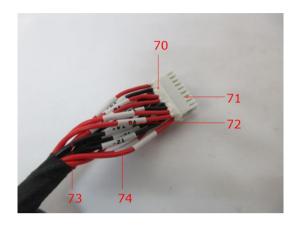




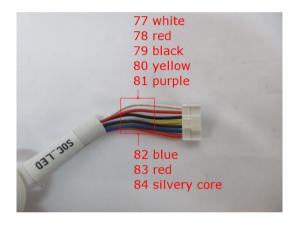


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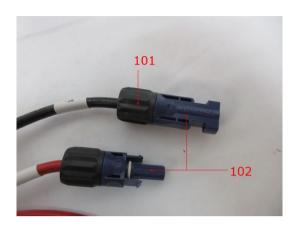






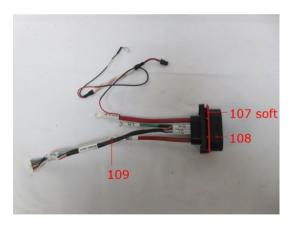
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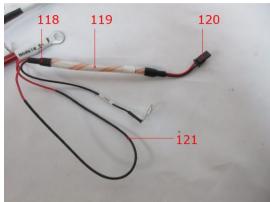








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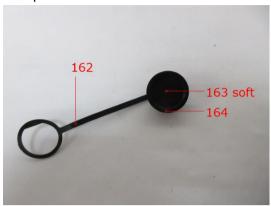








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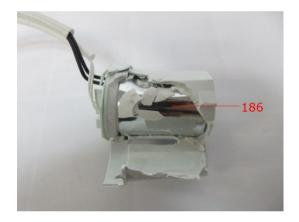


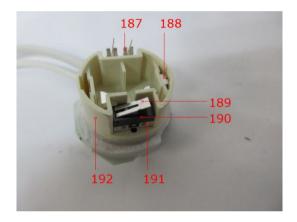


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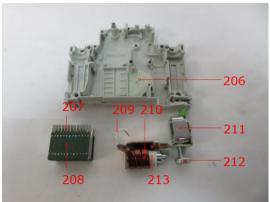




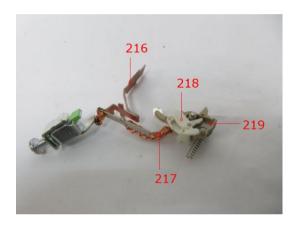


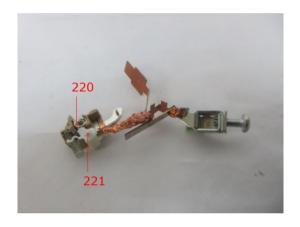


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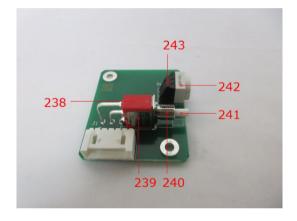


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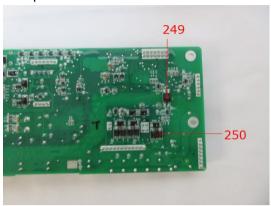






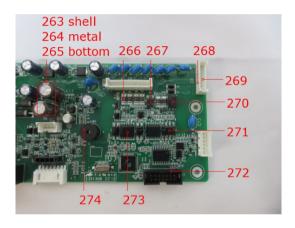


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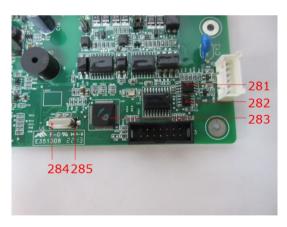






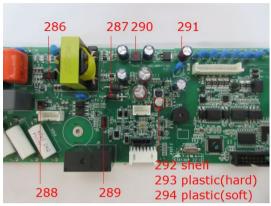


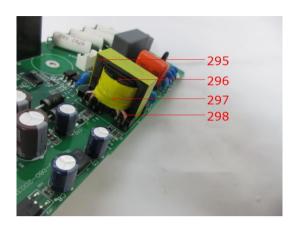


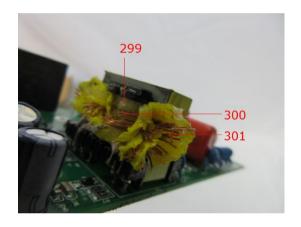


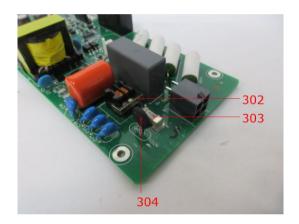


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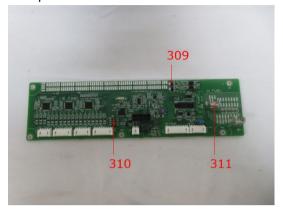








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Product (Provided by client)



#### General Terms and Conditions of Business of TÜV Rheinland in Greater China

These General Terms and Conditions of Business of TÜV Rheinland in Greater China ("GTCB") is made between the client and one or more member entities of TÜV Rheinland. In Greater China as applicable as the case may be ("TÜV Rheinland"). The Greater China have forester china have who concludes the contract not for the purpose of a daily use; the incorporated or unincorporated entity duly organized, validly existing and capable to form legally binding contracts under the applicable law. The following terms and conditions apply to agreed services including consultancy services, information, deliveries and similar services as well as an callary services and other secondary have serviced and other secondary and the services are serviced as a conditions of the client of any nature shall not soonly and shall between the district of the client of any nature shall not soonly and shall between the

1.3

surgescurs provised winn the scope of contract performance. Any standard terms and conditions of the client of any statute shall not apply and shall hereby be expressly and conditions of the client of any statute shall not apply and shall hereby be the contract of the client of the client shall form part of in the contract of an originity business relationship with the client, this CTBS shall also apply to future contracts with the client without TUV Rheinland having to refer to them separately in each individual case.

Unless otherwise agreed, all quotations submitted by TÜV Rheinland can be changed by TÜV Rheinland without notice prior to its acceptance and confirmation by the other party.

#### Coming into effect and duration of contracts

The contract shall come into effect for the agreed terms upon the quotation letter of TÜV Rheinland or a separate contractual document being signed by both contracting parties, or upon Rheinland or a separate contractual document being signed by both contracting parties, or upon Rheinland without receiving a quotation from TÜV Rheinland (quotation), TÜV Rheinland is in its soile discretion, enterfield to accept the order by giving written notice of such acceptance (including notice sent via effectivoir means) or by performing the requested services. The contract lare material sport her comprise the contract in accordance with article 3.1 and shall continue for the term agreed in the contract. It is contract term will be extended by if the contract produce for an extension of the contract term, the contract term will be extended by notice prior to the end of the contractual term. 3.1

Scope of services

The scope and type of the services to be provided by TÜV Rheinland shall be specified in the contractually agreed service scope of TÜV Rheinland shall be written confirmation of ode by TÜV Rheinland shall be sourced in TÜV Rheinland shall be the written confirmation of ode by TÜV Rheinland shall be the service description (e.g. checking the correctness and functionality of parts, products, processes, installations, organizations not listed in the service description, as well as the intended use and application of auch) are not owed. In particular, no responsibility is assumed for the orphit, urities this is expressly stated in the order.

The agreed services shall be performed in compliance with the regulations in force at the time the contract is entered inthe off to the order.

The agreed services shall be performed in compliance with the regulations in force at the time the contract is entered inthe off observations, in its sold description, the stated and nature of the assessment unless otherwise agreed in writing or if mandatory provisions require a specific procedure to be followed.

sment unless otherwise suprecent mining and the top top top the top to followed.

excution of the work there shall be no simultaneous assumption of any guarantee of the trees (proper quality) and working order of either tested or examined parts nor of the chress (proper quality) and working order of either tested or examined parts nor of the falsion as a whole and its upstream and/or downstream processes, organisations, use and falsion as a whole in accordance with regulations, nor of the systems on which the installation is based, or a construction of the proper of the

with regulatoris, unless tiesed releasons are level present yourset or yet included. In the case of interpection work, TOV Rheinland shall not be responsible for the accuracy or checking of the safety programmes or safety regulations on which the inspections are based, it is not to the contract of the safety programmes for the agreed sarvice scope change after conclusion of the contract, with a written notice to the client, TOV Rheinland shall be entitled to additional remuneration for resulting additional expenses, served contracts of the safety of the contract of the contract of third parties with the services of TOV Rheinland as well as making available of and justifying confidence in the work results (seat reports, test results, expert proposit, sect is not part of the agreed services. This also applies if the client passes on work results - in a rotation and contracts of the traction of the contract with TOV Rheinland as services.

or and justifying confidence in the work results (test reports, test results, expert reports, etc.) is not until or his not roll the agreed services. This side applies if the client passes on work results - in hill or in The client understands and agrees that in order to perform the contract with TUV Reinland, the client may need to sign one or more contractal agreements with amore third party(es) and establish legal relationships with that those third party(es) according to such certain the contractal party of the contractal provided by the contractal party of the contractal

5.3

Performance periods/dates of performance are based on estimates of the work involved which are prepared in line with the details provided by the client. They shall only be binding flowing confirmed as binding by TUV Rheinland in writing. It is investigated to the client of the provided of the periods of performance have been agreed, these periods shall not commence until the Arclies 5.1 and 5.2 also apply, even without express approval by the client, to all extensions of agreed periods/dates of performance not caused by TUV Rheinland. TUV Rheinlands in our responsible for a delay in performance, in periods if the client has not approved to the periods of the period of the period of the periods of the periods of the periods of the period of the periods of the periods of the period of the period

performance. If the client is obliged to comply with legal, officially prescribed and/or by the accreditor prescribed deadlines, it is the client's responsibility to agree on performance dates with TUV Rhentland, which enable the client to comply with the legal and/or officially prescribed deadlines. TUV within specifically stating that ensuring the deadlines is the contractual obligation of TUV Rhentland. 5.6

#### The client's obligation to cooperate

The client shall guarantee that all cooperation required on its part, its agents or third parties will be provided in good time and at no cost to TÜV Rheinland.

Design documents, supplies, auxiliary staff, etc. necessary for performance of the services shall be made available free of charge by the client. Moreover, collaborative action of the client must be undertaken in accordance with legal provisions, standards, safety regulations and accident prevention instructions. And the client represents and warrants that:

It has required statutory qualifications;

It doesn't have any illegal and dishonest behaviours or is not included in the list of Enterprises with Serious Illegal and Dishonest Acts of People's Republic of China.

If the client breaches the aforesaid representations and warranties, TÜV Rheinland is entitled to i) immediately terminate the contract/order without prior notice; and ii) withdraw the issued testing report/certificates if any.

It he scope of performance is not laid down in writing when the order is placed, invoicing shall be based on costs actually incurred. If no price is agreed in writing, invoicing shall be made in accordance with the price last of TVD Rheinland wild at the time of performance. Unless otherwise agreed, work shall be invoiced according to the progress of the work. If he execution of an order extends over more than one month and the value of the contract or the agreed fixed price exceeds £2,500.00 or equivalent value in local currency. TÜV Rheinland may demand payment on account or in instaliments.

7.2 7.3

8.3

Payment terms

All invoice amounts shall be due for payment within 30 days of the invoice date without deduction in receipt of the invoice. No discounts and rebates shall be granted. In receipt of the invoice, not expected the invoice and control of TDV Rhenfland as indicated on the invoice, stating the invoice and client numbers. In cases of default of payment, TDV Rhenland shall be entitled to claim default interest at the applicable short term loan interest rate publicly amounced by a reputable commercial bank in the bountry where TDV Rhenland short serves the right to claim further damages.

The provisions set to separe the transport of the invoice despite being granted a reasonable grace period. TDV Rhenland shall be entitled to cancel the controlate, whicheve the certificate, dain damages for non-performance and refuse to continue performance of the contract. The provisions set forth in article & shall also apply in cases involving returned cheques, cessastion of payment, commencement of insolvency proceedings against the client's assets or 8.4

ses in which the commencement of insolvency proceedings has been dismissed due to lack of

ons to the invoices of TÜV Rheinland shall be submitted in writing within two weeks of

Objections to the invoices of TUV Knewnerus aprecipations are receiped of the invoices of TUV Knewnerus aprecipation and the control of the invoices of the invoices. TUV Kneinland shall be entitled to dream and the beginning of a month if overheads and/or purchase costs have increased. In this case, TUV Kneinland shall notify the client in writing of the rise in fees. This notification shall be issued one morth prior to the date on which the rise in fees shall come into effect (period of notice of changes in fees). If the rise in fees remains under 5% exceeds 5% per contractual very the client shall be entitled to beminate the contract by the end of the period of notice of changes in fees, if the contract is not terminated, the changed fees shall be deemed to have been agreed upon by the time of the expiry of the notice period.

Only legally established and undisputed claims may be offset against claims by TÜV Rheinland. TÜV Rheinland shall have the right at all times to setoff any amount due or payable by the client, including but not limited to setoff against any fees paid by the client under any contracts, agreement and/or orders/quotations reached with TÜV Rheinland.

Any part of the work result ordered which is complete in itself may be presented by TÜV Rheinland for acceptance as an instalment. The client shall be obliged to accept it immediately. If acceptance is required or contractually agreed in an individual case, this shall be deemed to have basen place leve (2) weeks after competent and hardwork or of the work, unless that have been with the princh stalling at least one fundamental breach of contract by TÜV. Rheinland or contract by TÜV.

.
is not entitled to refuse acceptance due to insignificant breach of contract by TÜV

Rheidrad.

If acceptance is excluded according to the nature of the work performance of TÜV Rheinland, he completion of the work shall take its place.

During the Follow-Audit stage, if the client was unable to make use of the time windows provided for within the scope of a certification procedure for auditing/performance by TÜV Rheinland and the certificate is therefore to be withdraw (e.g. performance of surrellinear equality, or if the client cancels or postpones a confirmed audit date within two (2) weeks before the agreed date, TÜV Rheinland is entitled to immediately chaige a fump—sum compensation of 10% of the coder the confirmance of the complex of t

Rheinland has incurred no damage whatsoever or only a cursorenauy www. www.np.
londar as the client has undertaken in the contract to accept services, TUV Rheinland shall also
be entitled to Antege lump-sum damages in the amount of 10% of the order amount as
compensation for expenses if the service is not called within one year after the order has been
placed. The client reserves the right to prove that the TUV Rheinland has incurred no damage
whatsoever or only a considerably lower damage than the above mentioned lump sum.

Confidentiality

For the purpose of these terms and conditions, "confidential information" means all know-how, trade secrets, documents, images, drawings, expentise, information, dats, test resulfs, reports, rade secrets, documents, images, drawings, expentise, information, dats, test resulfs, reports, rade secrets, documents, images, drawings, expentise, information, dats, test resulfs, resports, rade and result of the control of the co

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the receiving party afready possessed this information prior to disclosure by the disclosing party, the the receiving party developed it itself, irrespective of disclosure by the disclosing party, shall not be deemed to constitute 'confidential information' as defined in this confidentially clause. All confidential information shall remain the property of the disclosing party. The receiving party hereby agrees to immediately (i) return all confidential information, including all copies, to the disclosing party, and/or (ii) or nequeste by the disclosing party. The receiving party hereby agrees to immediately (i) return all confidential information, including all copies, to the disclosing party in writing, at any time if so requised by the disclosing party but at the latest and without special request after termination or expiry of the contract. This does not extend to include reports and certificates prepared for the client solely for the purpose of hilling the obligations under the contract, which shall remains with the client. However, TOV Rheinland is entitled to make preparing these reports and certificates in order to evidence the correctness of its results and for general documentation purposes required by laws, regulations and the requirements of working procedures of TOV Rheinland.

#### Copyrights and rights of use, publications

10.6

10.7

Copyrights and rights of use, publications
TÜV Rheindand ball retain all exclusive copyrights in the reports, expert reports/ciprions, test reports/re

on of work results.

Any publication or duplication of the work results for advertising purposes or any further use of the work results beyond the scope regulated in clause 11.2, and any guidation of the introduction of Besides, the client resurses that the afforceast use shall comply with relevant applicable less, regulations and relevant rules (including but not limited to specific applicable testing and certification rules, recules a crosp given approval according to clause 11.5 at any limited to the provided of the control of the contro

Liability of TÜV Rheinland

Trespective of the signal brain, in the fullest extent permitted by applicable law, in the over of a breach of a contractual abdigations or toot, the liability of TÜV Rheinland for all damages, losses and reimburnement of expenses and the contractual abdigations or toot, the liability of TÜV Rheinland for all damages, losses and reimburnement of expenses and the limited to; (i) in the case of a contract with a fixed overall lee, three times the overall feet for the entire contract, (ii) in the case of a contract with a fixed overall lee, three times the overall feet for the entire contract, (ii) in the case of a contract with a fixed overall lee, three times the overall feet for the entire contract, (iii) in the case of a framework agreement that provides for the possibility of placing individual orders, three times of the feet for the individual order under which the damages or losses have occurred, according to the freedom provisions exceeds 2.5 Million Euro or equivalented manual from the contract of the con

breach (researcher) unresented with the personnel made available by the client to support TUV Rheinland in the personnel made available by the client to support TUV Rheinland in the performance of its services under the contract, unless such personnel made available is regarded as vicarious agent of TUV Rheinland ITUV Rheinland is not liable for the acts of the personnel made available by the client under the foregoing provision, the client shall indemently TUV Rheinland against any clients made by third prices arising from a Client shall indemently TUV Rheinland against any clients made by third prices arising from a Client shall indement the Client shall consider the Client shall con 12.5

When passing on the services provided by TÜV Rheinland or parts thereof to third parties in Greater China or other regions, the client must comply with the respectively applicable regulations of national and infermional export control law. When the provise that there are no obstacles to performance do a contract with the client is subject to the provise that there are no obstacles to performance due to national or international foreign trade legislations or embarges and/or sanctions, in the event of a violation, TÜV thereinand shall be entitled to terminate the contract with immediate effect and the client shall compensate for the losses incord freed by TÜV.

Data protection notice

The client understands and agrees that TUV Rheinland processes personal data (including but not initiated to personal information) of the client and its related parties (including but not limited to personal information) of the client and its related parties (including but not limited to the supplier of the client) for the purpose of fulfilling this contract. The client confirms that it has process the personal data that the client confirms that it has process the personal data that the client collected or processed by tested and transferred to TUV Rheinland. For certain services, we may also process sensitive personal data. TUV Rheinland will use and process the data in accordance with the relevant legal basis. If any personal data has to be disclosed or transferred to any third party or any overseas party outside of the district in which the data is accordance with the privacy and personal data security related laws and regulations in China and the local country. TUV Rheinland will take measures to avoid any leadings, abuse, manipulation, diamage or unauthorized access of personal data. The personal data will be detend the following injection, right of processing limitation, right of objection, right of destination, right of processing limitation, right of objection, right of destination data by TUV Rheinland as the proconductivity. For thresh details on the processing of personal data by TUV Rheinland by e-mail at distriprotection Sturcem or by past a thresh following address: TUV Rheinland by e-mail at distriprotection Sturcem or by past a thresh following address: TUV Rheinland by e-mail at distriprotection Sturcem or by past a thresh following address: TUV Rheinland by e-mail at distriprotection Sturcem or by the sturcem or t

Retention of test material and documentation

The test samples submitted by the client to TÜV Rheinland for testing will be scrapped following testing or will be returned to the client at the client's expense. The only exceptions are test samples, which are placed in storage on the basis of statutory regulations or of another samples, which are placed in storage on the basis of statutory regulations or of another client in the second second of the client in the properties of the client in the state and the samples are standing a test sample into storage will be disclosed to the client in the quotation. If reference samples or documentations are given to the client to be placed in storage at their premises, the reference samples or documentations are given to the client to be placed in storage at their premises, the reference samples or documentations are given to the client to be placed in storage at their premises, the reference samples or documentations are given to the client to be placed in storage at their premises, the reference sensities of charge. If the client, in response to such a request, its recognition and popularity damage resulting from the respective testing and certification that is brought forward by the client against TÜV Rheinland shall be voided.

The retention period for the documentation shall be 10 (ten) years after the expiry of the test mark certification or shall meet the applicable legal requirements for EUEC certificatios of conformity.

The costs of the handower and dispatch of the test samples for storage on the client's permises are borne by the client. TUV Rheinland will be islable for the loss of test samples or reference samples from the laboratories or warehouses of TÜV Rheinrand only in case of gross negligence.

15.4

Termination of the contract

Neveltistanding clause 3.3 of the GTCB, TUV Rheinland and the client are entitled to terminate the contract in its entirety or, in the case of services combined in one contract, each of the combined parts of the contract individually and independently of the continuation of the remaining encices with six (6) months motion to the end of the contractually agreed term. The notice period shall be abortered to air (6) weeks in case TUV Rheinland is prevented from performing the properties of the contract which includes but not limited to the following:

For good causes, TUV Rheinland any consider prings a written notice to the client to terminate the contract which includes but not limited to the following:

the client does not immediately rowly TUV Rheinland of changes in the conditions within the client never and the contract which includes out on the contract which includes the contract which includes the contract which includes the contract which includes an expert of the contract which includes the contract which includes the contract which includes a several consecutive delays in payment (aliens three terms); as substantial deterioration of the financial circumstances of the client cours and as result the payment claims of TUV Rheinland and which the contract are considerably endangered and TUV Rheinland in the contract in the event of any serious misrepresentation, be it by intentional fraud or grossly negligent behavior of the managers, engloyees or agents of the client;

if TUV Rheinland, for reasons beyond its control, is temporately or finally not able or entitled to a lump-sum claim for damages sust the client the control in the control in the control or almost superstant the client the con

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17.2.

within the scope of a certification procedure and the certificate therefore has to be withdrawn (for oxemple during the performance of monitoring audiols). Clause 163 applies accordingly.

Force Majeure

\*\*Force Majeure\*\*

Hardship
The Parties are bound to perform their contractual duties even if events have rendered performance more onerous than could reasonably have been anticipated at the time of the conclusion of the

(b)

18.3.

more onerous than could reasonably have been anticipated at the time of the conclusion of the Contract.

Companyage of the file clause, where a Party proves that:

The continued performance of its contractual distins has become excessively control. The continued performance of its contractual distins has become excessively control. The continued performance of its contractual extensionably have been expected to have taken into account at the time of the conclusion of the contract, and that it could not reasonably have avoided or overcome the event or its consequences, the Parties are bound, within a reasonable time of the invocation of this Clause, to negotiate alternative contractual terms which neasonably allow to evercome the consequences of the event.

Where Clause 18.2 applies, but where the Parties have been unable to agree alternative contractual terms as provided in that paragraph, the Parties have been unable to agree alternative contractual terms as provided in that paragraph, the Parties have been unable to agree alternative contractual terms as provided in that paragraph, the Parties have been unable to agree alternative contractual terms as provided in that paragraph, the Parties have been unable to agree alternative contractual terms as provided in that paragraph, the Parties have been unable to agree alternative contractual terms of the contractual terms of

#### Partial invalidity, written form, place of jurisdiction and dispute resolution

Partial invalidity, written form, place of jurisdiction and dispute resolution.

All amendments and supplements must be in writing in order to be effective. This also applies to amendments and supplements to this clause 17.1.

Should one or several of the provisions under the contract and/or these terms and conditions be or become ineffective, the contracting parties shall replace the invalid provision with a legally valid provision that grain esclosures to the contract of the invalid provision in significant commercial terms, and conditions shall be chosen following the rules as below:

If TUV Rheinland in question is legally registered and existing in the People's Republic of China, the contracting parties hereby agree that the contract and these terms and conditions shall be governed by the lates of the People's Republic of China.

ITUV Rheinland in question is legally registered and existing in Talwan, the contracting parameterly agree that the contract and these terms and conditions shall be governed by the laws of Talwan.

ITUV Rheinland in question is legally registered and existing in Hong Kong, the contracting it TUV Rheinland is the contract and these terms and conditions shall be governed by the laws of Hong Kong.

Any dispute in connection with the contract and these terms and conditions or the execution thereof shall be settled friendly through negotiations.

Unless otherwise stepulated in the contract, if no settlement or no agreement in respect of the Unless otherwise stepulated in the contract, and the contract of the stepulate of the contract, the dispute shall be submitted in the case of TUV Rheinland in question being legally registered and existing in the People's Republic of China, to China thermational Economic and Trade Arbitration Commission (CET AG) to be satisfied by arbitration under the Arbitration Russ of CETAC in lock when the arbitration is being. Shangkai, Shanthen or Changeing as appropriately chosen by the claiming party, in the case of TUV Rheinland to liquestion being legally registered and existing in Talwan, to Chinese Arbitration Association. Taple to be arbitrated in accordance with its then current Rules in the case of TUV Rheinland to liquestion period and existing in Talwan, to Chinese Arbitration Shangeign period and and existing in Talwan, to Chinese Arbitration Association. Taple to be settled by arbitration under the HKAC Administration carrier (HKAC) to be settled by arbitration under the HKAC Administrate rules. The arbitration shall take place in Hong Kong.