TÜVRheinland®
Precisely Right.



| | |
|---|---|
| *Report No.:* | 326130350a 001 |
| *Client:* | **LONGi Green Energy Technology Co., Ltd.** |
| *Contact Information:* | No.388, Middle Hangtian Road, Chang'an District, Xi'an City，Shaanxi, P.R.China |
| *Identification/ Model No(s):* | LR8-66HVD-xxxM; LR8-66HVDF-xxxM |
| *Sample obtaining method:* | Sending by customer |
| *Condition at delivery:* | Test item complete and undamaged. |
| *Sample Receiving date:* | 2025-09-29<br>2025-10-20 |
| *Testing Period:* | 2025-09-29 to 2025-10-23 |
| *Place of testing:* | Chemical laboratory Shanghai |

| *Test Specification:* | *Test result:* |
|---|---|
| Customer's requirement: | |
| 1. Cadmium, Lead, Chromium (VI), Mercury, Polybrominated biphenyls (PBB) and Polybrominated diphenyl ethers (PBDE), ROHS Phthalates (BBP, DBP, DEHP, DIBP)<br>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 | PASS |
| 2. Risk Assessment of Articles: Screening of substances of very high concern (SVHC) subject to the candidate list by European Chemical Agency (ECHA) according to Regulation (EC) No 1907/2006 and its amendments | SVHC concentration(s) ≤0.1% |

**For and on behalf of**
**TÜV Rheinland (Shanghai) Co., Ltd.**

2025-11-04 Mia Shen / Project Engineer

*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.*

## Test Report No.: 326130350a 001



**Material List:**

Item: LR8-66HVD-xxxM; LR8-66HVDF-xxxM

| Material No. | Material | Color | Location |
|---|---|---|---|
| M001 | Plastic | black | refer to photo |
| M002 | Plastic | black | refer to photo |
| M003 | Plastic | black | refer to photo |
| M004 | Plastic | black | refer to photo |
| M005 | Plastic | white | refer to photo |
| M006 | Glass | transparent | refer to photo |
| M007 | Plastic | white | refer to photo |
| M008 | Metal | silver | refer to photo |
| M009 | Synthetic material | dark blue | refer to photo |
| M010 | Glass | transparent | refer to photo |
| M011 | Plastic | white | refer to photo |
| M012 | Metal | copper | refer to photo |
| M013 | Metal | silver | refer to photo |
| M014 | Plastic | grey | refer to photo |
| M015 | Metal | silver/copper | refer to photo |
| M016 | Plastic | red | refer to photo |
| M017 | Metal | silver | refer to photo |
| M018 | Metal | silver | refer to photo |
| M019 | Plastic | white | refer to photo |

## Test Report No.: 326130350a 001



**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 | BL |
| M003 | BL | BL | BL | BL | BL |
| M004 | BL | BL | BL | BL | BL |
| M005 | BL | BL | BL | BL | BL |
| M006 | BL | BL | BL | BL | n.a. |
| M007 | BL | BL | BL | BL | BL |
| M008 | BL | BL | BL | BL | n.a. |
| M009 | BL | BL | BL | BL | BL |
| M010 | BL | BL | BL | BL | n.a. |
| M011 | BL | BL | BL | BL | BL |
| M012 | BL | BL | BL | BL | n.a. |
| M013 | BL | BL | d.(*1) | BL | n.a. |
| M014 | BL | BL | BL | BL | d.(*1) |
| M015 | BL | BL | d.(*1) | BL | n.a. |
| M016 | BL | BL | BL | BL | BL |
| M017 | BL | BL | BL | BL | n.a. |
| M018 | BL | BL | BL | BL | n.a. |
| M019 | BL | BL | BL | BL | BL |

**Abbreviation:**

| | | |
|---|---|---|
| Pb | = | Lead |
| Cd | = | Cadmium |
| Hg | = | Mercury |
| Cr | = | Chromium |
| Br | = | Bromine |
| n.a. | = | Not applicable |
| BL | = | Below limit |
| OL | = | Over limit |
| d. | = | Detected |

**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.

XRF Screening limits for different matrices :

| Material | Concentration (%) | | | | |
|---|---|---|---|---|---|
| | Cd | Cr | Pb | Hg | Br |
| **Polymeric** | BL≤0.006<X<0.014≤OL | BL≤0.064<X | BL≤0.067<X<0.133≤OL | BL≤0.066<X<0.134≤OL | BL≤0.029<X |
| **Metallic** | BL≤0.006<X<0.014≤OL | BL≤0.064<X | BL≤0.067<X<0.133≤OL | BL≤0.066<X<0.134≤OL | n.a. |
| **Composite materials** | BL≤0.004<X<0.016≤OL | BL≤0.044<X | BL≤0.047<X<0.153≤OL | BL≤0.046<X<0.154≤OL | BL≤0.024<X |

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

| | Cd | Cr(VI) | Pb | Hg | PBBs | PBDEs |
|---|---|---|---|---|---|---|
| **Maximum permissible Limit (%)** | 0.01 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |

## Test Report No.: 326130350a 001



**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 Polymer, Electronic material or others materials – Ref. to IEC 62321-7-2:2017

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 |

| Material No. | (%) | | | | | |
|---|---|---|---|---|---|---|
| | Cd | Cr^ | Pb | Hg | PBBs | PBDEs |
| | RL (%) | | | | | |
| | 0.001 | 0.001 | 0.001 | 0.001 | 0.01 | 0.01 |
| M013 | n.a. | n.a. | 0.006 | n.a. | n.a. | n.a. |
| M014 | n.a. | n.a. | n.a. | n.a. | < RL | < RL |
| M015 | n.a. | n.a. | 0.002 | n.a. | n.a. | n.a. |

**Abbreviation:**

| | | |
|---|---|---|
| Pb | = | Lead |
| Cd | = | Cadmium |
| Hg | = | Mercury |
| Cr | = | Chromium |
| Cr (VI) | = | Chromium (VI) |
| PBBs | = | Total Polybrominated Biphenyls |
| PBDEs | = | Total Polybrominated Diphenyl Ethers |
| < | = | Less than |
| RL | = | Reporting Limit |
| n.a. | = | Not Applicable |
| ^ | = | The total Chromium have been determined |
| % | = | Percentage |

**BBP, DBP, DEHP, DIBP content**

Test Method: ref. to IEC 62321-8:2017

**Test Result:**

| | BBP | DBP | DEHP | DIBP |
|---|---|---|---|---|
| **Maximum permissible Limit (%)** | 0.1 | 0.1 | 0.1 | 0.1 |

| Test No. | Material No. | (%) | | | |
|---|---|---|---|---|---|
| | | BBP | DBP | DEHP | DIBP |
| | | RL (%) | | | |
| | | 0.005 | 0.005 | 0.005 | 0.005 |
| T001 | M001 + M002 + M003 | < RL | < RL | < RL | < RL |
| T002 | M004 + M005 + M007 | < RL | < RL | < RL | < RL |
| T003 | M011 + M016 + M019 | < RL | < RL | < RL | < RL |
| T004 | M014 | < RL | < RL | < RL | < RL |

**Abbreviation:**
BBP= Benzylbutyl phthalate
DBP= Dibutyl phthalate
DEHP= Bis(2-ethylhexyl) phthalate
DIBP= Diisobutyl phthalate
< = less than
RL = Reporting Limit
%= percentage

**Remark:**

* The maximum permissible limit is required from the amendment (EU) 2015/863 of RoHS Directive 2011/65/EU.

**2. Screening of Substances of Very High Concern (SVHC) subject to the Candidate List by European Chemical Agency (ECHA) according to Regulation (EC) No 1907/2006 and its amendments.**

Obligation of Importer is necessary if the detected SVHC concentration in article level is >0.1%:
To communicate information down the supply chain according to article. 33 of Regulation(EC) No 1907/2006. OR

1. Notification to ECHA, if the quantities of SVHC in the produced/imported articles are above 1 ton in total per year per company.
2. Provide sufficient information to ensure safe use of the article and, as a minimum, include the name of the substance, to their customers and on request to consumers within 45 days of the receipt of this request.

Test Method: 1) SVOC: organic solvent extraction, determination by GC-MS/ECD
2) VOC: organic solvent extraction, determination by GC-MS
3) VVOC: headspace-GC/MS analysis
4) non-VOC: organic solvent extraction, determination by LC-MS/MS.
5) inorganics: acid digestion, determination by ICP-OES

**Test Result:**

| Test No. | Material No. | Result (%) |
|---|---|---|
| T001 | M001 + M002 + M003 + M004 + M005 + M007 + M011 + M016 + M019 | <RL |
| T002 | M006 + M009 + M010 | <RL |
| T003 | M008 + M012 + M013 + M014 + M015 + M017 + M018 | <RL |
| T004 | M013 | <RL |
| T005 | M015 | <RL |

Abbreviation: < = Less than
RL = Reporting Limit
% = Percentage

## Test Report No.: 326130350a 001



Remark:

(*1) The reporting limit for each individual SVHC in Candidate List by ECHA:

| | Substance | CAS No. | Reporting Limit |
|---|---|---|---|
| 1 | 4,4'- Diaminodiphenylmethane (A9) | 101-77-9 | 0.01% |
| 2 | Benzyl butyl phthalate (BBP) | 85-68-7 | 0.01% |
| 3 | Bis (2-ethylhexyl)phthalate (DEHP) | 117-81-7 | 0.01% |
| 4 | Dibutyl phthalate (DBP) | 84-74-2 | 0.01% |
| 5 | Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified：<br>gamma-hexabromocyclododecane<br>beta-hexabromocyclododecane<br>1,2,5,6,9,10-hexabromocyclododecane<br>Hexabromocyclododecane<br>alpha-hexabromocyclododecane | 134237-52-8 /<br>134237-51-7 /<br>3194-55-6 /<br>25637-99-4 /<br>134237-50-6 | 0.01% |
| 6 | 5-tert-butyl-2,4,6-trinitro-m-xylene (Musk xylene) | 81-15-2 | 0.01% |
| 7 | 2,4-Dinitrotoluene (2,4-DNT) | 121-14-2 | 0.01% |
| 8 | Diisobutyl phthalate (DIBP) | 84-69-5 | 0.01% |
| 9 | Tris(2-chloroethyl)phosphate (TCEP) | 115-96-8 | 0.01% |
| 10 | Diarsenic pentaoxide (*2) | 1303-28-2 | 0.01% |
| 11 | Diarsenic trioxide (*2) | 1327-53-3 | 0.01% |
| 12 | Lead chromate (*2)(*3) | 7758-97-6 | 0.01% |
| 13 | Lead chromate molybdate sulphate red<br>(C.I. Pigment Red 104) (*2)(*3) | 12656-85-8 | 0.01% |
| 14 | Lead sulfochromate yellow<br>(C.I. Pigment Yellow 34) (*2) | 1344-37-2 | 0.01% |
| 15 | Trichloroethylene | 79-01-6 | 0.01% |
| 16 | Chromium trioxide (*2) | 1333-82-0 | 0.01% |
| 17 | Acids generated from chromium trioxide and their oligomers:<br>Names of the acids and their oligomers: Chromic acid, Dichromic acid,<br>Oligomers of chromic acid and dichromic acid. (*2) | 7738-94-5 /<br>13530-68-2 | 0.01% |
| 18 | Sodium dichromate (*2)(*3) | 7789-12-0 / 10588-01-9 | 0.01% |
| 19 | Potassium dichromate *2)(*3) | 7778-50-9 | 0.01% |
| 20 | Ammonium dichromate (*2)(*3) | 7789-09-5 | 0.01% |
| 21 | Potassium chromate (*2)(*3) | 7789-00-6 | 0.01% |
| 22 | Sodium chromate (*2)(*3) | 7775-11-3 | 0.01% |
| 23 | Formaldehyde, oligomeric reaction products with aniline (technical MDA) (*10) | 25214-70-4 | 0.01% |
| 24 | 1,2-Dichloroethane (1,2-DCE) | 107-06-2 | 0.01% |
| 25 | Bis(2-methoxyethyl) ether (DEGDB) | 111-96-6 | 0.01% |
| 26 | Arsenic acid (*2) | 7778-39-4 | 0.01% |
| 27 | 2,2'-dichloro-4,4'-methylenedianiline (MOCA) | 101-14-4 | 0.01% |
| 28 | Dichromium tris(chromate) (*2)(*3) | 24613-89-6 | 0.01% |
| 29 | Strontium chromate (*2)(*3) | 7789-06-2 | 0.01% |
| 30 | Potassium hydroxyoctaoxodizincatedichromate (*2)(*3) | 11103-86-9 | 0.01% |
| 31 | Pentazinc chromate octahydroxide (*2)(*3) | 49663-84-5 | 0.01% |
| 32 | 1-bromopropane (n-propyl bromide) | 106-94-5 | 0.01% |
| 33 | Diisopentylphthalate | 605-50-5 | 0.01% |
| 34 | 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP) | 71888-89-6 | 0.01% |
| 35 | 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP) | 68515-42-4 | 0.01% |

| | | | |
|---|---|---|---|
| 36 | 1,2-Benzenedicarboxylic acid, dipentylester, branched and linear | 84777-06-0 | 0.01% |
| 37 | Bis(2-methoxyethyl) phthalate | 117-82-8 | 0.01% |
| 38 | Dipentyl phthalate (DPP) | 131-18-0 | 0.01% |
| 39 | N-pentyl-isopentylphthalate | 776297-69-9 | 0.01% |
| 40 | Anthracene oil (*6) | 90640-80-5 | 0.01%(*7) |
| 41 | Pitch, coal tar, high temperature (*6) | 65996-93-2 | 0.01%(*7) |
| 42 | 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated (OPEO) *[covering well-defined substances and UVCB substances, polymers and homologues]* | - | 0.01% |
| 43 | 4-Nonylphenol, branched and linear *[substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]* | - | 0.01% |
| 44 | 1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear | 68515-50-4 | 0.01% |
| 45 | Dihexyl phthalate | 84-75-3 | 0.01% |
| 46 | 1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5) | 68515-51-5 / 68648-93-1 | 0.01% |
| 47 | Trixylyl phosphate | 25155-23-1 | 0.01% |
| 48 | Sodium perborate,perboric acid, sodium salt (*2) (*5) | - | 0.01% |
| 49 | Sodium peroxometaborate (*2) (*5) | 7632-04-4 | 0.01% |
| 50 | 5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual stereoisomers of [1] and [2] or any combination thereof] | - | 0.01% |
| 51 | 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328) | 25973-55-1 | 0.01% |
| 52 | 2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327) | 3864-99-1 | 0.01% |
| 53 | 2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350) | 36437-37-3 | 0.01% |
| 54 | 2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320) | 3846-71-7 | 0.01% |
| 55 | Anthracene | 120-12-7 | 0.01% |
| 56 | Bis(tributyltin) oxide (TBTO) (*4) | 56-35-9 | 0.01% |
| 57 | Triethyl arsenate (*2) | 15606-95-8 | 0.01% |
| 58 | Lead hydrogen arsenate (*2) | 7784-40-9 | 0.01% |
| 59 | Cobalt dichloride (*2) | 7646-79-9 | 0.01% |
| 60 | Acrylamide | 79-06-1 | 0.01% |
| 61 | Anthracene oil, anthracene paste, distn. lights (*6) | 91995-17-4 | 0.01% (*7) |
| 62 | Anthracene oil, anthracene paste, anthracene fraction (*6) | 91995-15-2 | |
| 63 | Anthracene oil, anthracene-low (*6) | 90640-82-7 | |
| 64 | Anthracene oil, anthracene paste (*6) | 90640-81-6 | |
| 65 | Boric acid (*2) (*5) | 10043-35-3 / 11113-50-1 | 0.01% |
| 66 | Disodium tetraborate, anhydrous (*2) (*5) | 1303-96-4 / 1330-43-4 / 12179-04-3 | 0.01% |
| 67 | Tetraboron disodium heptaoxide, hydrate (*2) (*5) | 12267-73-1 | 0.01% |

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|---|---|---|---|
| 68 | 2-Methoxyethanol | 109-86-4 | 0.01% |
| 69 | 2-Ethoxyethanol | 110-80-5 | 0.01% |
| 70 | Cobalt(II) sulphate (*2) | 10124-43-3 | 0.01% |
| 71 | Cobalt(II) dinitrate (*2) | 10141-05-6 | 0.01% |
| 72 | Cobalt(II) carbonate (*2) | 513-79-1 | 0.01% |
| 73 | Cobalt(II) diacetate (*2) | 71-48-7 | 0.01% |
| 74 | Alkanes C10-C13, chloro (Short Chain Chlorinated Paraffins) (SCCP) | 85535-84-8 | 0.01% |
| 75 | 2-Ethoxyethyl acetate | 111-15-9 | 0.01% |
| 76 | Hydrazine | 302-01-2 / 7803-57-8 | 0.01% |
| 77 | 1-Methyl-2-pyrrolidone (NMP) | 872-50-4 | 0.01% |
| 78 | 1,2,3-Trichloropropane | 96-18-4 | 0.01% |
| 79 | Aluminosilicate Refractory Ceramic Fibres (RCF) (*8) | - | 0.01% |
| 80 | Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF) (*8) | - | 0.01% |
| 81 | 2-Methoxyaniline,o-Anisidine | 90-04-0 | 0.01% |
| 82 | 4-(1,1,3,3-tetramethylbutyl)phenol | 140-66-9 | 0.01% |
| 83 | Calcium arsenate (*2) | 7778-44-1 | 0.01% |
| 84 | Trilead diarsenate (*2) | 3687-31-8 | 0.01% |
| 85 | N,N-dimethylacetamide (DMAC) | 127-19-5 | 0.01% |
| 86 | Phenolphthalein | 77-09-8 | 0.01% |
| 87 | Lead dipicrate (*2) | 6477-64-1 | 0.01% |
| 88 | Lead diazide, Lead azide (*2) | 13424-46-9 | 0.01% |
| 89 | Lead styphnate (*2) | 15245-44-0 | 0.01% |
| 90 | 1,2-bis(2-methoxyethoxy)ethane (TEGDME,triglyme) | 112-49-2 | 0.01% |
| 91 | 1,2-dimethoxyethane,ethylene glycol dimethyl ether (EGDME) | 110-71-4 | 0.01% |
| 92 | Diboron trioxide (*2) (*5) | 1303-86-2 | 0.01% |
| 93 | Formamide (FOR) | 75-12-7 | 0.01% |
| 94 | Lead(II) bis(methanesulfonate) (*2) | 17570-76-2 | 0.01% |
| 95 | 1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC) | 2451-62-9 | 0.01% |
| 96 | 1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC) | 59653-74-6 | 0.01% |
| 97 | 4,4'-bis(dimethylamino)benzophenone (Michler's ketone), MK | 90-94-8 | 0.01% |
| 98 | N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base), RMK | 101-61-1 | 0.01% |
| 99 | [4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene] cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)] (*2) | 2580-56-5 | 0.01% |
| 100 | [4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)] (*9) | 548-62-9 | |
| 101 | 4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)] (*9) | 561-41-1 | |
| 102 | α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)] (*9) | 6786-83-0 | |
| 103 | Bis(pentabromophenyl) ether (decabromodiphenyl ether) (DecaBDE) | 1163-19-5 | 0.01% |

| | | | |
|---|---|---|---|
| 104 | Pentacosafluorotridecanoic acid | 72629-94-8 | 0.01% |
| 105 | Tricosafluorododecanoic acid | 307-55-1 | 0.01% |
| 106 | Henicosafluoroundecanoic acid | 2058-94-8 | 0.01% |
| 107 | Heptacosafluorotetradecanoic acid | 376-06-7 | 0.01% |
| 108 | Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) (ADCA) (*11) | 123-77-3 | 0.05% |
| 109 | Cyclohexane-1,2-dicarboxylic anhydride [1],<br>cis-cyclohexane-1,2-dicarboxylic anhydride [2],<br>trans-cyclohexane-1,2-dicarboxylic anhydride [3]<br>[The individual cis- [2] and trans- [3] isomer substances and all possible combinations of the cis- and trans-isomers [1] are covered by this entry] | 85-42-7 /<br>13149-00-3 /<br>14166-21-3 | 0.01% |
| 110 | Hexahydromethylphthalic anhydride (MHHPA) [1],<br>Hexahydro-4-methylphthalic anhydride [2],<br>Hexahydro-1-methylphthalic anhydride [3],<br>Hexahydro-3-methylphthalic anhydride [4]<br>[The individual isomers [2], [3] and [4] (including their cis- and trans- stereo isomeric forms) and all possible combinations of the isomers [1] are covered by this entry] | 25550-51-0 /<br>19438-60-9 /<br>48122-14-1 /<br>57110-29-9 | 0.01% |
| 111 | N,N-dimethylformamide (DMF) | 68-12-2 | 0.01% |
| 112 | 1,2-Diethoxyethane | 629-14-1 | 0.01% |
| 113 | Diethyl sulphate | 64-67-5 | 0.01% |
| 114 | Methoxyacetic acid (MAA) | 625-45-6 | 0.01% |
| 115 | Dimethyl sulphate | 77-78-1 | 0.01% |
| 116 | N-methylacetamide | 79-16-3 | 0.01% |
| 117 | Furan | 110-00-9 | 0.01% |
| 118 | Methyloxirane (Propylene oxide) | 75-56-9 | 0.01% |
| 119 | 3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine | 143860-04-2 | 0.01% |
| 120 | Dibutyltin dichloride (DBTC) (*15) | 683-18-1 | 0.01% |
| 121 | Dinoseb (6-sec-butyl-2,4-dinitrophenol) | 88-85-7 | 0.01% |
| 122 | 4,4'-methylenedi-o-toluidine | 838-88-0 | 0.01% |
| 123 | 4,4'-oxydianiline and its salts | 101-80-4 | 0.01% |
| 124 | 4-Aminoazobenzene | 60-09-3 | 0.01% |
| 125 | 4-methyl-m-phenylenediamine (toluene-2,4-diamine) | 95-80-7 | 0.01% |
| 126 | 6-methoxy-m-toluidine (p-cresidine) | 120-71-8 | 0.01% |
| 127 | Biphenyl-4-ylamine | 92-67-1 | 0.01% |
| 128 | o-aminoazotoluene | 97-56-3 | 0.01% |
| 129 | o-Toluidine | 95-53-4 | 0.01% |
| 130 | Acetic acid, lead salt, basic (*2) | 51404-69-4 | 0.01% |
| 131 | Trilead bis(carbonate) dihydroxide (*2) | 1319-46-6 | 0.01% |
| 132 | Lead oxide sulfate (*2) | 12036-76-9 | 0.01% |
| 133 | [Phthalato(2-)]dioxotrilead (*2) | 69011-06-9 | 0.01% |
| 134 | Dioxobis(stearato)trilead (*2) | 12578-12-0 | 0.01% |
| 135 | Fatty acids, C16-18, lead salts (*2) | 91031-62-8 | 0.01% |
| 136 | Lead bis(tetrafluoroborate) (*2) | 13814-96-5 | 0.01% |
| 137 | Lead cyanamidate (*2) | 20837-86-9 | 0.01% |
| 138 | Lead dinitrate (*2) | 10099-74-8 | 0.01% |
| 139 | Lead monoxide (lead oxide) (*2) | 1317-36-8 | 0.01% |
| 140 | Orange lead (lead tetroxide) (*2) | 1314-41-6 | 0.01% |
| 141 | Lead titanium trioxide (*2) | 12060-00-3 | 0.01% |

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| 142 | Lead titanium zirconium oxide (*2) | 12626-81-2 | 0.01% |
| 143 | Pyrochlore, antimony lead yellow (*2) | 8012-00-8 | 0.01% |
| 144 | Pentalead tetraoxide sulphate (*2) | 12065-90-6 | 0.01% |
| 145 | Silicic acid (H2Si2O5), barium salt (1:1), lead-doped<br>*[with lead (Pb) content above the applicable generic concentration limit for 'toxicity for reproduction' Repr. 1A (CLP) or category 1 (DSD),the substance is a member of the group entry of lead compounds, with index number 082-001-00-6 in Regulation (EC) No 1272/2008]* (*2) | 68784-75-8 | 0.01% |
| 146 | Silicic acid, lead salt (*2) | 11120-22-2 | 0.01% |
| 147 | Sulfurous acid, lead salt, dibasic (*2) | 62229-08-7 | 0.01% |
| 148 | Tetraethyllead (*2) | 78-00-2 | 0.01% |
| 149 | Tetralead trioxide sulphate (*2) | 12202-17-4 | 0.01% |
| 150 | Trilead dioxide phosphonate (*2) | 12141-20-7 | 0.01% |
| 151 | Ammonium pentadecafluorooctanoate (APFO) (*12) | 3825-26-1 | 0.01% |
| 152 | Pentadecafluorooctanoic acid (PFOA) | 335-67-1 | 0.01% |
| 153 | Cadmium (*2) | 7440-43-9 | 0.01% |
| 154 | Cadmium oxide (*2) | 1306-19-0 | 0.01% |
| 155 | 4-Nonylphenol, branched and linear, ethoxylated (NPEO)<br>[*substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof*] | - | 0.01% |
| 156 | Imidazolidine-2-thione; (2-imidazoline-2-thiol) | 96-45-7 | 0.01% |
| 157 | Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate)<br>(C.I. Direct Red 28) | 573-58-0 | 0.01% |
| 158 | Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo]-5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate<br>(C.I. Direct Black 38) | 1937-37-7 | 0.01% |
| 159 | Lead di(acetate) (*2) | 301-04-2 | 0.01% |
| 160 | Cadmium sulphide (*2) | 1306-23-6 | 0.01% |
| 161 | Cadmium chloride (*2) | 10108-64-2 | 0.01% |
| 162 | Cadmium fluoride (*2) | 7790-79-6 | 0.01% |
| 163 | Cadmium sulphate (*2) | 10124-36-4 / 31119-53-6 | 0.01% |
| 164 | 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE) (*13) | 15571-58-1 | 0.01% |
| 165 | Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE) (*14) | - | 0.01% |
| 166 | 1,3-propanesultone (1,3-PS) | 1120-71-4 | 0.01% |
| 167 | Nitrobenzene | 98-95-3 | 0.01% |
| 168 | Perfluorononan-1-oic-acid and its sodium and ammonium salts | 375-95-1<br>21049-39-8<br>4149-60-4 | 0.01% |
| 169 | Benzo[def]chrysene (Benzo[a]pyrene) | 50-32-8 | 0.01% |
| 170 | 4,4'-isopropylidenediphenol (bisphenol A) (BPA) | 80-05-7 | 0.01% |
| 171 | Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts | 335-76-2<br>3830-45-3<br>3108-42-7 | 0.01% |
| 172 | 4-heptylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof] | - | 0.01% |
| 173 | *p*-(1,1-dimethylpropyl)phenol | 80-46-6 | 0.01% |

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| 174 | Perfluorohexane-1-sulfonic acid and its salts (PFHxS) | - | 0.01% |
| 175 | Chrysene | 218-01-9 | 0.01% |
| 176 | Benzo[a]anthracene | 56-55-3 | 0.01% |
| 177 | Cadmium nitrate(*2) | 10325-94-7 | 0.01% |
| 178 | Cadmium hydroxide(*2) | 21041-95-2 | 0.01% |
| 179 | Cadmium carbonate(*2) | 513-78-0 | 0.01% |
| 180 | 1,6,7,8,9,14,15,16,17,17,18,18- Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"TM) [covering any of its individual anti- and syn-isomers or any combination thereof] | - | 0.01% |
| 181 | Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with ≥0.1% w/w 4-heptylphenol, branched and linear] | - | 0.01% |
| 182 | Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride, TMA) | 552-30-7 | 0.01% |
| 183 | Dicyclohexyl phthalate (DCHP) | 84-61-7 | 0.01% |
| 184 | Terphenyl, hydrogenated | 61788-32-7 | 0.01% |
| 185 | Octamethylcyclotetrasiloxane (D4) | 556-67-2 | 0.01% |
| 186 | Decamethylcyclopentasiloxane (D5) | 541-02-6 | 0.01% |
| 187 | Dodecamethylcyclohexasiloxane (D6) | 540-97-6 | 0.01% |
| 188 | Ethylenediamine (EDA) | 107-15-3 | 0.01% |
| 189 | Lead(*2) | 7439-92-1 | 0.01% |
| 190 | Disodium octaborate (*2)(*5) | 12008-41-2 | 0.01% |
| 191 | Benzo[ghi]perylene | 191-24-2 | 0.01% |
| 192 | 2,2-bis(4'-hydroxyphenyl)-4-methylpentane | 6807-17-6 | 0.01% |
| 193 | Benzo[k]fluoranthene | 207-08-9 | 0.01% |
| 194 | Fluoranthene | 206-44-0 | 0.01% |
| 195 | Phenanthrene | 85-01-8 | 0.01% |
| 196 | Pyrene | 129-00-0 | 0.01% |
| 197 | 1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan- 2-one | 15087-24-8 | 0.01% |
| 198 | 2-methoxyethyl acetate | 110-49-6 | 0.01% |
| 199 | Tris (4-nonylphenyl, branched and linear) phosphite (TNPP)<br>Tris (4-nonylphenyl, branched) phosphite<br>Phenol, p-sec-nonyl-, phosphite<br>Phenol, 4-nonyl-, phosphite (3:1)<br>tris(nonylphenyl) phosphite<br>Phenol, p-isononyl-, phosphite (3:1) | -<br>106599-06-8 /<br>3050-88-2 /<br>26523-78-4 /<br>31631-13-7 | 0.01% |
| 200 | 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof) | - | 0.01% |
| 201 | 4-tert-butylphenol (PTBP) | 98-54-4 | 0.01% |
| 202 | Diisohexyl phthalate (DiHexP) | 71850-09-4 | 0.01% |
| 203 | 2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone | 119313-12-1 | 0.01% |
| 204 | 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one | 71868-10-5 | 0.01% |
| 205 | Perfluorobutane sulfonic acid (PFBS) and its salts | - | 0.01% |
| 206 | 1-vinylimidazole | 1072-63-5 | 0.01% |
| 207 | 2-methylimidazole | 693-98-1 | 0.01% |
| 208 | Butyl 4-hydroxybenzoate | 94-26-8 | 0.01% |
| 209 | Dibutylbis(pentane-2,4-dionato-O,O')tin(*15) | 22673-19-4 | 0.01% |
| 210 | Bis(2-(2-methoxyethoxy)ethyl)ether | 143-24-8 | 0.01% |

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| 211 | Dioctyltin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety (*13) | - | 0.01% |
| 212 | 2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers | - | 0.01% |
| 213 | Orthoboric acid, sodium salt (*2) (*5) | 13840-56-7 | 0.01% |
| 214 | 2,2-bis(bromomethyl)propane1,3-diol (BMP)<br>2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA)<br>2,3-dibromo-1-propanol (2,3-DBPA) | 3296-90-0 /<br>36483-57-5 /<br>1522-92-5 /<br>96-13-9 | 0.01% |
| 215 | Glutaral | 111-30-8 | 0.01% |
| 216 | Medium-chain chlorinated paraffins (MCCP) [UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17] | - | 0.01% |
| 217 | Phenol, alkylation products (mainly in para position) with C12-rich branched or linear alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP) | - | 0.01% |
| 218 | 1,4-dioxane | 123-91-1 | 0.01% |
| 219 | 4,4'-(1-methylpropylidene)bisphenol | 77-40-7 | 0.01% |
| 220 | tris(2-methoxyethoxy)vinylsilane | 1067-53-4 | 0.01% |
| 221 | S-(tricyclo(5.2.1.0'2,6)deca-3-en-8(or 9)-yl O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate | 255881-94-8 | 0.01% |
| 222 | 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (DBMC) | 119-47-1 | 0.01% |
| 223 | (±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC)<br><br>(3E)-1,7,7-trimethyl-3-(4-methylbenzylidene)bicyclo[2.2.1]heptan-2-one<br>(1R,3E,4S)-1,7,7-trimethyl-3-(4- methylbenzylidene)bicyclo[2.2.1]heptan-2-one<br>(1S,3Z,4R)-1,7,7-trimethyl-3-(4-methylbenzylidene)bicyclo[2.2.1]heptan-2-one<br>(±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one<br>(1R,4S)-1,7,7-trimethyl-3-(4-methylbenzylidene)bicyclo[2.2.1]heptan-2-one<br>(1S,3E,4R)-1,7,7-trimethyl-3-(4- methylbenzylidene)bicyclo[2.2.1]heptan-2-one<br>(1R,3Z,4S)-1,7,7-trimethyl-3-(4- methylbenzylidene)bicyclo[2.2.1]heptan-2-one | -<br>1782069-81-1<br>95342-41-9<br>852541-25-4<br>36861-47-9<br>741687-98-9<br>852541-30-1<br>852541-21-0 | 0.01% |
| 224 | N-(hydroxymethyl)acrylamide | 924-42-5 | 0.01% |
| 225 | 1,1'-[ethane-1,2-diylbisoxy]bis[2,4,6-tribromobenzene] | 37853-59-1 | 0.01% |
| 226 | 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol (TBBPA) | 79-94-7 | 0.01% |
| 227 | 4,4'-sulphonyldiphenol | 80-09-1 | 0.01% |
| 228 | Barium diboron tetraoxide(*2) (*5) | 13701-59-2 | 0.01% |
| 229 | Bis(2-ethylhexyl) tetrabromophthalate covering any of the individual isomers and/or combinations thereof | - | 0.01% |
| 230 | Isobutyl 4-hydroxybenzoate | 4247-02-3 | 0.01% |
| 231 | Melamine | 108-78-1 | 0.01% |
| 232 | Perfluoroheptanoic acid and its salts | - | 0.01% |
| 233 | reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-octafluoro-4-(heptafluoropropyl)morpholine | - | 0.01% |
| 234 | bis(4-chlorophenyl) sulphone | 80-07-9 | 0.01% |
| 235 | Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO) | 75980-60-8 | 0.01% |
| 236 | Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol<br>Phenol, methylstyrenated EC / List no: 270-966-8 \| CAS no: 68512-30-1 | - | 0.01% |
| 237 | Bumetrizole | 3896-11-5 | 0.01% |
| 238 | 2-(dimethylamino)-2-[(4-methylphenyl)methyl]-1-[4-(morpholin-4-yl)phenyl]butan-1-one | 119344-86-4 | 0.01% |
| 239 | 2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329) | 3147-75-9 | 0.01% |
| 240 | 2,4,6-tri-tert-butylphenol | 732-26-3 | 0.01% |
| 241 | Bis(α,α-dimethylbenzyl) peroxide | 80-43-3 | 0.01% |
| 242 | Triphenyl phosphate(TPP) | 115-86-6 | 0.01% |
| 243 | reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives | 192268-65-8 | 0.01% |
| 244 | Perfluamine | 338-83-0 | 0.01% |
| 245 | Octamethyltrisiloxane | 107-51-7 | 0.01% |
| 246 | O,O,O-triphenyl phosphorothioate | 597-82-0 | 0.01% |
| 247 | 6-[(C10-C13)-alkyl-(branched, unsaturated)-2,5-dioxopyrrolidin-1-yl]hexanoic acid (*18) | 2156592-54-8 | 0.01% |

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| 248 | 1,1,1,3,5,5,5-heptamethyl-3-[(trimethylsilyl)oxy]trisiloxane | 17928-28-8 | 0.01% |
| 249 | Decamethyltetrasiloxane | 141-62-8 | 0.01% |
| 250 | tetra(sodium/potassium) 7-[(E)-{2-acetamido-4-[(E)-(4-{[4-chloro-6-({2-[(4-fluoro-6-{[4-(vinylsulfonyl)phenyl]amino}-1,3,5-triazine-2-yl)amino]propyl}amino)-1,3,5-triazine-2-yl]amino}-5-sulfonato-1-naphthyl)diazenyl]-5-methoxyphenyl} diazenyl]-1,3,6-naphthalenetrisulfonate; Reactive Brown 51 | - | 0.01% |

Remark:

(*2) The substances are tested and calculated in terms of its respective elements and to the worst-case scenario. The report states the theoretical value of SVHC substances without consideration of the actual occurrence in the article.

(*3) The substances are tested and calculated in terms of Cr (VI).

(*4) The substance is tested and calculated in terms of Tributyl tin.

(*5) The substances are tested and calculated in terms of boron element and the boron element may come from the compounds other than SVHCs.

(*6) The substances are UVCB (substance of unknown or variable composition, complex reaction products or biological materials), which are identified by its main constituents.

(*7) Individual concentrations to the constituent of UVCB with an amount of < 0.01% were not considered by the calculation of the sum.

(*8) The test results are based on microscopic and chemical evaluation.

(*9) The substances are quantified in terms of Michler's ketone and Michler's base by LC-MS, as Michler's ketone or Michler's base was found exceeds 0.01%.

(*10) The content oligomer is determined by Py-GC/MS.

(*11) The content of diazene-1,2-dicarboxamide is analyzed in terms of its breakdown product.

(*12) The substance is tested in terms of pentadecafluorooctanoate.

(*13) The substance is tested and calculated in terms of Dioctyl tin.

(*14) The substance is tested and calculated in terms of Monooctyl tin and Dioctyl tin.

(*15) The substance is tested and calculated in terms of Dibutyl tin

(*16) The tested material(s) was screened only for selected SVHCs. Selection of tests refers to the material type and application and the possibility of contamination during production & material specific contamination of the product.

(*17) The other SVHCs which are not mentioned in test result were either not subject to testing according to remark *16 or less than report limit.

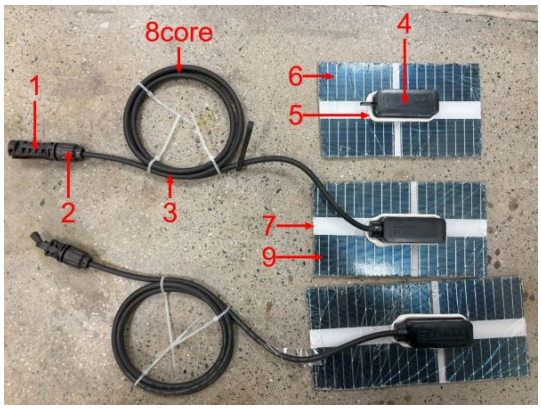
(*18) Qualification is performed via determination of structural constituents. The result is reported as semi-quantitative equivalent concentration, relative to a reference compound.

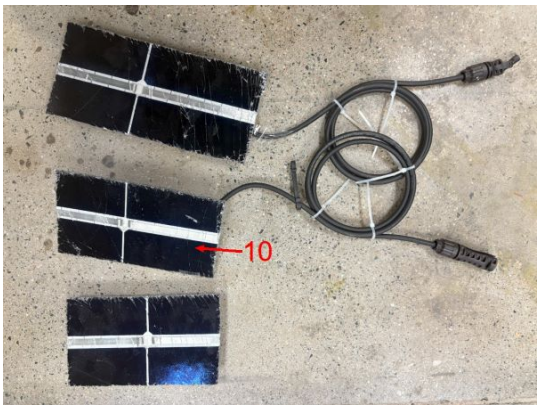
(*19) The theoretical content of SVHC substances is calculated in terms of its respective elements.This material may contains the mentioned SVHCs, it is suggested to check the respective recipe if the theoretical content of the respective substance >0.1% in each article

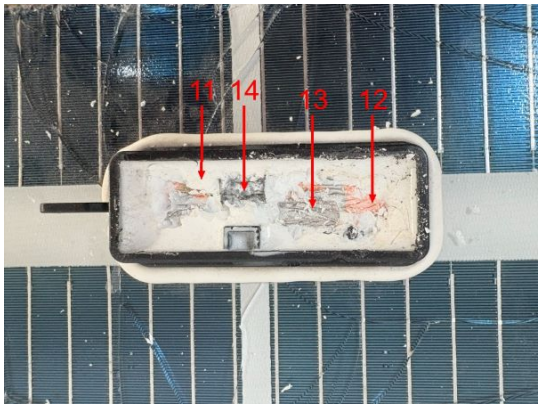
## Test Report No.: 326130350a 001

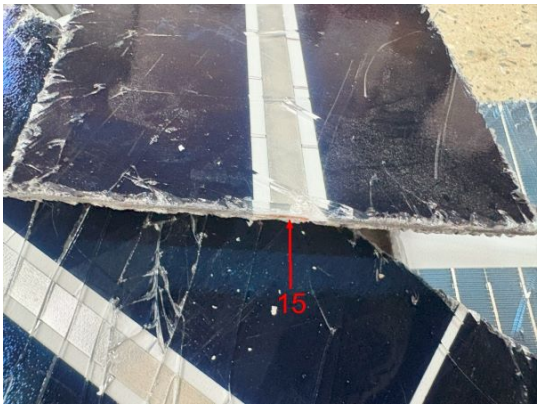


Sample Photos



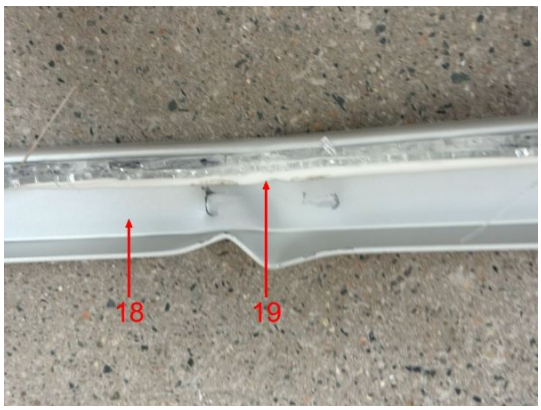









Sample Photo




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

**1. Scope**

1.1 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 hereof refers to the regions within the territories of China.The client hereof includes :

(i) a natural person capable to form legally binding contracts under the applicable laws who concludes the contract not for the purpose of a daily use;

(ii) the incorporated or unincorporated entity duly organized, validly existing and capable to form legally binding contracts under the applicable law.

1.2 The following terms and conditions apply to agreed services including consultancy services, information, deliveries and similar services as well as ancillary services and other secondary obligations provided within the scope of contract performance.

1.3 Any standard terms and conditions of the client of any nature shall not apply and shall hereby be expressly excluded. No standard contractual terms and conditions of the client shall form part of the contract even if TÜV Rheinland does not explicitly object to them.

1.4 In the context of an ongoing business relationship with the client, this GTCB shall also apply to future contracts with the client without TÜV Rheinland having to refer to them separately in each individual case.

**2. Quotations**

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.

**3. Coming into effect and duration of contracts**

3.1 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 the works requested by the client being carried out by TÜV Rheinland. If the client instructs TÜV Rheinland without receiving a quotation from TÜV Rheinland (quotation), TÜV Rheinland is, in its sole discretion, entitled to accept the order by giving written notice of such acceptance (including notice sent via electronic means) or by performing the requested services.

3.2 The contract term starts upon the coming into effect of the contract in accordance with article 3.1 and shall continue for the term agreed in the contract.

3.3 If the contract provides for an extension of the contract term, the contract term will be extended by the term provided for in the contract unless terminated in writing by either party with a three-month notice prior to the end of the contractual term.

**4. Scope of services**

4.1 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 by both parties. If no such separate service scope of TÜV Rheinland exists, then the written confirmation of order by TÜV Rheinland shall be decisive for the service to be provided. Unless otherwise agreed, services beyond the scope of 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 such) are not owed. In particular, no responsibility is assumed for the design, selection of materials, construction or intended use of an examined part, product, process or plant, unless this is expressly stated in the order.

4.2 The agreed services shall be performed in compliance with the regulations in force at the time the contract is entered into.

4.3 TÜV Rheinland is entitled to determine, in its sole discretion, the method and nature of the assessment unless otherwise agreed in writing or if mandatory provisions require a specific procedure to be followed.

4.4 On execution of the work there shall be no simultaneous assumption of any guarantee of the correctness (proper quality) and working order of either tested or examined parts nor of the installation as a whole and its upstream and/or downstream processes, organisations, use and application in accordance with regulations, nor of the systems on which the installation is based. In particular, TÜV Rheinland shall assume no responsibility for the construction, selection of materials and assembly of installations examined, nor for their use and application in accordance with regulations, unless these questions are expressly covered by the contract.

4.5 In the case of inspection work, TÜV Rheinland shall not be responsible for the accuracy or checking of the safety programmes or safety regulations on which the inspections are based, unless otherwise expressly agreed in writing.

4.6 If mandatory legal regulations and standards or official requirements for the agreed service scope change after conclusion of the contract, with a written notice to the client, TÜV Rheinland shall be entitled to additional remuneration for resulting additional expenses.

4.7 The services to be provided by TÜV Rheinland under the contract are agreed exclusively with the client. A contract of third parties with the services of TÜV Rheinland, as well as making available of and justifying confidence in the work results (test reports, test results, expert reports, etc.) is not part of the agreed services. This also applies if the client passes on work results - in full or in extracts - to third parties in accordance with clause 11.4.

4.8 The client understands and agrees that in order to perform the contract with TÜV Rheinland, the client may need to sign one or more contracts/ agreements with a/more third party(ies) and establish legal relationships with that/those third party(ies) according to such contracts/agreements. TÜV Rheinland will merely bears the corresponding legal liability according to this contract and the direct services actually to be provided by our company in the service process. If the relevant services are not directly provided by TÜV Rheinland (including but not limited to any testing and certification services to be provided by third testing and certification bodies), TÜV Rheinland will provide the client as agent for such relevant services. In order to achieve the purpose of the contract, the client hereby agrees that TÜV Rheinland can also sub-entrust to a third party to provide agency services, but TÜV Rheinland shall not bear any responsibility and/or risk for any services to be provided by any third parties (including but not limited to the testing and/or certification services to be entrusted and/or applied for by our company on behalf of the client to other third testing and/or certification bodies, agency services provided by any other third agent(s), etc.). Besides, the client shall be liable in accordance with the relevant laws and regulations and/or the terms under the contract. If the client is required to conduct any annual review/surveillance of the relevant testing and/or certification service results and pay additional fees in accordance with the relevant laws and regulations or the testing and certification rules, such fees are not within the scope of the contract price, the client shall timely perform the obligation of such annual review/surveillance and pay the corresponding fees. If the client fails to perform such obligations of the annual review/surveillance or fees payment, it may lead to adverse consequences such as failure/ suspending/cancellation/invalidity of testing and/or certification results, which shall not be borne/liable by TÜV Rheinland.

4.9 For the service content agreed in the contract, if the client requires TÜV Rheinland to deliver relevant test samples, data, etc. to any overseas laboratory or other places or sites to be designated by the client, TÜV Rheinland shall not take any responsibilities or risks for any problems during such delivery and the transportation process (including but not limited to any loss or damages of the samples and/or the materials, etc.). Besides, the relevant freight fees shall be borne by the client.

**5. Performance periods/dates**

5.1 The contractually agreed 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 if being confirmed as binding by TÜV Rheinland in writing.

5.2 If binding periods of performance have been agreed, these periods shall not commence until the client has submitted all required documents to TÜV Rheinland.

5.3 Articles 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 TÜV Rheinland.

5.4 TÜV Rheinland is not responsible for a delay in performance, in particular if the client has not fulfilled his duties to cooperate in accordance with clause 6.1 or has not done so in time and, in particular, has not provided TÜV Rheinland with all documents and information required for the performance of the service as specified in the contract.

5.5 If the performance of TÜV Rheinland is delayed due to unforeseeable circumstances such as force majeure, strikes, business disruptions, governmental regulations, transport obstacles, etc., TÜV Rheinland is entitled to postpone performance for a reasonable period of time which corresponds at least to the duration of the hindrance plus any time period which may be required to resume performance.

5.6 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 TÜV Rheinland, which enable the client to comply with the legal and/or officially prescribed deadlines. TÜV Rheinland assumes no responsibility in this respect unless TÜV Rheinland expressly agreed in writing specifically stating that ensuring the deadlines is the contractual obligation of TÜV Rheinland.

**6. The client's obligation to cooperate**

6.1 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.

6.2 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:

a) it has required statutory qualifications;

b) the product, service or management system to be certified complies with applicable laws and regulations; and

c) 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.

6.3 The client shall bear any additional cost incurred on account of work having to be redone or being delayed as a result of late, incorrect or incomplete information provided by or lack of proper cooperation from the client. Even where a fixed or maximum price is agreed, TÜV Rheinland shall be entitled to charge extra fees for such additional expense.

**7. Prices**

7.1 If the 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 list of TÜV Rheinland valid at the time of performance.

7.2 Unless otherwise agreed, work shall be invoiced according to the progress of the work.

7.3 If the 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 payments on account or in instalments.

**8. Payment terms**

8.1 All invoice amounts shall be due for payment within 30 days of the invoice date without deduction on receipt of the invoice. No discounts and rebates shall be granted.

8.2 Payments shall be made to the bank account of TÜV Rheinland as indicated on the invoice, stating the invoice and client numbers.

8.3 In cases of default of payment, TÜV Rheinland shall be entitled to claim default interest at the applicable short term loan interest rate publicly announced by a reputable commercial bank in the country where TÜV Rheinland is located. At the same time, TÜV Rheinland reserves the right to claim further damages.

8.4 Should the client default in payment of the invoice despite being granted a reasonable grace period, TÜV Rheinland shall be entitled to cancel the contract, withdraw the certificate, claim damages for non-performance and refuse to continue performance of the contract.

8.5 The provisions set forth in article 8.4 shall also apply in cases involving returned cheques, cessation of payment, commencement of insolvency proceedings against the client's assets or cases in which the commencement of insolvency proceedings has been dismissed due to lack of assets.

8.6 Objections to the invoices of TÜV Rheinland shall be submitted in writing within two weeks of receipt of the invoice.

8.7 TÜV Rheinland shall be entitled to demand appropriate advance payments.

8.8 TÜV Rheinland shall be entitled to raise its fees at the beginning of a month if overheads and/or purchase costs have increased. In this case, TÜV Rheinland shall notify the client in writing of the rise in fees. This notification shall be issued one month 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% per contractual year, the client shall not have the right to terminate the contract. If the rise in fees exceeds 5% per contractual year, the client shall be entitled to terminate 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.

8.9 Only legally established and undisputed claims may be offset against claims by TÜV Rheinland.

8.10 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.

**9. Acceptance of work**

9.1 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.

9.2 If acceptance is required or contractually agreed in an individual case, this shall be deemed to have taken place two (2) weeks after completion and handover of the work, unless the client refuses acceptance within this period stating at least one fundmental breach of contract by TÜV Rheinland.

9.3 The client is not entitled to refuse acceptance due to insignificant breach of contract by TÜV Rheinland.

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

9.5 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 withdrawn (e.g. performance of surveillance audits), 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 charge a lump-sum compensation of 10% of the order amount as compensation for expenses. The client reserves the right to prove that the TÜV Rheinland has incurred no damage whatsoever or only a considerably lower damage than the above lump sum.

9.6Insofar as the client has undertaken in the contract to accept services, TÜV Rheinland shall also be entitled to charge 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 TÜV Rheinland has incurred no damage whatsoever or only a considerably lower damage than the above mentioned lump sum.

**10. Confidentiality**

10.1 For the purpose of these terms and conditions, "confidential information" means all know-how, trade secrets, documents, images, drawings, expertise, information, data, test results, reports, samples, project documents, pricing and financial information, customer and supplier information, and marketing techniques and materials, tangible or intangible, that are supplied, transferred or otherwise disclosed by one Party (the "disclosing party") to the other Party (the "receiving party"), in writing or orally, in printed or electronic format. Confidential information is expressly not the data and know-how collected, compiled or otherwise obtained by TÜV Rheinland (non-personal and not proprietary to the client) within the scope of the provision of services by TÜV Rheinland. TÜV Rheinland is entitled to store, use, further develop and pass on the data obtained in connection with the provision of services for the purposes of developing new services, improving services and analysing the provision of services.10.2 The disclosing party shall mark all confidential information disclosed in written form as confidential before passing it onto the receiving party. The same applies to confidential information transmitted by e-mail. If confidential information is disclosed orally, the receiving party shall be appropriately informed in advance and the disclosing party shall confirm in writing the confidentiality nature of the information within five working days of oral disclosure. Where the disclosing party fails to do so within the stipulated period, the receiving party shall not take any confidentiality obligations hereunder towards such information. The client shall avoid using any third party platform and/or system (e.g. Wechat, etc. Unauthorized by TÜV Rheinland) to send any confidential information to TÜV Rheinland. Instead, the client shall send any confidential information to company email of TÜV Rheinland employees through its company email. If the client suffers from any losses or damages due to any theft or leakages to be caused by the adoption of any unauthorized confidential information sharing methods mentioned above, TÜV Rheinland shall be waived for any compensation liabilities.

10.3 All confidential information which the disclosing party transmits or otherwise discloses to the receiving party and which is created during performance of work by TÜV Rheinland:

a) may only be used by the receiving party for the purposes of performing the contract, unless expressly otherwise agreed in writing by the disclosing party;

b) may not be copied, distributed, published or otherwise disclosed by the receiving party, unless this is necessary for fulfilling the purpose of the contract or TÜV Rheinland is required to pass on confidential information, inspection reports or documentation to the government authorities, judicial court, accreditation bodies or third parties (including but not limited to the relevant direct and/or indirect exposed purchasers, vehicle manufacturers/whole equipment manufacturers, test standards or test requirements providers of the client's test products and/or certified products, etc.) that are involved in the performance of the contract;

c) must be treated by the receiving party with the same level of confidentiality as the receiving party uses to protect its own confidential information, but never with a lesser level of confidentiality than that which is reasonably required.

10.4 The receiving party may disclose any confidential information received from the disclosing party only to those of its employees who need this information to perform the services required for the contract. The receiving party undertakes to oblige these employees to observe the same level of secrecy as set forth in this confidentiality clause.

10.5 Information for which the receiving party can furnish proof that:

a) it was generally known at the time of disclosure or has become general knowledge without violation of this confidentiality clause by the receiving party; or

b) it was disclosed to the receiving party by a third party entitled to disclose this information; or

c) the receiving party already possessed this information prior to disclosure by the disclosing party; or

d) 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 confidentiality clause.

10.6 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) on request by the disclosing party, to destroy all confidential information, including all copies, and confirm the destruction of this confidential information to the disclosing party in writing, at any time if so requested 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 fulfilling the obligations under the contract, which shall remain with the client. However, TÜV Rheinland is entitled to make file copies of such reports, certificates and confidential information that forms the basis for 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 TÜV Rheinland.

10.7 From the start of the contract and for a period of three years after termination or expiry of the contract, the receiving party shall maintain strict secrecy of all confidential information and shall not disclose this information to any third parties or use it for itself.

**11. Copyrights and rights of use, publications**

11.1 TÜV Rheinland shall retain all exclusive copyrights in the reports, expert reports/opinions, test reports/results, results, calculations, presentations etc. prepared by TÜV Rheinland, unless otherwise agreed by the parties in a separate agreement. As the owner of the copyrights, TÜV Rheinland is free to grant others the right to use the work results for individual or all types of use ("right of use")

11.2 The client receives a simple, unlimited, non-transferable, non-sublicensable right of use to the contents of the work results produced within the scope of the contract, unless otherwise agreed by the parties in a separate agreement.The client may only use such reports, expert reports/opinions, test reports/results, results calculations, presentations etc. prepared within the scope of the contract for the contractually agreed purpose.

11.3 The transfer of right of use of the generated work results regulated in clause 11.2. of the GTCB is subject to full payment of the remuneration agreed in favour of TÜV Rheinland.

11.4 The client may use work results only complete and unshortened. The client may only pass on the work results in full unless TÜV Rheinland has given its prior written consent to the partial passing on of work results.

11.5 Any publication or duplication of the work results for advertising purposes or any further use of the work results beyond the scope regulaed in clause 11.2, and any quotaion of the introduction of TÜV Rheinland need the prior written approval of TÜV Rheinland in each individual case. Besides, the client ensures that the aforesaid use shall comply with relevant applicable laws, regulations and relevant rules (including but not limited to specific applicable testing and certification rules, etc.).

11.6 TÜV Rheinland may revoke a once given approval according to clause 11.5 at any time without stating reasons. In this case, the client is obliged to stop the transfer of the work results immediately at his own expense and, as far as possible, to withdraw publications.

11.7 The consent of TÜV Rheinland to publication or duplication of the work results does not entitle the client to use the corporate logo, corporate design or test/certification mark of TÜV Rheinland.

**12. Liability of TÜV Rheinland**

12.1 Irrespective of the legal basis, to the fullest extent permitted by applicable law, in the event of a breach of contractual obligations or tort, the liability of TÜV Rheinland for all damages, losses and reimbursement of expenses caused by TÜV Rheinland, its legal representatives and/or employees shall be limited to: (i) in the case of a contract with a fixed overall fee, three times the overall fee for the entire contract; (ii) in the case of a contract for annually recurring services, the agreed annual fee; (iii) in the case of a contract expressly charged on a time and material basis, a maximum of 20,000 Euro or equivalent amount in local currency; and (iv) in the case of a framework agreement that provides for the possibility of placing individual orders, three times of the fee for the individual order under which the damages or losses have occurred. Notwithstanding the above, in the event that the total and accumulated liability calculated according to the foregoing provisions exceeds 2.5 Million Euro or equivalent amount in local currency, the total and accumulated liability of TÜV Rheinland shall be only limited to and shall not exceed the said 2.5 Million Euro or equivalent amount in local currency.

12.2 The limitation of liability according to article 12.1 above shall not apply to damages and/or losses caused by malice, intent or gross negligence on the part of TÜV Rheinland or its vicarious agents. Such limitation shall not apply to damages for a person's death, physical injury or illness.

12.3 In cases involving a fundamental breach of contract, TÜV Rheinland will be liable even where minor negligence is involved. For this purpose, a "fundamental breach" is breach of a material contractual obligation, the performance of which permits the due performance of the contract. Any claim for damages for a fundamental breach of contract shall be limited to the amount of damages reasonably foreseen as a possible consequence of such breach of contract at the time of the breach (reasonably foreseeable damages), unless any of the circumstances described in article 12.2 applies.

12.4 TÜV Rheinland shall not be liable for the acts of the personnel made available by the client to support TÜV Rheinland in the performance of its services under the contract, unless such personnel made available is regarded as vicarious agent of TÜV Rheinland. If TÜV Rheinland is not liable for the acts of the personnel made available by the client under the foregoing provision, the client shall indemnify TÜV Rheinland against any claims made by third parties arising from or in connection with such person's acts.

12.5 Unless otherwise contractually agreed in writing, TÜV Rheinland shall only be liable under the contract to the client.

12.6 The limitation periods for claims for damages shall be based on statutory provisions.

12.7 None of the provisions of this article 12 changes the burden of proof to the disadvantage of the client.

**13. Export control**

13.1 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 international export control law.

13.2 The performance of a contract with the client is subject to the proviso that there are no obstacles to performance due to national or international foreign trade legislations or embargos and/or sanctions. In the event of a violation, TÜV Rheinland shall be entitled to terminate the contract with immediate effect and the client shall compensate for the losses incured thereof by TÜV Rheinland.

**14. Data protection notice**

The client understands and agrees that TÜV Rheinland processes personal data (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 obtained the prior consent of the data subject, which entitles TÜV Rheinland to access, use, or process the personal data that the client collected or processed by itself and transferred to TÜV Rheinland. For certain services, we may also process sensitive personal data. TÜV 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 personal data was collected, the client also confirms that it has obtained the prior consent of the data subject. TÜV Rheinland will carry out cross-border data transmission and protect the data in compliance with the privacy and personal data security related laws and regulations in China and the local country. TÜV Rheinland will take measures to avoid any leakage, abuse, manipulation, damage or unauthorized access of personal data. The personal data will be deleted immediately as soon as a corresponding reason for deletion arises. Data subjects may exercise the following rights: right of information, right of decision, right of rectification, right of deletion, right of processing limitation, right of objection, right of data transferability. In addition, persons concerned by the data processing have the right to revoke their consent at any time with effect for the future, as well as the right to file a complaint with the competent data protection supervisory authority. For further details on the processing of personal data by TÜV Rheinland as the person responsible or contract processor, please refer to the respective data protection information. You can contact the Group Data Protection Officer of TÜV Rheinland by e-mail at dataprotection@tuv.com or by post at the following address: TÜV Rheinland AG, c/o Group Data Protection Officer, Am Grauen Stein, 51105 Cologne, Germany.

**15. Retention of test material and documentation**

15.1 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 agreement with the client.

15.2 Charges apply if the test samples are stored at the premises of TÜV Rheinland. The cost of placing a test sample into storage will be disclosed to the client in the quotation.

15.3 If reference samples or documentations are given to the client to be placed in storage at their premises, the reference samples or documentations must be made available to TÜV Rheinland upon request promptly and free of charge. If the client, in response to such a request, is incapable of making available the reference samples and/or documentation, any liability claims for material and pecuniary damage resulting from the respective testing and certification that is brought forward by the client against TÜV Rheinland shall be voided.

15.4 The retention period for the documentation shall be 10 (ten) years after the expiry of the test mark certificates or shall meet the applicable legal requirements for EU/EC certificates of conformity and GS mark certificates.

15.5 The costs of the handover and dispatch of the test samples for storage on the client's premises are borne by the client. TÜV Rheinland will be liable for the loss of test samples or reference samples from the laboratories or warehouses of TÜV Rheinland only in case of gross negligence.

**16.Termination of the contract**

16.1 Notwithstanding clause 3.3 of the GTCB, TÜV 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, for good cause and independently of the continuation of the remaining services with six (6) months' notice to the end of the contractually agreed term. The notice period shall be shortened to six (6) weeks in case TÜV Rheinland is prevented from performing the services due to a loss or a suspension of its accreditation or notification.

16.2 For good causes, TÜV Rheinland may consider giving a written notice to the client to terminate the contract without bearing any liabilities and the client shall pay the relevant service fees for the services provided by TÜV Rheinland due to the termination date of the contract. The aforesaid good causes includes but not limited to the following:

a) the client does not immediately notify TÜV Rheinland of changes in the conditions within the company which are relevant for certification or surveillance audits;

b) the client misuses the certificate or certification mark or uses it in violation of the contract;

c) in the event of several consecutive delays in payment (at least three times);

d) a substantial deterioration of the financial circumstances of the client occurs and as a result the payment claims of TÜV Rheinland under the contract are considerably endangered and TÜV Rheinland cannot reasonably be expected to continue the contractual relationship.

e) in the event of any serious misrepresentation, be it by intentional fraud or grossly negligent behavior of the managers, employees or agents of the client;

f) if TÜV Rheinland, for reasons beyond its control, is temporarily or finally not able or entitled to continue or finalize the performance of the service, e.g. in case of force majeure, government interference, sanctions, loss of accreditation or notification, or other.

g) if the country/region involved in the whole contract or the specific service project in the contract does not belong to the insurance coverage applicable to TÜV Rheinland, and TÜV Rheinland believes that there is a risk or some risks beyond its control to continue to perform the contract.

16.3 In the event of termination with written notice by TÜV Rheinland for good cause, TÜV Rheinland shall be entitled to a lump-sum claim for damages against the client if the conditions of a claim for damages exist. In this case, the client shall owe 15% of the remuneration to be paid until the end of the fixed contract term as lump-sum compensation. The client reserves the right to prove that there is no damage or a considerably lower damage, TÜV Rheinland reserves the right to prove a considerably higher damage in individual cases.

16.4 TÜV Rheinland is also entitled to terminate the contract with written notice if the client has not been able to make use of the time windows for auditing /service provision provided by TÜV Rheinland within the scope of a certification procedure and the certificate therefore has to be withdrawn (for example during the performance of monitoring audits). Clause 16.3 applies accordingly.

**17. Force Majeure**

17.1 "Force Majeure" means the occurrence of an event or circumstance that prevents or impedes a Party from performing one or more of its contractual obligations under the contract, if and to the extent that that Party proves: (a) that such impediment is beyond its reasonable control; and (b) that it could not reasonably have been foreseen at the time of the conclusion of the contract; and (c) that the effects of the impediment could not reasonably have been avoided or overcome by the affected Party.

17.2. In the absence of proof to the contrary, the following events affecting a Party shall be presumed to fulfil conditions (a) and (b) under paragraph 1 of this Clause: (i) war (whether declared or not), hostilities, invasion, act of foreign enemies, extensive military mobilization; (ii) civil war, riot, rebellion and revolution, military or usurped power, insurrection, act of terrorism, sabotage or piracy; (iii) currency and trade restriction, embargo, sanction; (iv) act of authority whether lawful or unlawful, compliance with any law or governmental order, expropriation, seizure of works, requisition, nationalization; (v) plague, epidemic, natural disaster or extreme natural event; (vi) explosion, fire, destruction of equipment, prolonged breakdown of transport, telecommunication, information system or energy; (vii) general labor disturbance such as boycott, strike and lock-out, go-slow, occupation of factories and premises.

17.3. The Party successfully invoking this Clause is relieved from its duty to perform its obligations under the contract and from any liability in damages or from any other contractual remedy for breach of contract, from the time at which the impediment causes inability to perform, provided that the notice thereof is given without delay. If notice thereof is not given without delay, the relief is effective from the time at which notice thereof reaches the other Party. Where the effect of the impediment or event invoked is temporary, the above consequences shall apply only as long as the impediment invoked impedes performance by the affected Party. Where the duration of the impediment invoked has the effect of substantially depriving the contracting Parties of what they were reasonably entitled to expect under the contract, either Party has the right to terminate the contract by notification within a reasonable period to the other Party. Unless otherwise agreed, the Parties expressly agree that the contract may be terminated by either Party if the duration of the impediment exceeds 120 days.

**18. Hardship**

18.1 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 contract.

18.2. Notwithstanding paragraph 1 of this Clause, where a Party proves that:

(a) the continued performance of its contractual duties has become excessively onerous due to an event beyond its reasonable control which it could not reasonably have been expected to have taken into account at the time of the conclusion of the contract; and that

(b) 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 reasonably allow to overcome the consequences of the event.

18.3. Where Clause 18.2 applies, but where the Parties have been unable to agree alternative contractual terms as provided in that paragraph, the Party invoking this Clause is entitled to terminate the contract, but cannot request adaptation by the judge or arbitrator without the agreement of the other Party.

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

19.1 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.

19.2 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 comes closest to the content of the invalid provision in legal and commercial terms.

19.3 Unless otherwise stipulated in the contract, the governing law of the contract and these terms and conditions shall be chosen following the rules as below:

a) if TÜV 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 laws of the People's Republic of China.

b) if TÜV Rheinland in question is legally registered and existing in Taiwan, the contracting parties hereby agree that the contract and these terms and conditions shall be governed by the laws of Taiwan.

c) if TÜV Rheinland in question is legally registered and existing in Hong Kong, the contracting parties hereby agree that the contract and these terms and conditions shall be governed by the laws of Hong Kong.

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

Unless otherwise stipulated in the contract, if no settlement or no agreement in respect of the extension of the negotiation period can be reached within two months of the arising of the dispute, the dispute shall be submitted:

a) in the case of TÜV Rheinland in question being legally registered and existing in the People's Republic of China, to China International Economic and Trade Arbitration Commission (CIETAC) to be settled by arbitration under the Arbitration Rules of CIETAC in force when the arbitration is submitted. The arbitration shall take place in Beijing, Shanghai, Shenzhen or Chongqing as appropriately chosen by the claiming party.

b) in the case of TÜV Rheinland in question being legally registered and existing in Taiwan, to Chinese Arbitration Association, Taipei to be arbitrated in accordance with its then current Rules of Arbitration. The arbitration shall take place in Taipei.

c) in the case of TÜV Rheinland being legally registered and existing in Hong Kong, to Hong Kong International Arbitration Centre (HKIAC) to be settled by arbitration under the HKIAC Administered Arbitration Rules in force when the Notice of Arbitration is submitted in accordance with these rules. The arbitration shall take place in Hong Kong.

The decision of the relevant arbitration tribunal shall be final and binding on both parties. The arbitration fee shall be borne by the losing party.