Test Report -Products



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Client: LONGI GREEN ENERGY TECHNOLOGY CO., LTD.

Contact Information: No. 388, Middle Hangtian Road, Chang'an District Xi'an, Shaanxi,

P.R.China

Identification/ Photovoltaic Modules and Cells

Model No(s): LR5-72HIH, LR5-72HPH, LR4-72HIH, LR4-60HIH, LR4-72HPH, LR4-

60HPH, LR4-60HIB, LR4-60HPB, LR4-72HIBD, LR4-72HBD, LR5-

72HIBD, LR5-72HBD

IBC MonoSol xxx OS9-HC, IBC MonoSol xxx OS9-HC Black

Condition at delivery: Test item complete and undamaged.

Sample Receiving date: 2021-09-24

Testing Period: 2021-09-24 to 2021-10-10

Place of testing: Chemical laboratory Shanghai

Test Specification: Test result:

 Screening of substances of very high concern (SVHC) subject to the candidate Please refer to result list by European Chemical Agency (ECHA) according to Regulation (EC) No. page 4 1907/2006 of REACH and its amendments

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

Guic Xon

2021-10-11

Eric Xu / 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.



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Material List:

Item: Photovoltaic Modules and Cells

LR5-72HIH, LR5-72HPH, LR4-72HIH, LR4-60HIH, LR4-72HPH, LR4-60HPH, LR4-60HIB,

LR4-60HPB, LR4-72HIBD, LR4-72HBD, LR5-72HIBD, LR5-72HBD IBC MonoSol xxx OS9-HC, IBC MonoSol xxx OS9-HC Black

Material No.	Material	Color	Location
M001	Metal	black	refer to photo
M002	Glass	transparent	refer to photo
M003	Plastic	black	refer to photo
M004	Glue	black	refer to photo
M005	Metal	white	refer to photo
M006	Glass	transparent	refer to photo
M007	Glue	white	refer to photo
M008	Plastic	white	refer to photo
M009	Glass	transparent	refer to photo
M010	Battery	-	refer to photo
M011	Battery	-	refer to photo
M012	Battery	-	refer to photo
M013	Battery	-	refer to photo
M014	Battery	-	refer to photo
M015	Battery	-	refer to photo
M016	Metal	silver	refer to photo
M017	Metal	silver	refer to photo
M018	Plastic	black	refer to photo
M019	Plastic	black	refer to photo
M020	Plastic	black	refer to photo
M021	Plastic	black	refer to photo
M022	Plastic	black	refer to photo
M023	Plastic	black	refer to photo



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Material No.	Material	Color	Location
M024	Plastic	red	refer to photo
M025	Plastic	black	refer to photo
M026 Metal copper refer to photo		refer to photo	



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1. 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 of REACH and its amendments.

Conclusion:

	Conclusion		
Product Location	Acc. to Screening of Substances of Very High Concern (SVHC) in Candidate List for authorization published by European Chemicals Agency (ECHA) according to Regulation (EC) No. 1907/2006 of REACH and its amendments, the detected SVHC concentration in components level is	Obligation of Importer (*) (For article)	Detected Substance (if any)
sample	<0.1%	not necessary	-

(For article)

- (*) To communicate information down the supply chain according to article. 33 of REACH. 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 Results

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 of REACH and its amendments.

Test Method:

Result (%)

- 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 No.:	T001	T002	T003
Material No.:	M001 + M005 + M016 + M017 + M026	M002 + M006 + M009	M003 + M008
Result (%)	< RL	< RL	< RL
Test No.:	T004	T005	T006
Material No.:	M004 + M007	M010 + M011 + M012 + M013 + M014 + M015	M018 + M019 + M020 + M022 + M023 + M025
Result (%)	< RL	< RL	< RL
Test No.:	T007		
Material No.:	M021 + M024		

< RL



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Abbreviation: < = less than

> RL =Reporting Limit % =Percentage



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Remark:

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

	Substance	CAS No.	Reporting Limit
1	4,4'- Diaminodiphenylmethane (MDA)	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: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane	25637-99-4 / 3194-55-6 / 134237-50-6 / 134237-51-7 / 134237-52-8	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	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 (C.I. Pigment Red 104) (*2)(*3)	12656-85-8	0.01%
14	Lead sulfochromate yellow (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: Names of the acids and their oligomers: Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid. (*2)	7738-94-5 / 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	107-06-2	0.01%
25	Bis(2-methoxyethyl) ether	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%



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25	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	60545 40 4	0.049/
35	(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	
62	Anthracene oil, anthracene paste, anthracene fraction (*6)	91995-15-2	
63	Anthracene oil, anthracene-low (*6)	90640-82-7	0.01% (*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%



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67	Tetraboron disodium heptaoxide, hydrate (*2) (*5)	12267-73-1	0.01%
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	
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	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	
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	0.01%
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 \geq 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)] (*9)	6786-83-0	



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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], cis-cyclohexane-1,2-dicarboxylic anhydride [2], trans-cyclohexane-1,2-dicarboxylic anhydride [3] [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 / 13149-00-3 / 14166-21-3	0.01%
110	Hexahydromethylphthalic anhydride (MHHPA) [1], Hexahydro-4-methylphthalic anhydride [2], Hexahydro-1-methylphthalic anhydride [3], Hexahydro-3-methylphthalic anhydride [4] [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 / 19438-60-9 / 48122-14-1 / 57110-29-9	0.01%
111	N,N-dimethylformamide	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%



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141	Lead titanium trioxide (*2)	12060-00-3	0.01%
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 [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) [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) (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 (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	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 21049-39-8 4149-60-4	0.01%
169	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8	0.01%
170	4,4'-isopropylidenediphenol (bisphenol A)	80-05-7	0.01%
171	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	335-76-2 3830-45-3 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%



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173	<i>p</i> -(1,1-dimethylpropyl)phenol	80-46-6	0.01%
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	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) with ≥ 0.1% w/w of 4 -nonylphenol, branched and linear (4-NP)	-	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	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%
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%



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213	Orthoboric acid, sodium salt (*2) (*5)	13840-56-7	0.01%
214	2,2-bis(bromomethyl)propane1,3-diol (BMP) 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA) 2,3-dibromo-1-propanol (2,3-DBPA)	3296-90-0 / 36483-57-5 / 1522-92-5 / 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%

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 confirmed and tested in terms of borate and the borate 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

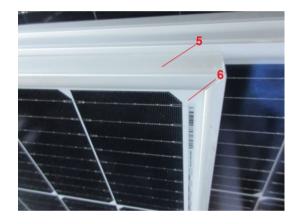


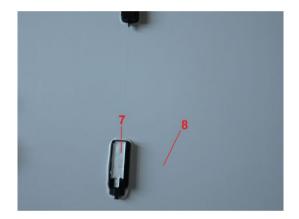
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Sample Photos















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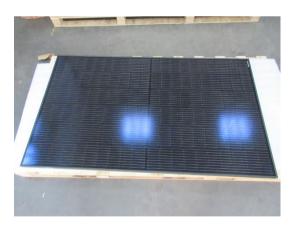
Sample Photos















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Sample Photos









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 hereof refers to Mainland China, Hong Kong and Taiwan. The client hereof includes:
- 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; (i)
- the incorporated or unincorporated entity duty cyranized, 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 ancillary services and other secondary obligations provided within the scope of contract performance.
- 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.
- 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

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

- Coming into eriect and outstand or 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 the works 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.
- 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 six-week notice notice to the end of the contractual terminated.

- 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.
- The agreed services shall be performed in compliance with the regulations in force at the time the contract is entered into.
- TÜV Rheinland is entitled to determine, in its sole discretion, the method and nature of the ssessment unless otherwise agreed in writing or if mandatory provisions require a specific rocedure to be followed.
- procedure to be intowed.

 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 the and application in accordance with regulations, nor of the systems on which the installation is based. In particular, TUN Phin-lands 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 converted by the contract.
- case of inspection work, TÜV Rheinland shall not be responsible for the accuracy or checking safety programmes or safety regulations on which the inspections are based, unless otherwise sly agreed in writing.
- f 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.
- 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 oil justifying conflower in the work results (test reports, test results, expert reports, etc.) and 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 clauses 11.4.

- 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 $T\bar{U}V$ 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 $T\bar{U}V$ Rheinland.
- 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.
- 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 Pheriand 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

- 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 made available free of charge by the client. Moreover, collaborative action of the client must undertaken in accordance with legal provisions, is standards, safety regulations and accid prevention instructions. And the client represents and warrants that:

a) 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/oerfictaets if any.

- If the scope of performance is not laid down in writing when the order is placed, invoicing shall be assed on costs actually incurred. If no price is agreed in writing, invoicing shall be made in scordance with the price list of TUV Rheinland valid at the time of performance.
- ise 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 installments.

- All invoice amounts shall be due for payment without deduction on receipt of the invoice discounts and rebates shall be granted.
- Payments shall be made to the bank account of TÜV Rheinland as indicated on the invoice, stating the invoice and client numbers.
- n cases of default of payment, TÜV Rheinland shall be entitled to claim default interest at the pplicable 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 laim 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.
- 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.
- Objections to the invoices of TÜV Rheinland shall be submitted in writing within two weeks of receipt of the invoice.
- TÜV Rheinland shall be entitled to demand appropriate advance payments
- TUV Rheinand shall be entitled to raise is fees at the beginning of a month if overheads and/or purchase costs have increased. In this case, TUV Rheinland shall notify the client in writing of the purchase costs have increased. In this case, TUV Rheinland shall notify the client in writing of the shall come line feller (period of notice of changes in fees). If the rise in fees emains under 50 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 contractual year. The client shall not have the right to terminate the contract by the cheered to have been agreed upon ty he time of the appropriate and propriate client of the view of the contract is yet with the contract is not under the contract by the client of the view of the contract is not the contract in the contract is not under the contract of the contract is not under the contract of the contract is not under the contract is not under the contract of the contract is not under the contract is not under the contract is not under the contract in the contract is not under the contract in the contract is not under the contract is not under the contract in the contract is not under the contract is not u
- 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 clie including but not limited to setoff against any fees paid by the client under any contracts, agreeme 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.
- oceptance is required or contractually agreed in an individual case, this shall be deemed to have an aloac two (2) weeks after completion and handover of the work, unless the client refuses eptance within this period stating at least one fundmental breach of contract by TÜV Rheinland.
- The client is not entitled to refuse acceptance due to insignificant breach of contract by TÜV Rheinland
- If acceptance is excluded according to the nature of the work performance of TÜV Rheinland, the completion of the work shall take its place.
- Competion or law 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-plentomance by TUN Whinhindan and the client stage of the post of
- Insofar as the clinical management of the contract to accept services, TUV Rheinland shall also be entitled to harge 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 loved redamage than the above mentioned fump sum.

10. Confidentiality

- 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 to the control of the provision of services by TUV Rheinfand. TUV Rheinfand and not proprietary to cellected, complied or otherwise obtained by TUV Rheinfand in convention with the provision of services by TUV Rheinfand. TUV Rheinfand is entitled to scheme, use, further develop and pass on the data obtained in convention with the provision of services store, use, further develop and pass on the data obtained in convention with the provision of services store, use, further develop and pass on the data obtained in convention with the provision of services store, use, further develop and pass on the data obtained in convention with the provision of services store, use, further develop and pass on the data obtained in convention with the provision of services services, 10.2 The declaring party shall confirm in writing the confidential information transmitted by e-mail. If confidential information is disclosed onally, the receiving party shall confirm in writing the confidential information transmitted by e-mail. If confidential information is disclosed onally, the receiving party shall confirm in writing the confidential information transmitted by e-mail. If confidential information is disclosed onally, the receiving party shall confirm in writing the confidential information transmitted by e-mail. If confidential information is disclosed onally, the receiving party shall confirm in writing the confidential information and confidential information. Turn writing the confidential information is admitted by e-mail. If confidential information is
- 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:
- 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;
 - 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 parise that are involved in the performance of the contract.
- 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.
- 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.
- Information for which the receiving party can furnish proof that
 - 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
- it was disclosed to the receiving party by a third party entitled to disclose this information; of
- 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.
 - deemed to constitute 'confidential information' as defined in this confidentiality 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, ander (ii) on request by the disclosing party, to deterry all confidential information, including all copies, and confilm 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 thilling the obligations under the contract, 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.
- From the start of the contract and for a period of three years after termination or expiry of contract, the receiving party shall maintain strict secrecy of all confidential information and shall disclose this information to any third parties or use it for itself.

Copyrights and rights of use, publications

- TÜV Rhienland shall retain all exclusive copyrights in the reports, expert reports/opinions, reports/results, results, calculations, presentations etc. propared by TÜV Rhienland, ut otherwise agreed by the parties in a separate agreement. As the owner of the copyrights, Rhienland is free to grant others the right to use the work results for individual or all types of (right of use?)
- 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/piprions, test reports/results, results calculations, presentations etc. prepared within the scope of the contract for the contractable) gareed 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.
 - 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.
 - 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 needs the prior written approval of TÜV Rheinland in aeach individual case
 - 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.

Liability of TÜV Rheinland

11.5

- 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 Rherinated for all damages, losses and remburament of expenses caused by TÜV Rherinated, is legal representatives and/or employees 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, here times of the fee for the individual under which the damages of losses have occurred. Notwithstanding the above, in the event that the Euro or equivalent amount in local currency, the folial and accomplated liability of TÜV Rheriland Euro or equivalent amount in local currency. The folial and accomplated liability of TÜV Rheriland Euro or equivalent amount in local currency. The folial and accomplated liability of TÜV Rheriland
- The limitation of liability according to article 12.1 above shall not apply to damages a caused by malice, intent or gross negligence on the part of TÜV Rheinland or its vica Such limitation shall not apply to damages for a person's death, physical injury or illness
- In cases involving a fundamental breach of contract. TUV Photorisms will be liable even where micro-neglesence is involved. For this propose, a Fundamental beach "is breach of a material contract charges of 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 that be little of the breach (reasonably foreseenable damages), unless any of the circumstances described in saticle 122 applies. 12.3
- 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 aeroices under the contract, unless such personnel that the performance of the services under the contract, unless such personnel that has to of the personnel made available by the client under the foregoing provision, the client shall indemnity TÜV Rheinland against any claims made by third parties arising from or in connection with such personnels acts. 12.4
- Unless otherwise contractually agreed in writing, TÜV Rheinland shall only be liable under the co to the client.
- 12.7 None of the provisions of this article 12 changes the burden of proof to the disadvantage of the client

- When passing on the services provided by TÜV Rheinland or parts thereof to third parties in Gn China or other regions, the client must comply with the respectively applicable regulations of nat and international export control law.
 - 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, TUV Rheinland shall be entitled to terminate the contract with immediate effect and the client shall compensate for the losses incurred thereof by TÜV Rheinland.

Data protection notice

TVD Rheinland rocesses personal data of the client for the purpose of fulfilling this contract. In addison, TVD Rheinland rocesses personal data for cinher legal purposes in accordance with the relevant legal sais. The personal data of the client will only be disclosed to other natural or legal personal final requirements are met. This also applies to transfers to their countries. The personal data will be deleted in the contract of the countries. The personal data will be deleted for the countries of the countries of the countries of the countries. The personal data will be deleted for the countries of the countries of

15. Test materials/samples: transport risk and storage

- 15.1The risk and costs for freight and transport of documents or test materials/samples to and from TÜV Rheinland as well as the costs of necessary disposal measures shall be borne by the client. TÜV Rheinland will be only liable for the direct loss of test materials/samples in the laboratories or warehouses of TÜV Rheinland only in case of gross negligence.
- 15.2Any destroyed and otherwise worthless test materials/samples will be disposed of by TŪV Rheinland for the client at the expense of the client, unless otherwise agreed.
- 15.3Undamaged test materials/samples shall be stored by TÜV Rheinland for four (4) weeks after completion of the test. If a longer storage period is desired, TÜV Rheinland charges an appropriate storage fee.
- 15.4After the expiry of the 4 weeks or any longer period agreed upon, the test materials/samples will be disposed of by TÜV Rheinland for the client for a fee in accordance with clause 15.2.
 - test materials/samples or documentations are given to the client to be placed in storage at their premises, the test material/samples or documentations must be made available to TUV Rheshinds making available the test material/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 TUV Rheshinds that be voided.

16. Termination of the contract

- 16.1 Novimbated rig clause 3.3 of the GTCB, TÜV Rharizand and the elient are entitled to terminate the contract.

 In the entiry or, in the sand services combined in one contract, each of the combined parts of the contract individually and independently of the continuation of the trenaining 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 accretization or notification.
- 16.2For good causes, TÜV Rheinland may consider giving a written notice to the client to terminate the cor which 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 signs of such changes;
 - 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);
 - ostantial 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.
- 16.3in the event of termination with written notice by TÜV Rheinland for good cause. TÜV Rheinland shall be erifield to a lump-sum dain for damages against the client if the conditions of a claim for damages exist. It is not supply to the conditions of a claim for damages exist. It is not supply to the condition of the condition of the client for the condition of the client for the client for the condition of the client for the conditions of the client for the cli
- 16.4TÜV 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 iservice provision provided by TÜV Rheinland within the scope performance of monitoring audits). Clisure 16.3 applies accordingly.

- 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. 17.1"Force Majeure" r
- In the absence of proof to the contrary, the following events affecting a Party shall be presumed to fulfill conditions (a) and (b) under paragraph 1 of this Clause: (i) war (whether declared or not), hostillities, invasion, act of foreign enemies, extensive millitary mobilization; (i) civil var, for theblicn and revolution, millitary or usurped power, insurrection, act of terrorism, sabotage or piracy; (iii) currency and trade restriction, enthages, scandior; (ii) extensive this will or ulantaful, concipiance with any law or governmental order, expropriation, secture of works, requisition, nationalization; (p) alignue, epidemic, natural disaster or detiene natural evert; (i) explosion, in, destruction of expressive disasterity of the contrary of the contr
- as boycut, strike and lock-out, go-alow, occupation of factories and premises.

 The Party successfully invoking this Clause is reliased from its day to perform its chigations under the centract 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, it 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 missed 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 lies the right to eleminate the contract by profitted to expect under the contract, the profit is the profit of the pro

- 18.1The 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.
- rec Clause 182 applies, but where the Parties have been unable to agree alternative contractual terms as vided in that paragraph, the Party invoking this Clause is entitled to terminate the contract, but cannot uest adaptation by the judge or arbitrator without the agreement of the other Party.

rtial 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 comes closest to the content of the invalid provision in legal and commercial terms. 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:
- 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.
- 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. 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
- Any dispute in connection with the contract and these terms and conditions or the execution thereof shall be settled friendly through negotiations.
- ass 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:
- in the case of TÜV Rheinland in question being legally registered and existing in the Recycle's Republic of China, to China bitemational Economic and Trade Arbitration Commission (CIETAC) to be setted 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.
- 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.
- the case of TÜV Rheinland being legally registered and existing in Hong Kong, to Hong Kong emational Arbitration Centre (HKIAC) to be settled by arbitration under the HKIAC Administered obiration Rules in force when the Notice of Arbitration is submitted in accordance with these rules. The intration shall takes 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.