

Test Report No.:报告号 **244255163a3 002**

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Client:客户 **Shenyang RenHui fire control technology co., LTD**
沈阳仁辉消防科技有限公司

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Test item(s):测试样品 Concentrated foam fire extinguishing agent
浓缩型泡沫灭火剂

Identification/ Model No(s):规格 S-1-AB (10% A-EX+1.5%B-EX)

Sample obtaining method:样品获取方式 Sending by customer
客户寄样

Sample Receiving date: 2020-07-23
收件日期

Testing Period:测试日期 2020-07-27 – 2020-07-31

Test specification: 检测要求

Customer's requirement 客户要求:

1. Perfluorooctane Sulfonate (PFOS) 全氟辛烷磺酸
2. Screening of substances of very high concern (SVHC) subject to authorisation, according to (EU) No 143/2011, (EU) No 125/2012, (EU) No. 348/2013, (EU) No 895/2014, (EU) No 2017/999 and (EU) No 2020/171 (Annex XIV of EC No 1907/2006) and candidate list by European Chemical Agency (ECHA), according to the EU Court of Justice rules on SVHCs in articles (Guidance on requirements for substances in articles, June 2017) / 产品风险评估: 依据欧盟法庭针对物品中高关注物质的判决, 法规(EU)No 143/2011, (EU) No 125/2012, (EU) No 348/2013, (EU) No 895/2014, (EU) No 2017/999及(EU) No 2020/171 (Annex XIV of EC No 1907/2006)之授权清单及欧洲化学品管理局颁布的高度关注物质的筛检 (物品中物质限值指南, 2017年6月)。

Test result: 结果

Pass 符合
Please refer to result page
请参考结果页

Other Information: 其他信息

Remark: Please be kindly informed that all the content recorded in the captioned report 244255163a1 001 is cancelled and now superseded by 244255163a3 002 & 244255163a4 002.

备注: 请注意, 之前以244255163a1 001作为报告号的报告中的所有内容均已取消, 并由244255163a3 002和244255163a4 002代替之。

For and on behalf of
TÜV Rheinland (Shanghai) Co., Ltd.
莱茵技术(上海)有限公司



2020-08-07

Nicky Chen / Project Manager

Date 日期

Name/Position 姓名/职位

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 a. m. 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.

样品信息由客户提供。测试结果根据所做测试的种类和范围而得出。

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Material list 材料清单:

Item /样品: Concentrated foam fire extinguishing agent
浓缩型泡沫灭火剂
S-1-AB (10% A-EX+1.5%B-EX)

Material No. 材料号	Material 材料	Color 颜色	Location 位置
M001	Liquid 液体	Transparent 透明	Refer to photo 参考照片

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Perfluorooctane Sulfonate (PFOS)

全氟辛烷磺酸

Test method: In house method, determination by LC-MS-MS

测试方法: 内部方法, 液相色谱-质谱联用(LC-MS-MS)分析

Test results 测试结果

Test No. 测试编号	Material No. 物料编号	Test Parameter 测试参数	Unit 单位	RL 报告限值	Regulatory requirement 法规要求	Test Result 测试结果	Conclusion 结论
T001	M001	PFOS 全氟辛烷磺酸	mg/kg	1.0	10	< RL	Pass

Abbreviation 简称: < = Less than 小于
 RL = Reporting Limit 报告检出限
 mg/kg = milligram per kilogram 毫克每千克

Remark:

* According to Part A, Annex I to Regulation (EU) 2019/1021:
 根据欧盟委员会条例 (EU) 2019/1021 附录 I, A 部分要求如下

Substance 物质	Scope 范围	Maximum Permissible Limit 最大容许限值
Perfluorooctane sulfonic acid and its derivatives (PFOS) 全氟辛烷磺酸及其衍生物 (PFOS)	Substances or in preparations 化学物质或配制品	≤ 10 mg/kg
	Semi-finished products or articles, or the part thereof 半成品, 产品或零部件	< 1000 mg/kg
	Textiles or other coated materials 纺织品或涂层材料	< 1 µg/m ²

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Screening of substances of very high concern (SVHC) subject to authorisation, according to (EU) No 143/2011, (EU) No 125/2012, (EU) No 348/2013, (EU) No 895/2014, (EU) No 2017/999 and (EU) No 2020/171 (Annex XIV of EC No 1907/2006) and candidate list by European Chemical Agency (ECHA), according to the EU Court of Justice rules on SVHCs in articles. / 依据欧盟法庭针对物品中高关注物质的判决, 法规(EU)No 143/2011, (EU) No 125/2012, (EU) No 348/2013, (EU) No 895/2014, (EU) No 2017/999及(EU) No 2020/171 (Annex XIV of EC No 1907/2006)之授权清单及欧洲化学品管理局颁布的高度关注物质的筛选。

- Test Method: 1) Test portion is digested with acid and assisted with microwave, the elements are analysed by ICP-OES. /测试部分用酸及微波消解, 电感耦合等离子体发射光谱法分析
- 测试方法: 2) Test portion is extracted by organic solvent, semi-quantitative analysis by GC-MS / UV-Vis. /测试部分用有机溶剂萃取, 气相质谱连用仪扫描法/紫外可见吸收光谱法分析
- 3) Test portion is extracted by organic solvent, the extraction solution is analyzed by Headspace-GC/MS / LC-DAD-MS / LC-MS/MS. /测试部分用有机溶剂溶解, 顶空-气相质谱连用仪扫描法/液相色谱-二极管阵列-串联质谱法/液相串联质谱法分析

Test No.: 测试编号	T001
Material No.: 材料编号	M001
Result (%): 测试结果	< RL

Abbreviation 简称: < = less than /小于
 RL = reporting limit / 表示报告检出限
 % = percentage by mass / 表示质量百分比

Remark 备注:

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.

SVHC which are not mentioned in test result were either not subject to testing or not detected. / 测试材料选择性筛选高度关注物质。选择的测试参考材料种类, 应用, 生产过程中污染的可能性和产品材料的特性。测试结果中没有提及的其他高度关注物质无需测试或未检出。

(*1) The reporting limit for each individual SVHC subject to authorisation according to (EU) No 143/2011, (EU) No 125/2012, (EU) No 348/2013, (EU) No 895/2014, (EU) No. 2017/999 and (EU) No 2020/171 (Annex XIV of EC No 1907/2006): / 依据欧洲化学品管理局颁布的授权清单(EU) No 143/2011, (EU)No 125/2012, (EU) No 348/2013, (EU) No 895/2014, (EU) No 2017/999, 及(EU) No 2020/171 (Annex XIV of EC No 1907/2006) 中每个高度关注物质的报告检出限如下:

	Substances	CAS No.	Reporting Limit
1	4,4'-Diaminodiphenylmethane (MDA) / 4,4'-二胺基二苯甲烷	101-77-9	0.01%
2	Benzyl butyl phthalate (BBP) / 邻苯二甲酸丁酯苯甲酯	85-68-7	0.01%
3	Bis (2-ethylhexyl)phthalate (DEHP) / 邻苯二甲酸二(2-乙基己基)酯	117-81-7	0.01%
4	Dibutyl phthalate (DBP) / 邻苯二甲酸二丁基酯	84-74-2	0.01%
5	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane / 六溴环十二烷	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) / 二甲苯麝香 / 二甲苯麝香	81-15-2	0.01%
7	2,4-Dinitrotoluene (2,4-DNT) / 2,4-二硝基甲苯	121-14-2	0.01%
8	Diisobutyl phthalate (DIBP) / 邻苯二甲酸二异丁酯	84-69-5	0.01%
9	Tris(2-chloroethyl)phosphate / 三(2-氯乙基)磷酸酯	115-96-8	0.01%
10	Diarsenic pentaoxide (*3) / 五氧化二砷	1303-28-2	0.01%

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11	Diarsenic trioxide (*3) / 三氧化二砷	1327-53-3	0.01%
12	Lead chromate (*3)(*4) / 铬酸铅	7758-97-6	0.01%
13	Lead chromate molybdate sulphate red (C.I. Pigment Red 104) (*3)(*4) / 颜料红 104	12656-85-8	0.01%
14	Lead sulfochromate yellow (C.I. Pigment Yellow 34) (*3) / 颜料黄 34	1344-37-2	0.01%
15	Trichloroethylene / 三氯乙烯	79-01-6	0.01%
16	Chromium trioxide (*4) / 三氧化铬	1333-82-0	0.01%
17	Acids generated from chromium trioxide and their oligomers. Names of the acids and their oligomers: / 氧化铬及其聚合物形成的酸 Chromic acid / 铬酸 Dichromic acid / 重铬酸 Oligomers of chromic acid and dichromic acid (*4) / 重铬酸聚合物	7738-94-5 / 13530-68-2	0.01%
18	Sodium dichromate (*3) / 重铬酸钠水合物	7789-12-0 / 10588-01-9	0.01%
19	Potassium dichromate (*4) / 重铬酸钾	7778-50-9	0.01%
20	Ammonium dichromate (*4) / 重铬酸铵	7789-09-5	0.01%
21	Potassium chromate (*4) / 铬酸钾	7789-00-6	0.01%
22	Sodium chromate (*4) / 铬酸钠	7775-11-3	0.01%
23	Formaldehyde, oligomeric reaction products with aniline (technical MDA) (*11) / 甲醛苯胺聚合物	25214-70-4	0.01%
24	1,2-Dichloroethane / 1,2-二氯乙烷	107-06-2	0.01%
25	Bis(2-methoxyethyl) ether / 二乙二醇二甲醚	111-96-6	0.01%
26	Arsenic acid (*3) / 砷酸	7778-39-4	0.01%
27	2,2'-dichloro-4,4'-methylenedianiline (MOCA) / 4,4'-二氨基-3,3'-二氯二苯甲烷	101-14-4	0.01%
28	Dichromium tris(chromate) (*4) / 铬酸铬	24613-89-6	0.01%
29	Strontium chromate (*4) / 铬酸锶	7789-06-2	0.01%
30	Potassium hydroxyoctaoxidizincatedichromate (*4) / 氢氧化铬酸锌钾	11103-86-9	0.01%
31	Pentazinc chromate octahydroxide (*4) / 锌黄	49663-84-5	0.01%
32	1-bromopropane (n-propyl bromide) / 正丙基溴	106-94-5	0.01%
33	Diisopentylphthalate / 邻苯二甲酸二异戊酯	605-50-5	0.01%
34	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP) / 邻苯二甲酸二(C6-8 支链与直链)烷基酯, 富 C7	71888-89-6	0.01%
35	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNU) / 1,2-苯二甲酸二(C7-11 支链与直链)烷基(醇)酯	68515-42-4	0.01%
36	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear / 支链和直链 1,2-苯二甲酸二戊酯	84777-06-0	0.01%
37	Bis(2-methoxyethyl) phthalate / 邻苯二甲酸二甲氧乙酯	117-82-8	0.01%
38	Dipentyl phthalate (DPP) / 邻苯二甲酸二戊酯	131-18-0	0.01%
39	N-pentyl-isopentylphthalate / 邻苯二甲酸正戊基异戊基酯	776297-69-9	0.01%
40	Anthracene oil (*7) / 蒽油	90640-80-5	0.01%(*8)
41	Pitch, coal tar, high temperature (*7) / 沥青, 煤焦油, 高温	65996-93-2	0.01%
42	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated (OPEO) [covering well-defined substances and UVCB substances, polymers and homologues] / 4-(1,1,3,3-四甲基丁基)苯酚, 乙氧基-以及所有被定义的物质, 未知成分或可变成成分的物质, 聚合物和同系物	-	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	-	0.01%

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	individual isomers or a combination thereof] / 分支或线性的壬基酚, 包括含有9个碳烷基链的所有独立的同分异构体和所有含有线性或分支9个碳烷基链的UVCB物质		
44	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear / 邻苯二甲酸异己酯	68515-50-4	0.01%
45	Dihexyl phthalate / 邻苯二甲酸二己酯	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 $\geq 0.3\%$ of dihexyl phthalate (EC No. 201-559-5) / 1,2-苯二甲酸二 C6-10 烷基酯; 1,2-苯二甲酸混合癸、己、辛二酯, 包含 $\geq 0.3\%$ 的邻苯二甲酸二己酯 (EC No. 201-559-5)	68515-51-5 / 68648-93-1	0.01%
47	Trixylyl phosphate / 磷酸三(二甲苯)酯	25155-23-1	0.01%
48	Sodium perborate; perboric acid, sodium salt (*3) (*6) / 水合高硼酸钠盐类	-	0.01%
49	Sodium peroxometaborate (*3) (*6) / 过硼酸钠	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] / [1] 5-二叔丁基-2-(2,4-二甲基环己-3-烯-1-基)-5-甲基-1,3-二噁烷, [2] 5-二叔丁基-2-(4,6-二甲基环己-3-烯-1-基)-5-甲基-1,3-二噁烷 包含以下[1]与[2]之所有单独立体异构物与其组成。	-	0.01%
51	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328) / 2-(2'-羟基-3',5'-二特戊基苯基)苯并三唑	25973-55-1	0.01%
52	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327) / 2,4-二叔丁基-6-(5-氯-2H-苯并三唑-2-基)苯酚 (UV-327)	3864-99-1	0.01%
53	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350) / 2-(2'-羟基-3'-异丁基-5'-叔丁基苯基)苯并三唑 (UV-350)	36437-37-3	0.01%
54	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320) / 2-(2'-羟基-3',5'-二叔丁基苯基)苯并三唑	3846-71-7	0.01%

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

每个高度关注物质的报告检出限根据欧洲化学品管理局颁布的候选清单如下:

	Substances/物质	CAS No./CAS 号码	Reporting Limit/ 报告检出限
55	Anthracene / 蒽	120-12-7	0.01%
56	Bis(tributyltin) oxide (TBTO) (*3) (*5) / 氧化双三丁基锡	56-35-9	0.01%
57	Triethyl arsenate (*3) / 三乙基砷酸盐	15606-95-8	0.01%
58	Lead hydrogen arsenate (*3) / 砷酸氢铅	7784-40-9	0.01%
59	Cobalt(II) dichloride (*3) / 二氯化钴	7646-79-9	0.01%
60	Acrylamide / 丙烯酰胺	79-06-1	0.01%
61	Anthracene oil, anthracene paste, distn. lights (*7) / 蒽油, 蒽糊, 轻油	91995-17-4	0.01%(*8)
62	Anthracene oil, anthracene paste, anthracene fraction (*7) / 蒽油, 蒽糊, 蒽馏分离液	91995-15-2	
63	Anthracene oil, anthracene-low (*7) / 蒽油, 含蒽量少	90640-82-7	
64	Anthracene oil, anthracene paste (*7) / 蒽油, 蒽糊	90640-81-6	
65	Boric acid (*3) (*6) / 硼酸	10043-35-3 / 11113-50-1	0.01%
66	Disodium tetraborate, anhydrous (*3) (*6) / 无水四硼酸二钠	1303-96-4 / 1330-43-4 / 12179-04-3	0.01%
67	Tetraboron disodium heptaoxide, hydrate (*3) (*6) / 水合七氧四硼酸二钠	12267-73-1	0.01%

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68	2-Methoxyethanol / 2-乙二醇甲醚	109-86-4	0.01%
69	2-Ethoxyethanol / 2-乙氧基乙醇	110-80-5	0.01%
70	Cobalt(II) sulphate (*3) / 硫酸钴(II)	10124-43-3	0.01%
71	Cobalt(II) dinitrate (*3) / 硝酸钴(II)	10141-05-6	0.01%
72	Cobalt(II) carbonate (*3) / 碳酸钴(II)	513-79-1	0.01%
73	Cobalt(II) diacetate (*3) / 醋酸钴(II)	71-48-7	0.01%
74	Alkanes C10-C13, chloro (Short Chain Chlorinated Paraffins) (SCCP) / 短链氯化石蜡	85535-84-8	0.01%
75	2-Ethoxyethyl acetate / 2-乙氧基乙酸乙酯	111-15-9	0.01%
76	Hydrazine / 肼	302-01-2 / 7803-57-8	0.01%
77	1-Methyl-2-pyrrolidone (NMP) / 1-甲基-2-吡咯烷酮	872-50-4	0.01%
78	1,2,3-Trichloropropane / 1,2,3-三氯丙烷	96-18-4	0.01%
79	Aluminosilicate Refractory Ceramic Fibres (RCF) (*9) / 硅酸铝,耐火陶瓷纤维	-	0.01%
80	Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF) (*9) / (Zr-RCF)氧化锆硅酸铝,耐火陶瓷纤维	-	0.01%
81	2-Methoxyaniline, o-Anisidine / 邻甲氧基苯胺	90-04-0	0.01%
82	4-(1,1,3,3-tetramethylbutyl)phenol / 对特辛基苯酚	140-66-9	0.01%
83	Calcium arsenate (*3) / 磷酸钙	7778-44-1	0.01%
84	Trilead diarsenate (*3) / 磷酸铅	3687-31-8	0.01%
85	N,N-dimethylacetamide (DMAC) / 二甲基乙酰胺	127-19-5	0.01%
86	Phenolphthalein / 酚酞	77-09-8	0.01%
87	Lead dipicrate (*3) / 苦味酸铅	6477-64-1	0.01%
88	Lead diazide, Lead azide (*3) / 叠氮化铅	13424-46-9	0.01%
89	Lead styphnate (*3) / 收斂酸铅	15245-44-0	0.01%
90	1,2-bis(2-methoxyethoxy)ethane (TEGDME, triglyme) / 1,2-二(2-甲氧基乙氧基)乙烷 (三甘醇二甲醚)	112-49-2	0.01%
91	1,2-dimethoxyethane, ethylene glycol dimethyl ether (EGDME) / 1,2-二甲氧基乙烷 (乙二醇二甲醚)	110-71-4	0.01%
92	Diboron trioxide (*3) (*6) / 三氧化二硼	1303-86-2	0.01%
93	Formamide / 甲酰胺	75-12-7	0.01%
94	Lead(II) bis(methanesulfonate) (*3) / 甲基磺酸铅	17570-76-2	0.01%
95	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazine-2,4,6-trione (TGIC) / 异氰尿酸三缩水甘油酯	2451-62-9	
96	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC) / 1,3,5-三(环氧乙烷基甲基)-1,3,5-三嗪-2,4,6-(1H,3H,5H)-三酮立体异构体	59653-74-6	0.01%
97	4,4'-bis(dimethylamino)benzophenone (Michler's ketone), MK / 4,4'-二(N,N-二甲氨基)二苯甲酮(四甲基米氏酮)	90-94-8	0.01%
98	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base), RMK / N,N,N',N'-四甲基-4,4'-二氨基二苯甲酮(四乙基米氏酮)	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)] (*10) / 碱性蓝 26	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)] (*10) / 结晶紫 (4-(双(P-(二甲氨基)苯基)亚甲基)-2,5-环己烯基-1-基铵	548-62-9	

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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)] (*10) / 4,4'-二[(二甲氨基)苯基]-4-甲氨基苯甲醇	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)] (*10) / α, α -二[4-(二甲氨基)苯基]-4-苯基氨基-1-萘甲醇(*11)	6786-83-0	
103	Bis(pentabromophenyl) ether (decabromodiphenyl ether) (DecaBDE) / 十溴联苯醚	1163-19-5	0.01%
104	Pentacosafuorotridecanoic acid / 全氟十三酸	72629-94-8	0.01%
105	Tricosafuorododecanoic acid / 全氟十二酸	307-55-1	0.01%
106	Henicosafuoroundecanoic acid / 全氟十一酸	2058-94-8	0.01%
107	Heptacosafuorotetradecanoic acid / 全氟十四酸	376-06-7	0.01%
108	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) (ADCA) (*12) / 偶氮二甲酰胺	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] / 六氢苯二甲酸酐	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] / 甲基六氢苯酐	25550-51-0 / 19438-60-9 / 48122-14-1 / 57110-29-9	0.01%
111	N,N-dimethylformamide / N,N-二甲基甲酰胺	68-12-2	0.01%
112	1,2-Diethoxyethane / 乙二醇二乙醚	629-14-1	0.01%
113	Diethyl sulphate / 硫酸二乙酯	64-67-5	0.01%
114	Methoxyacetic acid (MAA) / 甲氧基乙酸	625-45-6	0.01%
115	Dimethyl sulphate / 硫酸二甲酯	77-78-1	0.01%
116	N-methylacetamide / N-甲基乙酰胺	79-16-3	0.01%
117	Furan / 呋喃	110-00-9	0.01%
118	Methyloxirane (Propylene oxide) / 环氧丙烷	75-56-9	0.01%
119	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine / 3-乙基-2-甲基-2-(3-甲基丁基)-1,3-恶唑烷	143860-04-2	0.01%
120	Dibutyltin dichloride (DBTC) (*3) / 二氯二丁基锡	683-18-1	0.01%
121	Dinoseb (6-sec-butyl-2,4-dinitrophenol) / 2-(1-甲基丙基)-4,6-二硝基苯酚	88-85-7	0.01%
122	4,4'-methylenedi-o-toluidine / 4,4'-二氨基-3,3'-二甲基联苯基甲烷	838-88-0	0.01%
123	4,4'-oxydianiline and its salts / 4,4'-二氨基二苯醚	101-80-4	0.01%
124	4-Aminoazobenzene / 4,4'-二氨基二苯醚	60-09-3	0.01%
125	4-methyl-m-phenylenediamine (toluene-2,4-diamine) / 2,4-二氨基甲苯	95-80-7	0.01%
126	6-methoxy-m-toluidine (p-cresidine) / 3-甲基-6-甲氧基苯胺	120-71-8	0.01%
127	Biphenyl-4-ylamine / 4-氨基联苯	92-67-1	0.01%
128	o-aminoazotoluene / 邻氨基偶氮甲苯	97-56-3	0.01%
129	o-Toluidine / 邻甲苯胺	95-53-4	0.01%

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130	Acetic acid, lead salt, basic (*3) / 碱式醋酸铅	51404-69-4	0.01%
131	Trilead bis(carbonate) dihydroxide (*3) / 碱式碳酸铅	1319-46-6	0.01%
132	Lead oxide sulfate (*3) / 碱式硫酸铅	12036-76-9	0.01%
133	[Phthalato(2-)]dioxotrilead (*3) / (1,2-苯二羧酸根合)二氧化三铅	69011-06-9	0.01%
134	Dioxobis(stearato)trilead (*3) / 双(十八酸基)二氧化三铅	12578-12-0	0.01%
135	Fatty acids, C16-18, lead salts (*3) / C16-18-脂肪酸铅盐	91031-62-8	0.01%
136	Lead bis(tetrafluoroborate) (*3) / 四氟硼酸铅(II)	13814-96-5	0.01%
137	Lead cyanamidate (*3) / 氨基氰铅盐	20837-86-9	0.01%
138	Lead dinitrate (*3) / 硝酸铅	10099-74-8	0.01%
139	Lead monoxide (lead oxide) (*3) / 氧化铅	1317-36-8	0.01%
140	Orange lead (lead tetroxide) (*3) / 四氧化铅	1314-41-6	0.01%
141	Lead titanium trioxide (*3) / 钛酸铅	12060-00-3	0.01%
142	Lead titanium zirconium oxide (*3) / 钛酸铅锆	12626-81-2	0.01%
143	Pyrochlore, antimony lead yellow (*3) / C.I. 颜料黄 41	8012-00-8	0.01%
144	Pentalead tetraoxide sulphate (*3) / 氧化铅与硫酸铅的复合物	12065-90-6	0.01%
145	Silicic acid (H ₂ Si ₂ O ₅), 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] (*3) / 含铅的矽酸钡	68784-75-8	0.01%
146	Silicic acid, lead salt (*3) / 矽酸铅	11120-22-2	0.01%
147	Sulfurous acid, lead salt, dibasic (*3) / 亚硫酸铅 (II)	62229-08-7	0.01%
148	Tetraethyllead (*3) / 四乙基铅	78-00-2	0.01%
149	Tetralead trioxide sulphate (*3) / 三碱式硫酸铅	12202-17-4	0.01%
150	Trilead dioxide phosphonate (*3) / 磷酸氧化铅	12141-20-7	0.01%
151	Ammonium pentadecafluorooctanoate (APFO) (*13) / 全氟辛酸铵	3825-26-1	0.01%
152	Pentadecafluorooctanoic acid (PFOA) / 全氟辛酸	335-67-1	0.01%
153	Cadmium (*3) / 镉	7440-43-9	0.01%
154	Cadmium oxide (*3) / 氧化镉	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] / 分支或线性的乙氧化壬基酚 [包括含有9个碳烷基链的所有独立的同分异构体和所有含有线性或分支9个碳烷基链的UVCB物质]	-	0.01%
156	Imidazolidine-2-thione; (2-imidazoline-2-thiol) / 仲乙硫脲(咪唑啉-2-硫酮)	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) / 直接黑 38	1937-37-7	0.01%
159	Lead di(acetate) (*3) / 醋酸铅	301-04-2	0.01%
160	Cadmium sulphide (*3) / 硫化镉	1306-23-6	0.01%
161	Cadmium chloride (*3) / 氯化镉	10108-64-2	0.01%

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162	Cadmium fluoride (*3) / 氟化镉	7790-79-6	0.01%
163	Cadmium sulphate (*3) / 硫酸镉	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) (*14) / 二正辛基-双(巯乙酸 2-乙基己酯)锡 (DOTE)	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) (*15) / 二正辛基-双(巯乙酸 2-乙基己酯)锡与甲基锡三(巯基乙酸异辛酯)的反应物 (DOTE 和 MOTE 反应物)	-	0.01%
166	1,3-propanesultone/ 1,3-丙烷磺酸内酯	1120-71-4	0.01%
167	Nitrobenzene / 硝基苯	98-95-3	0.01%
168	Perfluorononan-1-oic acid and its sodium and ammonium salts/ 全氟壬酸及其钠和铵盐	375-95-1 21049-39-8 4149-60-4	0.01%
169	Benzo[def]chrysene (Benzo[a]pyrene) / 苯并[def]蒽 (苯并[a]芘)	50-32-8	0.01%
170	4,4'-isopropylidenediphenol (bisphenol A) / 双酚 A	80-05-7	0.01%
171	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts / 全氟癸酸 (PFDA) 及其钠盐和铵盐	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] / 支链与直链的 4-庚基酚	-	0.01%
173	p-(1,1-dimethylpropyl)phenol/ 4-叔戊基苯酚	80-46-6	0.01%
174	Perfluorohexane-1-sulfonic acid and its salts (PFHxS) / 全氟己基磺酸及其盐类	-	0.01%
175	Chrysene / 屈	218-01-9	0.01%
176	Benzo[a]anthracene / 苯并[a]蒽	56-55-3	0.01%
177	Cadmium nitrate(*3) / 硝酸镉	10325-94-7	0.01%
178	Cadmium hydroxide(*3) / 氢氧化镉	21041-95-2	0.01%
179	Cadmium carbonate(*3) / 碳酸镉	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"™) [covering any of its individual anti- and syn-isomers or any combination thereof] / 德克隆[包括所有反式和顺式异构体及其组合]	-	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] / 1,3,4-噻二唑烷-2,5-二硫酮, 甲醛和 4-庚基苯酚的支链和直链的反应物(4-庚基苯酚, 支链和直链含量≥0.1% w/w)	-	0.01%
182	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride, TMA) / 1,2,4-苯三酸酐(偏苯三酸酐) (TMA)	552-30-7	0.01%
183	Dicyclohexyl phthalate (DCHP) / 邻苯二甲酸二环己酯(DCHP)	84-61-7	0.01%
184	Terphenyl, hydrogenated / 氢化三联苯	61788-32-7	0.01%

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185	Octamethylcyclotetrasiloxane (D4) / 八甲基环四硅氧烷(D4)	556-67-2	0.01%
186	Decamethylcyclopentasiloxane (D5) / 十甲基环五硅氧烷(D5)	541-02-6	0.01%
187	Dodecamethylcyclohexasiloxane (D6) / 十二甲基环六硅氧烷(D6)	540-97-6	0.01%
188	Ethylenediamine (EDA) / 乙二胺 (EDA)	107-15-3	0.01%
189	Lead / 铅	7439-92-1	0.01%
190	Disodium octaborate (*3) / 氧化硼钠	12008-41-2	0.01%
191	Benzo[ghi]perylene/ 苯并(g,h,i)芘	191-24-2	0.01%
192	2,2-bis(4'-hydroxyphenyl)-4-methylpentane/ 2,2-二(4-羟基苯基)-4-甲基戊烷	6807-17-6	0.01%
193	Benzo[k]fluoranthene/ 苯并(k)荧蒽	207-08-9	0.01%
194	Fluoranthene/ 荧蒽	206-44-0	0.01%
195	Phenanthrene / 菲	85-01-8	0.01%
196	Pyrene / 芘	129-00-0	0.01%
197	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan- 2-one / 1,7,7-三甲基-3-(苯基亚甲基)双环[2.2.1]庚烷-2-酮	15087-24-8	0.01%
198	2-methoxyethyl acetate/ 2-甲氧基乙基乙酸酯	110-49-6	0.01%
199	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with $\geq 0.1\%$ w/w of 4-nonylphenol, branched and linear (4-NP) / 三(4-壬基苯基, 支链和直链)亚磷酸酯 (TNPP), 含有 $\geq 0.1\%$ w/w 的 4-壬基苯基, 支链和直链 (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) / 2,3,3,3-四氟-2-(七氟丙氧基)丙酸, 及其盐类和酰基卤化物 (包括它们各自的同分异构体及其组合)	-	0.01%
201	4-tert-butylphenol / 4-叔丁基苯酚	98-54-4	0.01%
202	Diisohexyl phthalate(DiHexP) / 邻苯二甲酸二异己酯	71850-09-4	0.01%
203	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone / 2-苄基-2-二甲氨基-1-(4-吗啉基)丁酮	119313-12-1	0.01%
204	2-methyl-1(4-methylthiophenyl)-2-morpholinopropan-1-one / 2-甲基-1-(4-甲硫基苯基)-2-吗啉基-1-丙酮	71868-10-5	0.01%
205	Perfluorobutane sulfonic acid(PFBS) and its salts / 全氟丁烷磺酸 (PFBS) 及其盐	-	0.01%
206	1-vinylimidazole / 全氟丁烷磺酸 (PFBS) 及其盐	1072-63-5	0.01%
207	2-methylimidazole / 全氟丁烷磺酸 (PFBS) 及其盐	693-98-1	0.01%
208	Butyl 4-hydroxybenzoate / 全氟丁烷磺酸 (PFBS) 及其盐	94-26-8	0.01%
209	Dibutylbis(pentane-2,4-dionato-O,O')tin(*16) / 全氟丁烷磺酸 (PFBS) 及其盐	22673-19-4	0.01%

Remarks 备注:

- (*3) The substances are tested and calculated in terms of its respective elements and to the worst-case scenario. And the elements may come from the compounds other than SVHCs. / 这些物质按照其各自元素测定并按照最坏的情况进行计算。这些对应的元素可能来自SVHCs以外的化合物。
- (*4) The substances are tested and calculated in terms of Cr (VI). / 测试其代表性元素六价铬。
- (*5) The substance is tested and calculated in terms of tributyl tin. / 测试三丁基锡并以之做计算。
- (*6) The substances are confirmed and tested in terms of borate. Boric acid, Disodium tetraborate, anhydrous, Tetraboron disodium heptaoxide, hydrate and Diboron trioxide, Sodium perborate, perboric acid, sodium salt, Sodium peroxometaborate are detected as sum of boric acid. And the borate may come from the compounds other than SVHCs. / 这些物质通过硼酸盐来测定并确认。硼酸, 无水四硼酸二钠, 水合七氧四硼酸二钠, 三氧化二硼, 水合高硼酸钠盐类, 过硼酸钠通过硼酸总量测定。硼酸盐可能来自SVHCs以外的化合物。
- (*7) The substances are UVCB (substance of unknown or variable composition, complex reaction products or biological materials), which are identified by its main constituents. / 该物质为未知或多种混合物, 交错反应物质

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或生物材料，以其主要组成物质分析之。

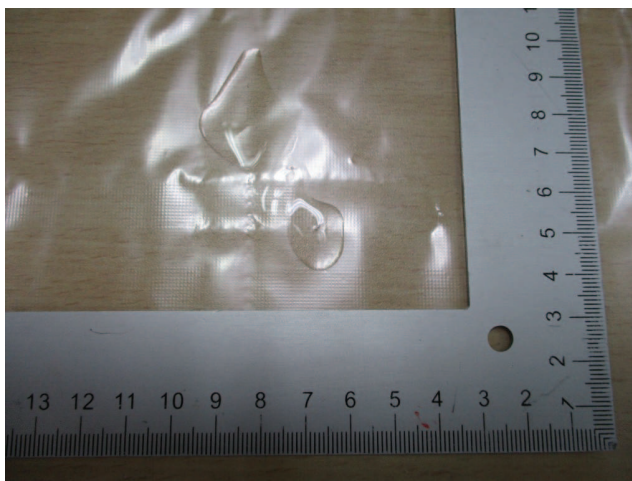
- (*8) Individual concentrations to the constituent of UVCB with an amount of < 0.01% were not considered by the calculation of the sum. / 个别UVCB物质若含量小于0.01%，则不列入总和计算。
- (*9) The test results are based on microscopic and chemical evaluation. / 测试结果依据显微镜和化学评估。
- (*10) The substances are quantified in 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%. / 当米希勒酮或米希勒碱含量超过0.01%时，用LC-MS以米希勒酮和米希勒碱做确认分析。
- (*11) The content oligomer is determined by Py-GC/MS. / 低聚合物的含量以Py-GC/MS分析。
- (*12) The content of diazene-1,2-dicarboxamide is analyzed in terms of its breakdown product. / 含量以其分裂物质分析。
- (*13) The substance is tested in terms of pentadecafluorooctanoate. / 测试其代表性物质pentadecafluorooctanoate
- (*14) The substance is tested and calculated in terms of dioctyl tin. / 测试二辛基锡并以此做计算。
- (*15) The substance is tested and calculated in terms of mono-octyl tin and dioctyl tin. / 测试单辛基锡和二辛基锡并以此做计算。
- (*16) The substance is tested and calculated in terms of Dibutyl tin. / 测试二丁基锡并以此做计算。

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Sample photos

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- END -

-结束-

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 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").
- 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.

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 six-week notice prior to the end of the contractual term.

4. Scope of services

- 4.1 The scope of the services shall be decided solely by a unanimous declaration issued by both parties. If no such declaration exists, then the written confirmation of order by TÜV Rheinland shall be decisive.
- 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 or of the installation as a whole and its upstream and/or downstream processes, organisations, used 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.

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.

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.
- 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. Invoicing of work

- 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 without deduction on receipt of the invoice. No discounts 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 customer 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.

9. Acceptance

- 9.1 Any part of the work 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 the client fails to fulfil its acceptance obligation immediately, acceptance shall be deemed to have taken place 4 calendar weeks after completion of the work provided that TÜV Rheinland has specifically made the client aware of the aforementioned deadline upon completion of the work.

10. Confidentiality

- 10.1 For the purpose of these terms and conditions, "confidential information" means all information, documents, images, drawings, know-how, data, samples and project documentation which one party (the "disclosing party") hands over, transfers or otherwise discloses to the other party (the "receiving party"). Confidential information also includes paper copies and electronic copies of such information.
- 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.
- 10.3 All confidential information which the disclosing party transmits or otherwise discloses to the receiving party 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 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

- 11.1 TÜV Rheinland shall retain all exclusive copyrights in the expert reports, test results, calculations, presentations etc. prepared by TÜV Rheinland.
- 11.2 The client may only use such expert reports, test results, calculations, presentations etc. prepared within the scope of the contract for the contractually agreed purpose.
- 11.3 The client may use test reports, test results, expert reports, etc. only complete and unshortened. Any publication or duplication for advertising purposes needs the prior written approval of TÜV Rheinland.

12. Liability of TÜV Rheinland

- 12.1 Irrespective of the legal basis, 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 personnel's acts.
- 12.5 The limitation periods for claims for damages shall be based on statutory provisions.
- 12.6 None of the provisions of this article 12 changes the burden of proof to the disadvantage of the client.
13. **Partial invalidity, written form, place of jurisdiction and dispute resolution**
- 13.1 All amendments and supplements must be in writing in order to be effective. This also applies to amendments and supplements to this clause 13.1.
- 13.2 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.
- 13.3 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.
- 13.4 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 Branch 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.