



# Certificate of Compliance

No. 0P211229.CRCSU73

Test Report / Technical Construction File no. TCF-ZHY-20717

Certificate's  
Holder:

China Right Consultants Ltd.  
Room 426, No. 285, East Luochuan Rd.,  
Zhabei District, Shanghai, 200072, China

Certification ECM  
Mark:



Product:  
Model(s):

Air Pressure Switch  
KFH100-A, KFH100-B, KFH090-E, KFH090-F

Parameter:

0.1A 125/250VAC; 5(2.5)A 125/250VAC;  
0.1A 24/30/48VDC; 0.2(0.1)A 30VAC;  
1.5(0.5)A 250VAC; 3(0.05)A 250VAC;

Verification to:

Standard:  
EN 1854:2010

related to CE Directive(s):  
2014/35/EU (Low Voltage)

**Remark:** This document has been issued on a voluntary basis and upon request of the manufacturer. It is our opinion that the technical documentation received from the manufacturer is satisfactory for the requirements of the ECM Certification Mark. The conformity mark above can be affixed on the products accordingly to the ECM regulation about its release and its use.

Additional information and clarification about the Marking:



The manufacturer is responsible for the CE Marking process, and if necessary, must refer to a Notified Body. This document has been issued on the basis of the regulation on ECM Voluntary Mark for the certification of products. RG01\_ECM rev.3 available at: [www.entecerma.it](http://www.entecerma.it)

**Issuance date: 29 December 2021**

**Expiry date: 28 December 2026**

Reviewer  
Technical expert  
Amanda Payne

Approver  
ECM Service Director

Luca Bedonni

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# Test Report

Report No. A2210533885101X1

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**Company Name shown on Report** China Right Consultants Ltd.  
**Address** Room 426, No. 285, East Luochuan Rd.,  
Zhabei District, Shanghai, 200072, China

**The following sample(s) and sample information was/were submitted and identified by/on the behalf of the applicant**

Sample Name Air Pressure Switch  
Part No. KFH090-F  
Sample Received Date Dec. 17, 2021  
Testing Period Dec. 17, 2021 to Jan. 5, 2022

**Test Requested**

- 1.As specified by client, to screen the 219 substances of very high concern (SVHC) under Regulation(EC) No 1907/2006 of REACH in the submitted sample(s).
- 2.As specified by client, to screen the 5 substances submitted by EU Member States to ECHA for intention for identification of substance of very high concern (SVHC) under Regulation(EC) No1907/2006 of REACH in the submitted sample(s).

**Test Method** Please refer to the following page(s).

**Test Result(s)** Please refer to the following page(s).

**Summary**

- 1.According to the analytical results under the principle of maximum risk, concentrations of 219 SVHC substances are all less than 0.1% (w/w) in the submitted sample(s).
- 2.According to the analytical results under the principle of maximum risk, concentrations of 5 substances for intention for identification of SVHC are all less than 0.1% (w/w) in the submitted sample(s).

Tested by

Reviewed by

Approved by

Date

Jan. 7, 2022



Hill Zheng  
Technical Manager

No. R177736360

Centre Testing International Group Co.,Ltd.

CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China

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## Test Result(s) 1

Batch	No.	Substance Name(s)	CAS No.	EC No.	Concentration (%)	Report Limit (%)
					001	
III	30	Boric acid*	10043-35-3 11113-50-1	233-139-2 234-343-4	N.D.*1	0.01
III	31	<sup>②</sup> Disodium tetraborate, anhydrous*****	1330-43-4 12179-04-3 1303-96-4	215-540-4	N.D.*1	0.01
III	32	<sup>②</sup> Tetraboron disodium heptaoxide, hydrate*****	12267-73-1	235-541-3	N.D.*1	0.01
VII	74	Diboron trioxide*	1303-86-2	215-125-8	N.D.*1	0.01
XI	154	<sup>②</sup> Sodium perborate; perboric acid, sodium salt*****	15120-21-5 11138-47-9	239-172-9 234-390-0	N.D.*1	0.01
XI	155	<sup>②</sup> Sodium peroxometaborate*****	7632-04-4	231-556-4	N.D.*1	0.01
XIX	183	Decamethylcyclopentasiloxane (D5)	541-02-6	208-764-9	0.021	0.01
XIX	184	Dodecamethylcyclohexasiloxane (D6)	540-97-6	208-762-8	0.085	0.01
XIX	186	Disodium octaborate*	12008-41-2	234-541-0	N.D.*1	0.01
XXV	218	Orthoboric acid, sodium salt *	13840-56-7	237-560-2	N.D.*1	0.01
-	-	Other tested SVHC (See the candidate list)	-	-	N.D.	-

Batch	No.	Substance Name(s)	CAS No.	EC No.	Concentration (%)	Report Limit (%)
					002	
-	-	All tested SVHC (See the candidate list)	-	-	N.D.	-

## Test Result(s) 2

Batch	No.	Substance Name(s)	CAS No.	EC No.	Concentration (%)	Report Limit (%)
					001	
XXVI	4	S-(tricyclo[5.2.1.0 <sup>2,6</sup> ]deca-3-en-8(or 9)-yl) O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate *	255881-94-8	401-850-9	N.D.*2	0.05
-	-	Other tested intention for identification of SVHC(See the list of intention for identification of SVHC)	-	-	N.D.	-

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**Test Method:**

Refer to US EPA3052:1996, US EPA 3050B:1996, US EPA3060A:1996, US EPA 3550C:2007, US EPA 3540C:1996, ISO 17353:2004(E), EN 14582:2016 for sample pretreatment.

Analyzed by ICP-OES, UV-Vis, PLM, SEM, IC, HPLC, GC-MS, GC-MS(NCI), GC-FID, HPLC-DAD and LC-MS-MS.

**Sample/Part Description**

Sample No.	Article No.	Number of SVHC
001	3+4+5+6+7+8+12+13+14	219 (Candidate) + 5 (Intention for identification)
002	1+2+9+10+11+15+16+17+18+19+20	72

Article No.	Sample/Part Description
1	Silver-gray metal
2	Silver-gray metal
3	Black plastic cover
4	Black rubber
5	White plastic
6	Blue rubber
7	White rubber
8	Yellow solid
9	Silvery metal spring
10	Silver-white metal
11	Silver-white metal
12	White plastic
13	Gray plastic
14	Gray plastic
15	Silvery metal sheet
16	Cupreous metal sheet
17	Golden/silvery metal
18	Golden metal
19	Golden metal
20	Golden metal

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**Remark:**

1. The table of tested result(s) only shows detected SVHC/intention for identification of SVHC, and SVHC/intention for identification of SVHC that below Report Limit are not reported. Please refer to the Candidate List of SVHC/ intention for identification of SVHC on next pages.
2. w/w = weight by weight; 0.1%= 1000 mg/kg =1000 ppm
3. N.D. = Not Detected (<report limit)
4. \*: Concentration value of the substance by the conversion from the test results of certain elements. Concentration value of Bis(tributyltin)oxide(TBTO), Dibutyltin dichloride (DBTC), 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE), 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), Dibutylbis(pentane-2,4-dionato-O,O')tin, [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] by the conversion from the test results of certain compounds(Tributyl Tins(TBT), Dibutyl Tins(DBT), Dioctyl Tins(DOT), Monoctyl Tins(MOT)).
5. \*\*: All refractory ceramic fibres are covered by index number 650-017-00-8 in Annex VI of the Regulation on Classification, Labeling and Packaging of chemical substances and mixtures, the so called CLP Regulation (Regulation (EC) No 1272/2008).
6. \*\*\*: C.I.: Colour Index
7. \*\*\*\*: Light fractions from distillation
8. \*\*\*\*\*: Concentration value of Disodiumtetraborate, anhydrous and Tetraboron disodium heptaoxide, hydrate is evaluated by Disodiumtetraborate, with no consider of the hydrate. Concentration value of Sodium perborate; perboric acid, sodium salt; Sodium peroxometaborate is evaluated by Sodium perborate, with no consider of the hydrate.
9. ▲: Concentration value of Formaldehyde, oligomeric reaction products with aniline by the conversion from the test results of certain compounds (2,4-Diaminodiphenylmethane, 4,4'-Diaminodiphenylmethane, 2,2-Diaminodiphenylmethane).
10. <sup>①</sup>: In view of the substances are established as UVCB substances(substances of unknown or variable composition, complex reaction products or biological materials) consisting of different and variable constituents, the test results are calculated based on the main constituents of the representative compounds for substances. When the content of the representative substances is equal to or higher than 0.1% (w/w), the presence of the substance in the sample need to be further confirmed by checking MSDS or requesting from suppliers.
11. <sup>②</sup>: In view of the substance contain variable substances, the test results are calculated based on main constituents of the representative compounds for the substances, and the test results of the representative compounds are calculated based on the result of specified heavy metal elements.
12. In consideration of the analysis requirement and the limit of sample volume, the screening test for the article is based on components / material enough to test.
13. Composite test has been performed in equal proportion for the components/material per client request. And the result is calculated using the minimum sample weight.

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13. \*<sup>1</sup>: The sample contains Boron. According to the declaration of the client, the element Boron in the submitted sample does not exist in the form of Boric acid; Disodium tetraborate, anhydrous; Tetraboron disodium heptaoxide, hydrate; Diboron trioxide; Sodium perborate; perboric acid, sodium salt; Sodium peroxometaborate; Disodium octaborate; Orthoboric acid, sodium salt.
14. \*<sup>2</sup>:The sample contains Sulfur and Phosphorus. According to the declaration of the client, the element Sulfur and Phosphorus in the submitted sample does not exist in the form of S-(tricyclo[5.2.1.0<sup>2,6</sup>] deca-3-en-8(or 9)-yl) O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate.

**Remark:**

This testing report revised “Address” based on the original report of No.A2210533885101. This testing report displaces the original one which was invalid since the date of this testing report released.

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## Candidate List of SVHC

Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
I	1	Anthracene	120-12-7	204-371-1	0.005
I	2	4,4'- Diaminodiphenylmethane	101-77-9	202-974-4	0.005
I	3	Dibutyl phthalate(DBP)	84-74-2	201-557-4	0.005
I	4◇	Cobalt dichloride*	7646-79-9	231-589-4	0.01
I	5◇	Diarsenic pentaoxide*	1303-28-2	215-116-9	0.01
I	6◇	Diarsenic trioxide*	1327-53-3	215-481-4	0.01
I	7◇	Sodium dichromate*	7789-12-0 10588-01-9	234-190-3	0.01
I	8	5-tert-butyl-2,4,6-trinitro-m-xylene (Musk xylene)	81-15-2	201-329-4	0.005
I	9	Bis(2-ethyl(hexyl)phthalate)(DEHP)	117-81-7	204-211-0	0.005
I	10	Hexabromocyclododecane (HBCDD)	25637-99-4 3194-55-6 (134237-50-6) (134237-51-7) (134237-52-8)	247-148-4 221-695-9	0.005
I	11	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) (SCCPs)	85535-84-8	287-476-5	0.01
I	12	Bis(tributyltin)oxide (TBTO)*	56-35-9	200-268-0	0.005
I	13◇	Lead hydrogen arsenate*	7784-40-9	232-064-2	0.01
I	14	Benzyl butyl phthalate(BBP)	85-68-7	201-622-7	0.005
I	15◇	Triethyl arsenate*	15606-95-8	427-700-2	0.01
II	16	<sup>①</sup> Anthracene oil	90640-80-5	292-602-7	0.05
II	17	<sup>①</sup> Anthracene oil, anthracene paste, distn. lights *****	91995-17-4	295-278-5	0.05
II	18	<sup>①</sup> Anthracene oil, anthracene paste,anthracene fraction	91995-15-2	295-275-9	0.05
II	19	<sup>①</sup> Anthracene oil, anthracene-low	90640-82-7	292-604-8	0.05
II	20	<sup>①</sup> Anthracene oil, anthracene paste	90640-81-6	292-603-2	0.05
II	21	<sup>①</sup> Pitch, coal tar, high-temp.	65996-93-2	266-028-2	0.05
II	22	Acrylamide	79-06-1	201-173-7	0.01
II	23	2,4-dinitrotoluene	121-14-2	204-450-0	0.01
II	24	Diisobutyl phthalate (DIBP)	84-69-5	201-553-2	0.005
II	25◇	<sup>②</sup> Lead chromate	7758-97-6	231-846-0	0.05
II	26◇	<sup>②</sup> Lead chromate molybdate sulphate red (C.I. Pigment Red 104)***	12656-85-8	235-759-9	0.05
II	27◇	<sup>②</sup> Lead sulfochromate yellow (C.I. Pigment Yellow 34)***	1344-37-2	215-693-7	0.05



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Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
II	28	Tris(2-chloroethyl)phosphate (TCEP)	115-96-8	204-118-5	0.01
III	29	Trichloroethylene	79-01-6	201-167-4	0.005
III	30◇	Boric acid*	10043-35-3 11113-50-1	233-139-2 234-343-4	0.01
III	31◇	<sup>②</sup> Disodium tetraborate, anhydrous*****	1330-43-4 12179-04-3 1303-96-4	215-540-4	0.01
III	32◇	<sup>②</sup> Tetraboron disodium heptaoxide, hydrate*****	12267-73-1	235-541-3	0.01
III	33◇	Sodium chromate*	7775-11-3	231-889-5	0.01
III	34◇	Potassium chromate*	7789-00-6	232-140-5	0.01
III	35◇	Ammonium dichromate*	7789-09-5	232-143-1	0.01
III	36◇	Potassium dichromate*	7778-50-9	231-906-6	0.01
IV	37◇	Cobalt(II) sulphate*	10124-43-3	233-334-2	0.01
IV	38◇	Cobalt(II) dinitrate*	10141-05-6	233-402-1	0.01
IV	39◇	Cobalt(II) carbonate*	513-79-1	208-169-4	0.01
IV	40◇	Cobalt(II) diacetate*	71-48-7	200-755-8	0.01
IV	41	2-methoxyethanol	109-86-4	203-713-7	0.005
IV	42	2-ethoxyethanol	110-80-5	203-804-1	0.005
IV	43◇	Chromium trioxide*	1333-82-0	215-607-8	0.01
IV	44◇	<sup>①</sup> Acids generated from chromium trioxide and their oligomers: Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid*	7738-94-5 13530-68-2	231-801-5 236-881-5	0.01
V	45	2-ethoxyethyl acetate	111-15-9	203-839-2	0.01
V	46◇	Strontium chromate*	7789-06-2	232-142-6	0.01
V	47	<sup>①</sup> 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	271-084-6	0.01
V	48	Hydrazine	7803-57-8 302-01-2	206-114-9	0.01
V	49	1-methyl-2-pyrrolidone (NMP)	872-50-4	212-828-1	0.01
V	50	1,2,3-trichloropropane	96-18-4	202-486-1	0.01
V	51	<sup>①</sup> 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	276-158-1	0.01
VI	52◇	Dichromium tris(chromate)*	24613-89-6	246-356-2	0.01
VI	53◇	Potassium hydroxyoctaoxodizincatedichromate*	11103-86-9	234-329-8	0.01
VI	54◇	Pentazinc chromate octahydroxide*	49663-84-5	256-418-0	0.01



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Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
VI	55◇	<sup>②</sup> Aluminosilicate Refractory Ceramic Fibres (RCF) **	-	-	0.05
VI	56◇	<sup>②</sup> Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF) **	-	-	0.05
VI	57	<sup>①</sup> Formaldehyde, oligomeric reaction products with aniline▲	25214-70-4	500-036-1	0.01
VI	58	Bis(2-methoxyethyl) phthalate	117-82-8	204-212-6	0.005
VI	59	2-Methoxyaniline(o-Anisidine)	90-04-0	201-963-1	0.005
VI	60	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	205-426-2	0.005
VI	61	1,2-dichloroethane	107-06-2	203-458-1	0.005
VI	62	Bis(2-methoxyethyl) ether	111-96-6	203-924-4	0.005
VI	63◇	Arsenic acid*	7778-39-4	231-901-9	0.01
VI	64◇	Calcium arsenate*	7778-44-1	231-904-5	0.01
VI	65◇	Trilead diarsenate*	3687-31-8	222-979-5	0.01
VI	66	N,N-dimethylacetamide (DMAC)	127-19-5	204-826-4	0.005
VI	67	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	202-918-9	0.005
VI	68	Phenolphthalein	77-09-8	201-004-7	0.005
VI	69◇	Lead diazide, Lead azide*	13424-46-9	236-542-1	0.01
VI	70◇	Lead styphnate*	15245-44-0	239-290-0	0.01
VI	71◇	Lead dipicrate*	6477-64-1	229-335-2	0.01
VII	72	1,2-bis(2-methoxyethoxy) ethane (TEGDME; triglyme)	112-49-2	203-977-3	0.01
VII	73	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	203-794-9	0.01
VII	74◇	Diboron trioxide*	1303-86-2	215-125-8	0.01
VII	75	Formamide	75-12-7	200-842-0	0.01
VII	76◇	Lead(II) bis(methanesulfonate)*	17570-76-2	401-750-5	0.01
VII	77	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazine-2,4,6-trione (TGIC)	2451-62-9	219-514-3	0.01
VII	78	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	423-400-0	0.01
VII	79	4,4'-bis(dimethylamino) benzophenone (Michler's ketone)	90-94-8	202-027-5	0.01
VII	80	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	202-959-2	0.01

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Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
VII	81	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride(C.I. Basic Violet 3)***	548-62-9	208-953-6	0.01
VII	82	[4-[[4-anilino-1-naphthyl] [4-(dimethylamino)phenyl] methylene]cyclohexa-2,5- dien-1-ylidene] dimethylammonium chloride(C.I. Basic Blue 26)***	2580-56-5	219-943-6	0.01
VII	83	$\alpha,\alpha$ -Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)***	6786-83-0	229-851-8	0.01
VII	84	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	561-41-1	209-218-2	0.01
VIII	85	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	214-604-9	0.05
VIII	86	<sup>①</sup> 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]	-	-	0.05
VIII	87	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))(ADCA)	123-77-3	204-650-8	0.05
VIII	88	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-	-	0.05
VIII	89	Henicosaflluoroundecanoic acid	2058-94-8	218-165-4	0.05
VIII	90	Pentacosaflluorotridecanoic acid	72629-94-8	276-745-2	0.05
VIII	91	Cyclohexane-1,2-dicarboxylic anhydride, cis-cyclohexane-1,2-dicarboxylic anhydride, trans-cyclohexane-1,2-dicarboxylic anhydride	85-42-7 13149-00-3 14166-21-3	201-604-9 236-086-3 238-009-9	0.05

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Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
VIII	92	Hexahydromethylphthalic anhydride, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride	25550-51-0 19438-60-9 48122-14-1 57110-29-9	247-094-1 243-072-0 256-356-4 260-566-1	0.05
VIII	93	Heptacosafuorotetradecanoic acid	376-06-7	206-803-4	0.05
VIII	94	Diisopentylphthalate(DIPP)	605-50-5	210-088-4	0.05
VIII	95	<sup>①</sup> 1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	284-032-2	0.05
VIII	96	n-pentyl-isopentylphthalate	776297-69-9	933-378-9	0.05
VIII	97	Methoxyacetic acid	625-45-6	210-894-6	0.05
VIII	98	Tricosafuorododecanoic acid	307-55-1	206-203-2	0.05
VIII	99	1,2-diethoxyethane	629-14-1	211-076-1	0.05
VIII	100	3-ethyl-2-methyl-2-(3-methylbutyl)- 1,3-oxazolidine	143860-04-2	421-150-7	0.05
VIII	101	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	202-453-1	0.05
VIII	102	N-methylacetamide	79-16-3	201-182-6	0.05
VIII	103◇	Pentalead tetraoxide sulphate*	12065-90-6	235-067-7	0.01
VIII	104	Biphenyl-4-ylamine	92-67-1	202-177-1	0.05
VIII	105	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	201-861-7	0.05
VIII	106◇	Dioxobis(stearato)trilead*	12578-12-0	235-702-8	0.01
VIII	107◇	Lead dinitrate*	10099-74-8	233-245-9	0.01
VIII	108◇	Tetralead trioxide sulphate*	12202-17-4	235-380-9	0.01
VIII	109◇	Lead monoxide (lead oxide)*	1317-36-8	215-267-0	0.01
VIII	110◇	Lead titanium trioxide*	12060-00-3	235-038-9	0.01
VIII	111	4,4'-methylenedi-o-toluidine	838-88-0	212-658-8	0.05
VIII	112◇	Acetic acid, lead salt, basic*	51404-69-4	257-175-3	0.01
VIII	113	Dimethyl sulphate	77-78-1	201-058-1	0.05
VIII	114	Furan	110-00-9	203-727-3	0.05
VIII	115◇	Pyrochlore, antimony lead yellow*	8012-00-8	232-382-1	0.01
VIII	116◇	Tetraethyllead*	78-00-2	201-075-4	0.01
VIII	117◇	[Phthalato(2-)]dioxotrilead*	69011-06-9	273-688-5	0.01
VIII	118	Diethyl sulphate	64-67-5	200-589-6	0.05
VIII	119◇	Lead cyanamidate*	20837-86-9	244-073-9	0.01
VIII	120◇	Silicic acid (H <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> ), barium salt (1:1), lead-doped*	68784-75-8	272-271-5	0.01
VIII	121◇	Trilead dioxide phosphonate*	12141-20-7	235-252-2	0.01
VIII	122	<i>o</i> -Toluidine	95-53-4	202-429-0	0.05

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Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
VIII	123	<i>o</i> -aminoazotoluene	97-56-3	202-591-2	0.05
VIII	124	4-aminoazobenzene	60-09-3	200-453-6	0.05
VIII	125	6-methoxy- <i>m</i> -toluidine ( <i>p</i> -cresidine)	120-71-8	204-419-1	0.05
VIII	126	Dibutyltin dichloride (DBTC)*	683-18-1	211-670-0	0.05
VIII	127◇	Lead titanium zirconium oxide*	12626-81-2	235-727-4	0.01
VIII	128	Methyloxirane (Propylene oxide)	75-56-9	200-879-2	0.05
VIII	129	1-bromopropane (n-propyl bromide)	106-94-5	203-445-0	0.05
VIII	130◇	Trilead bis(carbonate)dihydroxide*	1319-46-6	215-290-6	0.01
VIII	131◇	Fatty acids, C16-18, lead salts*	91031-62-8	292-966-7	0.01
VIII	132◇	Orange lead (lead tetroxide)*	1314-41-6	215-235-6	0.01
VIII	133◇	Sulfurous acid, lead salt, dibasic*	62229-08-7	263-467-1	0.01
VIII	134	4,4'-oxydianiline and its salts	101-80-4	202-977-0	0.05
VIII	135◇	Lead oxide sulfate*	12036-76-9	234-853-7	0.01
VIII	136◇	Lead bis(tetrafluoroborate)*	13814-96-5	237-486-0	0.01
VIII	137◇	Silicic acid, lead salt*	11120-22-2	234-363-3	0.01
VIII	138	N,N-dimethylformamide	68-12-2	200-679-5	0.05
IX	139◇	Cadmium	7440-43-9	231-152-8	0.01
IX	140◇	Cadmium oxide*	1306-19-0	215-146-2	0.01
IX	141	Dipentyl phthalate (DPP)	131-18-0	205-017-9	0.01
IX	142	<sup>①</sup> 4-Nonylphenol, branched and linear, ethoxylated/ <i>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</i>	-	-	0.05
IX	143	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	223-320-4	0.01
IX	144	Pentadecafluorooctanoic acid (PFOA)	335-67-1	206-397-9	0.01
X	145	<sup>①</sup> Trixylyl phosphate	25155-23-1	246-677-8	0.01
X	146	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	217-710-3	0.01
X	147	Dihexyl phthalate	84-75-3	201-559-5	0.01

# Test Report

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Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
X	148◇	Cadmium sulphide*	1306-23-6	215-147-8	0.01
X	149	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)***	573-58-0	209-358-4	0.01
X	150◇	Lead di(acetate)*	301-04-2	206-104-4	0.01
X	151	Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7	202-506-9	0.01
XI	152	<sup>①</sup> 1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	271-093-5	0.01
XI	153◇	Cadmium chloride*	10108-64-2	233-296-7	0.01
XI	154◇	<sup>②</sup> Sodium perborate; perboric acid, sodium salt*****	15120-21-5 11138-47-9	239-172-9 234-390-0	0.01
XI	155◇	<sup>②</sup> Sodium peroxometaborate*****	7632-04-4	231-556-4	0.01
XII	156	2-(2H-Benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	247-384-8	0.01
XII	157	2-Benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	223-346-6	0.01
XII	158	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)*	15571-58-1	239-622-4	0.05
XII	159◇	Cadmium fluoride*	7790-79-6	232-222-0	0.01
XII	160◇	Cadmium sulphate*	10124-36-4 31119-53-6	233-331-6	0.01
XII	161	<sup>①</sup> 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)*	-	-	0.05
XIII	162	<sup>①</sup> 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	271-094-0 272-013-1	0.05

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Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
XIII	163	<sup>①</sup> 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]	-	-	0.05
XIV	164	Nitrobenzene	98-95-3	202-716-0	0.01
XIV	165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	223-383-8	0.01
XIV	166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	253-037-1	0.01
XIV	167	1,3-propanesultone	1120-71-4	214-317-9	0.01
XIV	168	Perfluorononan-1-oic-acid and its sodium and ammonium salts	375-95-1 21049-39-8 4149-60-4	206-801-3 - -	0.01
XV	169	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8	200-028-5	0.01
XVI	170	4,4'-isopropylidenediphenol (bisphenol A; BPA)	80-05-7	201-245-8	0.01
XVI	171	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	3108-42-7 335-76-2 3830-45-3	221-470-5 206-400-3 -	0.01
XVI	172	<i>p</i> -(1,1-dimethylpropyl)phenol	80-46-6	201-280-9	0.01
XVI	173	<sup>①</sup> 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]	-	-	0.05
XVII	174	Perfluorohexane-1-sulphonic acid and its salts (PFHxS)	-	-	0.0005
XVIII	175	Dechlorane plus (including any of its individual anti- and syn-isomers or any combination thereof)	-	-	0.01
XVIII	176	Benzo[a]anthracene	56-55-3	200-280-6	0.01
XVIII	177◇	Cadmium nitrate*	10325-94-7	233-710-6	0.01
XVIII	178◇	Cadmium carbonate*	513-78-0	208-168-9	0.01

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Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
XVIII	179◇	Cadmium hydroxide*	21041-95-2	244-168-5	0.01
XVIII	180	Chrysene	218-01-9	205-923-4	0.01
XVIII	181	<sup>①</sup> 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 (4-HPbl)]	-	-	0.05
XIX	182	Octamethylcyclotetrasiloxane (D4)	556-67-2	209-136-7	0.01
XIX	183	Decamethylcyclopentasiloxane (D5)	541-02-6	208-764-9	0.01
XIX	184	Dodecamethylcyclohexasiloxane (D6)	540-97-6	208-762-8	0.01
XIX	185◇	Lead	7439-92-1	231-100-4	0.01
XIX	186◇	Disodium octaborate*	12008-41-2	234-541-0	0.01
XIX	187	Benzo[ghi]perylene	191-24-2	205-883-8	0.01
XIX	188	<sup>①</sup> Terphenyl, hydrogenated	61788-32-7	262-967-7	0.01
XIX	189	Ethylenediamine (EDA)	107-15-3	203-468-6	0.01
XIX	190	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride) (TMA)	552-30-7	209-008-0	0.01
XIX	191	Dicyclohexyl phthalate (DCHP)	84-61-7	201-545-9	0.01
XX	192	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	401-720-1	0.01
XX	193	Benzo[k]fluoranthene	207-08-9	205-916-6	0.01
XX	194	Fluoranthene	206-44-0	205-912-4	0.01
XX	195	Phenanthrene	85-01-8	201-581-5	0.01
XX	196	Pyrene	129-00-0	204-927-3	0.01
XX	197	1,7,7-trimethyl-3-(phenylmethylene) bicyclo[2.2.1]heptan-2-one (3-benzylidene camphor) (3-BC)	15087-24-8	239-139-9	0.01
XXI	198	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
XXI	199	2-methoxyethyl acetate	110-49-6	203-772-9	0.01
XXI	200	4-tert-butylphenol	98-54-4	202-679-0	0.01
XXI	201	<sup>①</sup> Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)	-	-	0.01



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Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
XXII	202	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1	404-360-3	0.01
XXII	203	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5	400-600-6	0.01
XXII	204	Diisohexyl phthalate	71850-09-4	276-090-2	0.01
XXII	205	Perfluorobutane sulfonic acid (PFBS) and its salts	-	-	0.01
XXIII	206	1-vinylimidazole	1072-63-5	214-012-0	0.01
XXIII	207	2-methylimidazole	693-98-1	211-765-7	0.01
XXIII	208	Butyl 4-hydroxybenzoate	94-26-8	202-318-7	0.01
XXIII	209	Dibutylbis(pentane-2,4-dionato-O,O')tin *	22673-19-4	245-152-0	0.05
XXIV	210	bis(2-(2-methoxyethoxy)ethyl) ether	143-24-8	205-594-7	0.01
XXIV	211	Diocetyl tin 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 *	-	-	0.05
XXV	212	1,4-dioxane	123-91-1	204-661-8	0.01
XXV	213	2,2-bis(bromomethyl) propane-1,3-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	221-967-7 253-057-0 202-480-9	0.01
XXV	214	2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers	-	-	0.01
XXV	215	4,4'-(1-methylpropylidene)bisphenol (bisphenol B)	77-40-7	201-025-1	0.01
XXV	216	Glutaral	111-30-8	203-856-5	0.01
XXV	217	<sup>①</sup> 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
XXV	218◇	Orthoboric acid, sodium salt *	13840-56-7	237-560-2	0.01

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Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
XXV	219	<sup>①</sup> 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

“◇” indicates the tested items of 72 SVHC.

## List of intention for identification of SVHC

Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
XXVI	1	Resorcinol	108-46-3	203-585-2	0.01
XXVI	2	(±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC)	-	-	0.01
XXVI	3	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (DBMC)	119-47-1	204-327-1	0.01
XXVI	4	S-(tricyclo[5.2.1.0 <sup>2,6</sup> ]deca-3-en-8(or 9)-yl) O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate *	255881-94-8	401-850-9	0.05
XXVI	5	tris(2-methoxyethoxy)vinylsilane	1067-53-4	213-934-0	0.01

For Batch XXVI, the substance of No.1 is the substance published on June 1<sup>st</sup> 2021 submitted by EU Member States to ECHA for intention for identification of substance of very high concern (SVHC) under Regulation (EC) No1907/2006 of REACH. The substances of No.2-5 are the substances published on September 3<sup>rd</sup> 2021 submitted by EU Member States to ECHA for intention for identification of substance of very high concern (SVHC) under Regulation (EC) No 1907/2006 of REACH.

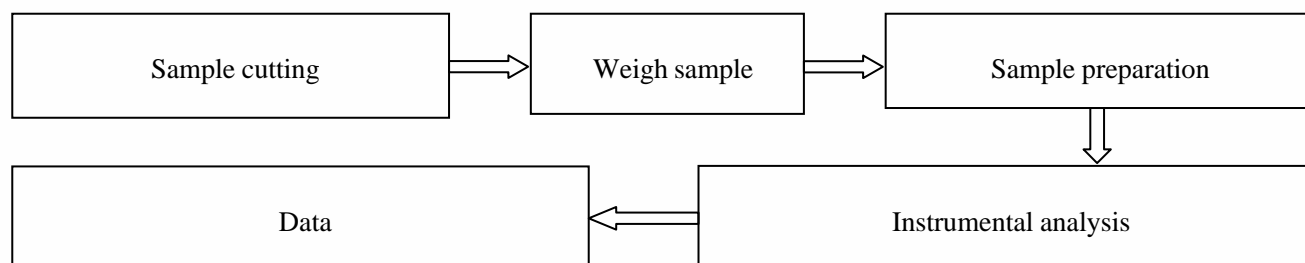
# Test Report

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**Appendix:**

1. Any supplier of an article containing a substance that is included in the Candidate List in a concentration above 0.1 % weight by weight (w/w) has the duty to communicate information in accordance with Article 33 of European Union regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).
  - 1) Any supplier shall provide the recipient of the article with sufficient information to allow safe use of the article including, as a minimum, the name of that substance.
  - 2) On request by a consumer any supplier shall provide the consumer with sufficient information to allow safe use of the article including, as a minimum, the name of that substance within 45 days of receipt of the request, free of charge.
2. The supplier of a substance that is included in the Candidate List on their own shall provide the recipient of the substance with a safety data sheet for free compiled in accordance with Article 3 and Annex II of REACH.
3. The supplier of a mixture that containing a substance that is included in the Candidate List shall exchange information in accordance with Article 31, Article 32, and Annex II of REACH.
  - 1) Any supplier shall provide the recipient of the mixture with a safety data sheet for free where a preparation meets the criteria for classification as dangerous in accordance with Directives 1999/45/EC.
  - 2) Any supplier shall provide the recipient of the mixture with a safety data sheet for free where a preparation does not meet the criteria for classification as dangerous in accordance with Directive 1999/45/EC, but contains any substance that is included in the Candidate List in an individual concentration of  $\geq 0.1$  % by weight for non-gaseous mixtures or  $\geq 0.2$  % by volume for gaseous mixtures.

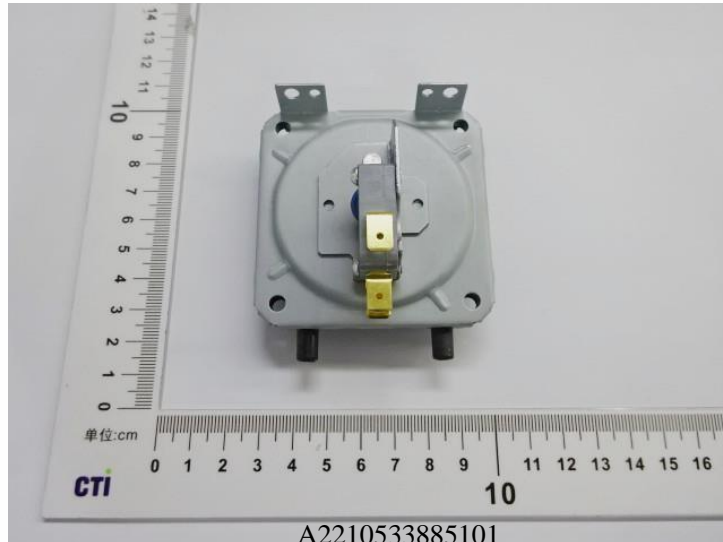
**Test Process**

# Test Report

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## Photo(s) of the sample(s)



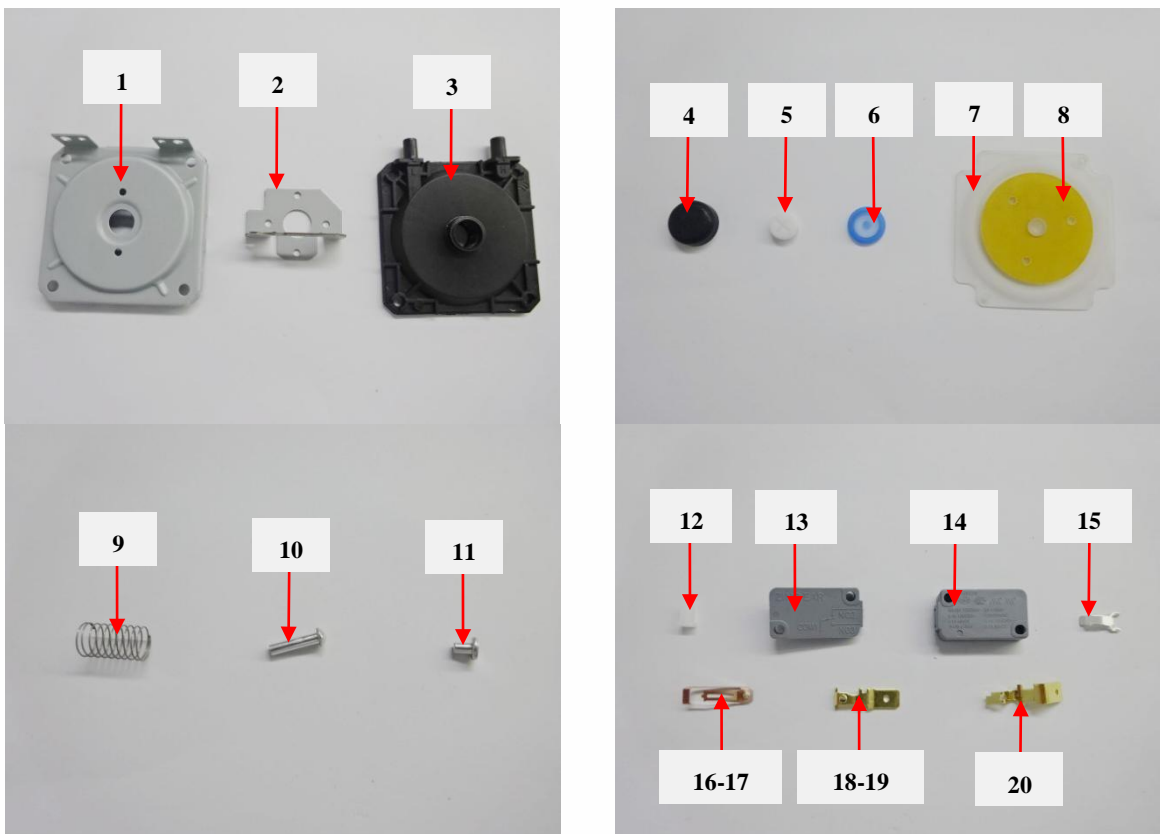
Final Product

# Test Report

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## Photo(s) of the sample(s)



### Statement:

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. The result(s) shown in this report refer(s) only to the sample(s) tested;
4. Without written approval of CTI, this report can't be reproduced except in full;
5. In case of any discrepancy between the English version and Chinese version of the testing reports (if generated), the Chinese version shall prevail.

\*\*\* End of Report \*\*\*



# Verification Report

Report No. A2210533885102X1

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## CENTRE TESTING INTERNATIONAL



**Company Name shown on Report** China Right Consultants Ltd.

**Address** Room 426, No. 285, East Luochuan Rd.,  
Zhabei District, Shanghai, 200072, China

\*\*\*\*\*  
**Conclusion**

Tested Sample	According to standard/directive	Result
Submitted Sample	RoHS Directive 2011/65/EU with amendment (EU) 2015/863	PASS

\*\*\*\*\*  
PASS means that the results shown on the report comply with the limits set by RoHS Directive 2011/65/EU with amendment (EU) 2015/863.

Tested by Vivi Liao

Reviewed by Anso Fang



Approved by Hill Zheng

Hill Zheng  
Technical Manager

Date Jan. 7, 2022

No. R177731372

# Verification Report

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# Verification Report

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**The following sample(s) and sample information was/were submitted and identified by/on the behalf of the applicant**

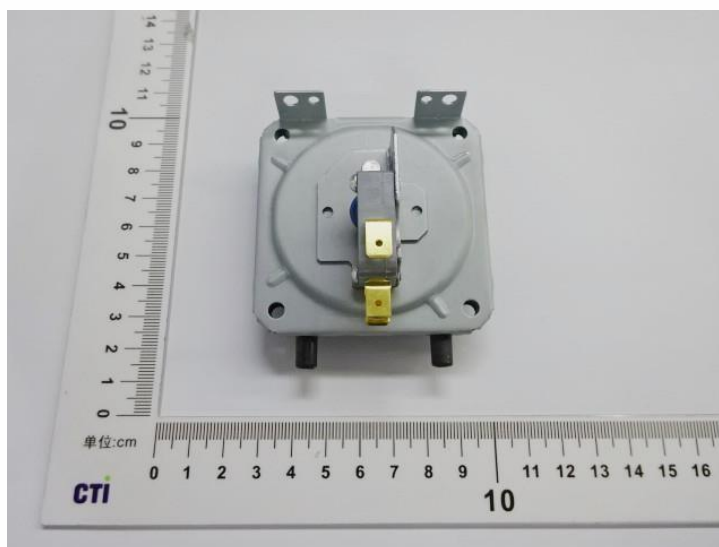
Product Name	Air Pressure Switch
Product Part No.	KFH090-F
Sample Received Date	Dec. 17, 2021
Testing Period	Dec. 17, 2021 to Jan. 4, 2022

**Test Requested**

With reference to RoHS Directive 2011/65/EU with amendment (EU) 2015/863, to conduct verification test for Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs) and Phthalates (Dibutyl phthalate (DBP), Benzylbutyl phthalate (BBP), Di-2-ethylhexyl phthalate (DEHP), Diisobutyl phthalate (DIBP)) in the submitted samples.

**Photo(s) of the Product(s)**

**Air Pressure Switch**



# Verification Report

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## Test Method

### A. Screening limits for regulated elements according to IEC 62321-3-1:2013 (Unit: mg/kg)

Element	Polymers	Metals	Composite material
Pb	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Cd	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Hg	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$
Br	$BL \leq (300-3\sigma) < X$	N/A	$BL \leq (250-3\sigma) < X$

### B. Screening limits for Phthalates

Test Item(s)	Screening limits (Unit: mg/kg)
Dibutyl phthalate(DBP)	$BL \leq 600 < X$
Benzylbutyl phthalate(BBP)	$BL \leq 600 < X$
Di-2-ethylhexyl phthalate(DEHP)	$BL \leq 600 < X$
Diisobutyl phthalate(DIBP)	$BL \leq 600 < X$

### C. Chemical Test

Tested Item(s)	Test Method	Measured Equipment(s)	MDL	Limit
Lead (Pb)	IEC 62321-5:2013	ICP-OES	10 mg/kg	1000 mg/kg
	Refer to IEC 62321-5:2013		10 mg/kg	
Cadmium (Cd)	IEC 62321-5:2013	ICP-OES	10 mg/kg	100 mg/kg
	Refer to IEC 62321-5:2013		10 mg/kg	
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES	10 mg/kg	1000 mg/kg
	Refer to IEC 62321-4:2013+AMD1:2017 CSV		10 mg/kg	
Hexavalent Chromium (Cr(VI))	IEC 62321-7-2:2017	UV-Vis	20 mg/kg	1000 mg/kg
	IEC 62321-7-1:2015		0.10 $\mu\text{g}/\text{cm}^2$ (LOQ)	
Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015	GC-MS	100 mg/kg	1000 mg/kg
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015	GC-MS	100 mg/kg	1000 mg/kg
Phthalates (DBP, BBP, DEHP, DIBP)	IEC 62321-8:2017	GC-MS	50 mg/kg	1000 mg/kg for each

#### Remark:

- BL = Under the screening limit
- OL = Above the screening limit
- X = The range of needing to do further testing
- $3\sigma$  = The reproducibility of analytical instruments
- N/A = Not applicable
- LOD = Detection limit
- LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10  $\mu\text{g}/\text{cm}^2$

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## Test Result(s)

Sample No.	Sample Description	Tested Items	XRF Screening Test	Phthalates Screening Test	Chemical Test (mg/kg)	Conclusion	Sample Received/ Resubmitted Date
001	Silver-gray metal	Pb	BL	/	/	PASS	Dec. 17, 2021
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	N/A	/	/		
		DBP	N/A	/	/		
		BBP	N/A	/	/		
		DEHP	N/A	/	/		
002	Silver-gray metal	Pb	BL	/	/	PASS	Dec. 17, 2021
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	N/A	/	/		
		DBP	N/A	/	/		
		BBP	N/A	/	/		
		DEHP	N/A	/	/		
003	Black plastic cover	Pb	BL	/	/	PASS	Dec. 17, 2021
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	IN	/	N.D.		
		DBP	N/A	BL	/		
		BBP	N/A	BL	/		
		DEHP	N/A	BL	/		
DIBP	N/A	BL	/				

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Sample No.	Sample Description	Tested Items	XRF Screening Test	Phthalates Screening Test	Chemical Test (mg/kg)	Conclusion	Sample Received/ Resubmitted Date
004	Black rubber	Pb	BL	/	/	PASS	Dec. 17, 2021
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	BL	/	/		
		DBP	N/A	BL	/		
		BBP	N/A	BL	/		
		DEHP	N/A	BL	/		
005	White plastic	Pb	BL	/	/	PASS	Dec. 17, 2021
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	BL	/	/		
		DBP	N/A	BL	/		
		BBP	N/A	BL	/		
		DEHP	N/A	BL	/		
006	Blue rubber	Pb	BL	/	/	PASS	Dec. 17, 2021
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	BL	/	/		
		DBP	N/A	BL	/		
		BBP	N/A	BL	/		
		DEHP	N/A	BL	/		
DIBP	N/A	BL	/				

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Sample No.	Sample Description	Tested Items	XRF Screening Test	Phthalates Screening Test	Chemical Test (mg/kg)	Conclusion	Sample Received/ Resubmitted Date
007	White rubber	Pb	BL	/	/	PASS	Dec. 17, 2021
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	BL	/	/		
		DBP	N/A	BL	/		
		BBP	N/A	BL	/		
		DEHP	N/A	BL	/		
008	Yellow solid	Pb	BL	/	/	PASS	Dec. 17, 2021
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	BL	/	/		
		DBP	N/A	BL	/		
		BBP	N/A	BL	/		
		DEHP	N/A	BL	/		
009	Silvery metal spring	Pb	BL	/	/	PASS	Dec. 17, 2021
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	IN	/	N.D.▼		
		Br(PBBs&PBDEs)	N/A	/	/		
		DBP	N/A	/	/		
		BBP	N/A	/	/		
		DEHP	N/A	/	/		
DIBP	N/A	/	/				

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Sample No.	Sample Description	Tested Items	XRF Screening Test	Phthalates Screening Test	Chemical Test (mg/kg)	Conclusion	Sample Received/ Resubmitted Date
010	Silver-white metal	Pb	BL	/	/	PASS	Dec. 17, 2021
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	N/A	/	/		
		DBP	N/A	/	/		
		BBP	N/A	/	/		
		DEHP	N/A	/	/		
011	Silver-white metal	Pb	BL	/	/	PASS	Dec. 17, 2021
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	N/A	/	/		
		DBP	N/A	/	/		
		BBP	N/A	/	/		
		DEHP	N/A	/	/		
012	White plastic	Pb	BL	/	/	PASS	Dec. 17, 2021
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	BL	/	/		
		DBP	N/A	BL	/		
		BBP	N/A	BL	/		
		DEHP	N/A	BL	/		
DIBP	N/A	BL	/				

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Sample No.	Sample Description	Tested Items	XRF Screening Test	Phthalates Screening Test	Chemical Test (mg/kg)	Conclusion	Sample Received/ Resubmitted Date
013	Gray plastic	Pb	BL	/	/	PASS	Dec. 17, 2021
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	IN	/	N.D.		
		DBP	N/A	BL	/		
		BBP	N/A	BL	/		
		DEHP	N/A	BL	/		
014	Gray plastic	Pb	BL	/	/	PASS	Dec. 17, 2021
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	IN	/	N.D.		
		DBP	N/A	BL	/		
		BBP	N/A	BL	/		
		DEHP	N/A	BL	/		
015	Silvery metal sheet	Pb	BL	/	/	PASS	Dec. 17, 2021
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	N/A	/	/		
		DBP	N/A	/	/		
		BBP	N/A	/	/		
		DEHP	N/A	/	/		
DIBP	N/A	/	/				



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Sample No.	Sample Description	Tested Items	XRF Screening Test	Phthalates Screening Test	Chemical Test (mg/kg)	Conclusion	Sample Received/ Resubmitted Date
016	Cupreous metal sheet	Pb	BL	/	/	PASS	Dec. 17, 2021
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	N/A	/	/		
		DBP	N/A	/	/		
		BBP	N/A	/	/		
		DEHP	N/A	/	/		
017	Golden/silvery metal	Pb	BL	/	/	PASS	Dec. 17, 2021
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	N/A	/	/		
		DBP	N/A	/	/		
		BBP	N/A	/	/		
		DEHP	N/A	/	/		
018	Golden metal	Pb	BL	/	/	PASS	Dec. 17, 2021
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	N/A	/	/		
		DBP	N/A	/	/		
		BBP	N/A	/	/		
		DEHP	N/A	/	/		
DIBP	N/A	/	/				

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Sample No.	Sample Description	Tested Items	XRF Screening Test	Phthalates Screening Test	Chemical Test (mg/kg)	Conclusion	Sample Received/ Resubmitted Date
019	Golden metal	Pb	BL	/	/	PASS	Dec. 17, 2021
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	N/A	/	/		
		DBP	N/A	/	/		
		BBP	N/A	/	/		
		DEHP	N/A	/	/		
020	Golden metal	Pb	BL	/	/	PASS	Dec. 17, 2021
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs&PBDEs)	N/A	/	/		
		DBP	N/A	/	/		
		BBP	N/A	/	/		
		DEHP	N/A	/	/		
DIBP	N/A	/	/				

**Remark :**

- N.D. = Not Detected (<MDL or LOQ)
- MDL = Method Detection Limit
- mg/kg = ppm = parts per million
- 1000 mg/kg = 0.1%
- / = Not tested
- IN = Uncertain, Further chemical test
- N/A = Not applicable
- BL = Under the screening limit
- ▼The sample is negative for Cr(VI) – The Cr(VI) concentration is below 0.10 µg/cm<sup>2</sup>.  
The coating is considered a non-Cr(VI) based coating.
- When conducting the test for PBBs&PBDEs, XRF was introduced to screen Br Exclusively; When conducting the test for Hexavalent Chromium, XRF was introduced to screen Chromium exclusively.

**Note :**

- This testing report revised “Company Name shown on Report”, “Address” based on the original report of No. A2210533885102. This testing report displaces the original one which was invalid since the date of this testing report released.

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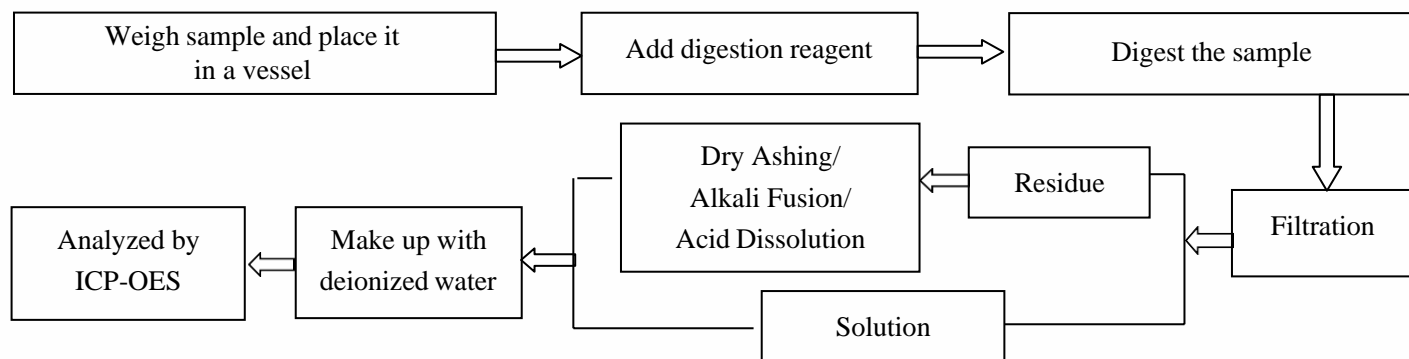
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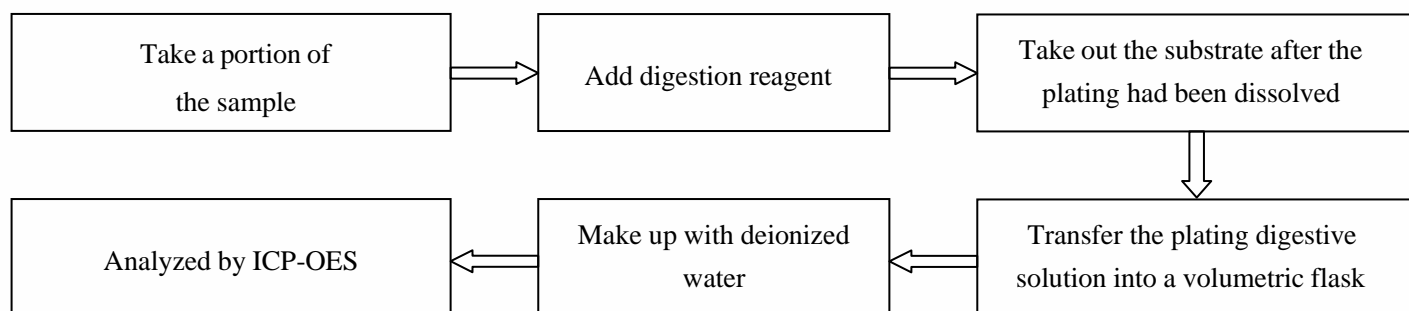
**Test Process**

**1. Lead (Pb), Cadmium (Cd)**

**(1) IEC 62321-5:2013**

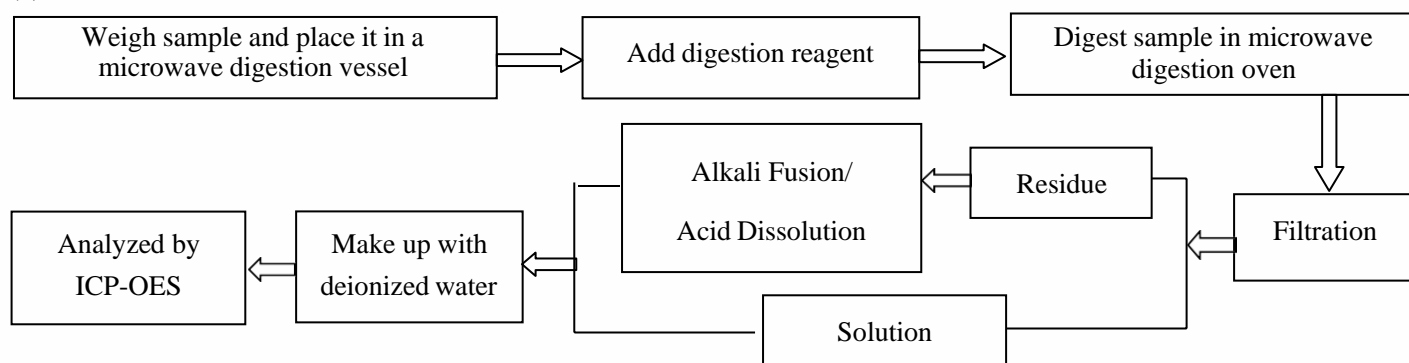


**(2) Refer to IEC 62321-5:2013**

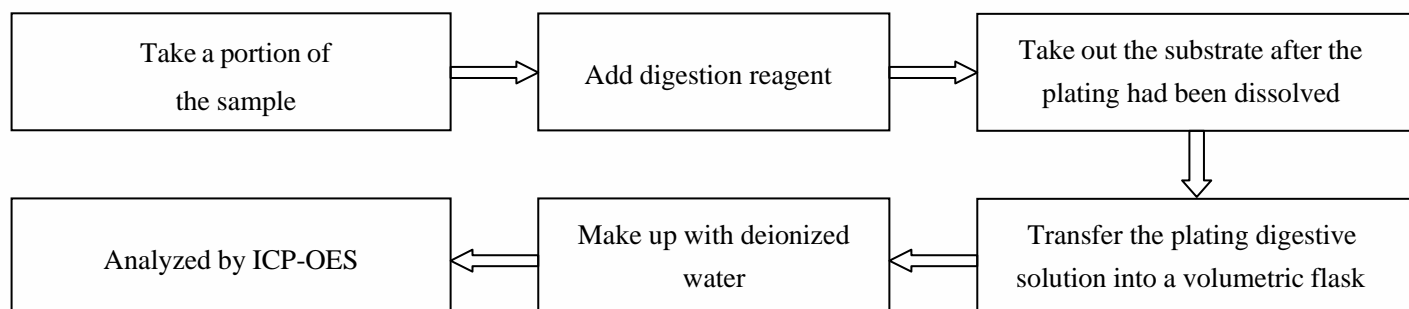


**2. Mercury (Hg)**

**(1) IEC 62321-4:2013+AMD1:2017 CSV**



**(2) Refer to IEC 62321-4:2013+AMD1:2017 CSV**



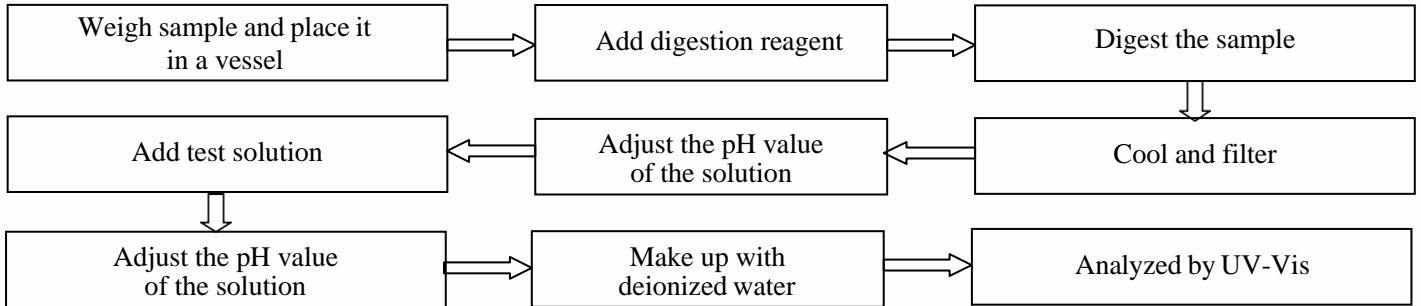
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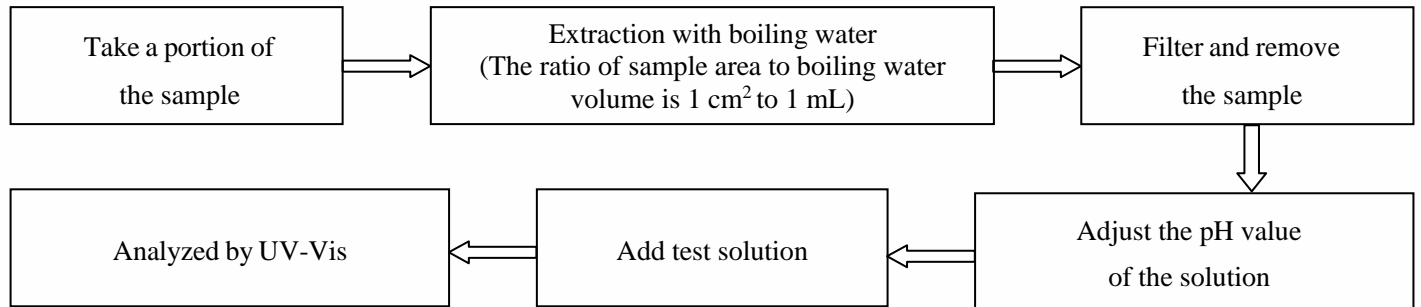
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### 3. Hexavalent Chromium (Cr(VI))

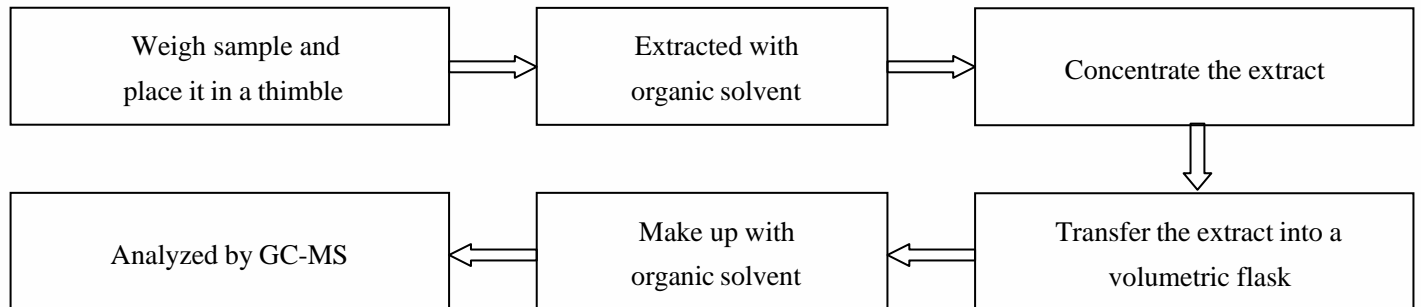
#### (1) IEC62321-7-2:2017



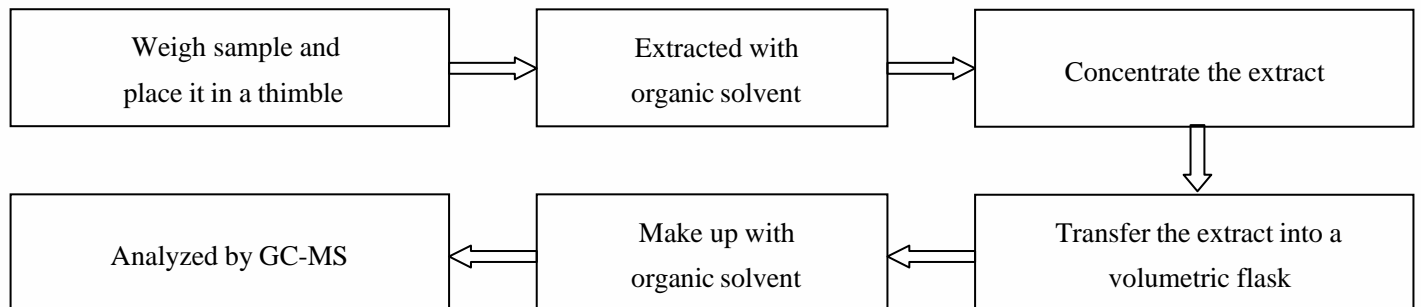
#### (2) IEC 62321-7-1:2015



### 4. Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)



### 5. Phthalates (DBP, BBP, DEHP, DIBP)

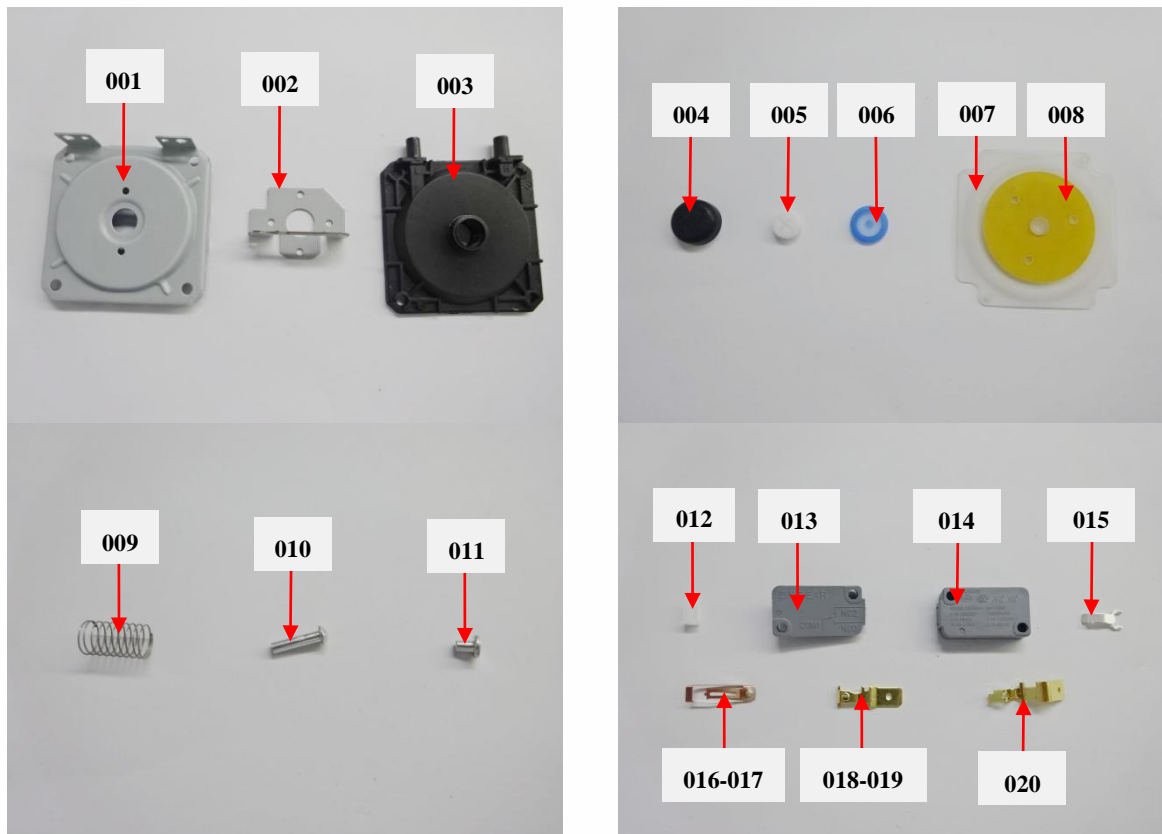


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## Photo(s) of the tested component(s)



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## Exempted Items of RoHS Directive

In accordance with Directive 2011/65/EU as amended, there are 45 exemption items in Annex III of 2011/65/EU altogether.

	Exemption	Scope and dates of applicability
1	Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):	
1(a)	For general lighting purposes < 30 W: 5 mg	Expires on 31 December 2011; 3,5 mg may be used per burner after 31 December 2011 until 31 December 2012; 2,5 mg shall be used per burner after 31 December 2012
1(b)	For general lighting purposes $\geq$ 30 W and < 50 W: 5 mg	Expires on 31 December 2011; 3,5 mg may be used per burner after 31 December 2011
1(c)	For general lighting purposes $\geq$ 50 W and < 150 W: 5 mg	
1(d)	For general lighting purposes $\geq$ 150 W: 15 mg	
1(e)	For general lighting purposes with circular or square structural shape and tube diameter $\leq$ 17 mm	No limitation of use until 31 December 2011; 7 mg may be used per burner after 31 December 2011
1(f)	For special purposes: 5 mg	
1(g)	For general lighting purposes < 30 W with a lifetime equal or above 20 000 h: 3,5 mg	Expires on 31 December 2017
2(a)	Mercury in double-capped linear fluorescent lamps for general lighting purposes not exceeding (per lamp):	
2(a)(1)	Tri-band phosphor with normal lifetime and a tube diameter < 9 mm (e.g. T2): 5 mg	Expires on 31 December 2011; 4 mg may be used per lamp after 31 December 2011
2(a)(2)	Tri-band phosphor with normal lifetime and a tube diameter $\geq$ 9 mm and $\leq$ 17 mm (e.g. T5): 5 mg	Expires on 31 December 2011; 3 mg may be used per lamp after 31 December 2011
2(a)(3)	Tri-band phosphor with normal lifetime and a tube diameter > 17 mm and $\leq$ 28 mm (e.g. T8): 5 mg	Expires on 31 December 2011; 3,5 mg may be used per lamp after 31 December 2011
2(a)(4)	Tri-band phosphor with normal lifetime and a tube diameter > 28 mm (e.g. T12): 5 mg	Expires on 31 December 2012; 3,5 mg may be used per lamp after 31 December 2012
2(a)(5)	Tri-band phosphor with long lifetime ( $\geq$ 25 000 h): 8 mg	Expires on 31 December 2011; 5 mg may be used per lamp after 31 December 2011
2(b)	Mercury in other fluorescent lamps not exceeding (per lamp):	
2(b)(1)	Linear halophosphate lamps with tube > 28 mm (e.g. T10 and T12): 10 mg	Expires on 13 April 2012
2(b)(2)	Non-linear halophosphate lamps (all diameters): 15 mg	Expires on 13 April 2016
2(b)(3)	Non-linear tri-band phosphor lamps with tube diameter > 17 mm (e.g. T9)	No limitation of use until 31 December 2011; 15 mg may be used per lamp after 31 December 2011
2(b)(4)	Lamps for other general lighting and special purposes (e.g. induction lamps)	No limitation of use until 31 December 2011; 15 mg may be used per lamp after 31 December 2011
3	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp):	

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	<b>Exemption</b>	<b>Scope and dates of applicability</b>
3(a)	Short length ( $\leq 500$ mm)	No limitation of use until 31 December 2011; 3,5 mg may be used per lamp after 31 December 2011
3(b)	Medium length ( $> 500$ mm and $\leq 1\ 500$ mm)	No limitation of use until 31 December 2011; 5 mg may be used per lamp after 31 December 2011
3(c)	Long length ( $> 1\ 500$ mm)	No limitation of use until 31 December 2011; 13 mg may be used per lamp after 31 December 2011
4(a)	Mercury in other low pressure discharge lamps (per lamp)	No limitation of use until 31 December 2011; 15 mg may be used per lamp after 31 December 2011
4(b)	Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner) in lamps with improved colour rendering index $R_a > 60$ :	
4(b)-I	$P \leq 155$ W	No limitation of use until 31 December 2011; 30 mg may be used per burner after 31 December 2011
4(b)-II	$155$ W $< P \leq 405$ W	No limitation of use until 31 December 2011; 40 mg may be used per burner after 31 December 2011
4(b)-III	$P > 405$ W	No limitation of use until 31 December 2011; 40 mg may be used per burner after 31 December 2011
4(c)	Mercury in other High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner):	
4(c)-I	$P \leq 155$ W	No limitation of use until 31 December 2011; 25 mg may be used per burner after 31 December 2011
4(c)-II	$155$ W $< P \leq 405$ W	No limitation of use until 31 December 2011; 30 mg may be used per burner after 31 December 2011
4(c)-III	$P > 405$ W	No limitation of use until 31 December 2011; 40 mg may be used per burner after 31 December 2011
4(d)	Mercury in High Pressure Mercury (vapour) lamps (HPMV)	Expires on 13 April 2015
4(e)	Mercury in metal halide lamps (MH)	
4(f)	Mercury in other discharge lamps for special purposes not specifically mentioned in this Annex	
4(g)	Mercury in hand crafted luminous discharge tubes used for signs, decorative or architectural and specialist lighting and light-artwork, where the mercury content shall be limited as follows: (a) 20 mg per electrode pair + 0,3 mg per tube length in cm, but not more than 80 mg, for outdoor applications and indoor applications exposed to temperatures below 20 °C; (b) 15 mg per electrode pair + 0,24 mg per tube length in cm, but not more than 80 mg, for all other indoor applications.	Expires on 31 December 2018
5(a)	Lead in glass of cathode ray tubes	
5(b)	Lead in glass of fluorescent tubes not exceeding 0,2 % by weight	

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	<b>Exemption</b>	<b>Scope and dates of applicability</b>
6(a)	Lead as an alloying element in steel for machining purposes and in galvanised steel containing up to 0,35 % lead by weight	Expires on: -21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; -21 July 2023 for category 8 in vitro diagnostic medical devices; -21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.
6(a)-I	Lead as an alloying element in steel for machining purposes containing up to 0,35 % lead by weight and in batch hot dip galvanised steel components containing up to 0,2 % lead by weight	Expires on 21 July 2021 for categories 1-7 and 10.
6(b)	Lead as an alloying element in aluminium containing up to 0,4 % lead by weight	Expires on: -21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments, -21 July 2023 for category 8 in vitro diagnostic medical devices, -21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.
6(b)-I	Lead as an alloying element in aluminium containing up to 0,4 % lead by weight, provided it stems from lead-bearing aluminium scrap recycling	Expires on 21 July 2021 for categories 1-7 and 10.
6(b)-II	Lead as an alloying element in aluminium for machining purposes with a lead content up to 0,4 % by weight	Expires on 18 May 2021 for categories 1-7 and 10.
6(c)	Copper alloy containing up to 4 % lead by weight	Expires on: -21 July 2021 for categories 1-7 and 10, -21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments, -21 July 2023 for category 8 in vitro diagnostic medical devices, -21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.
7(a)	Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)	Applies to categories 1-7 and 10 (except applications covered by point 24 of this Annex) and expires on 21 July 2021. For categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments expires on 21 July 2021. For category 8 in vitro diagnostic medical devices expires on 21 July 2023. For category 9 industrial monitoring and control instruments, and for category 11 expires on 21 July 2024.
7(b)	Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications	



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	<b>Exemption</b>	<b>Scope and dates of applicability</b>
7(c)-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound	Applies to categories 1-7 and 10 (except applications covered under point 34) and expires on 21 July 2021. For categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments expires on 21 July 2021. For category 8 in vitro diagnostic medical devices expires on 21 July 2023. For category 9 industrial monitoring and control instruments, and for category 11 expires on 21 July 2024.
7(c)-II	Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher	Does not apply to applications covered by point 7(c)-I and 7(c)-IV of this Annex. Expires on: -21 July 2021 for categories 1-7 and 10; -21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; -21 July 2023 for category 8 in vitro diagnostic medical devices; -21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11
7(c)-III	Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC	Expires on 1 January 2013 and after that date may be used in spare parts for EEE placed on the market before 1 January 2013
7(c)-IV	Lead in PZT based dielectric ceramic materials for capacitors which are part of integrated circuits or discrete semiconductors	-21 July 2021 for categories 1-7 and 10; -21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; -21 July 2023 for category 8 in vitro diagnostic medical devices; -21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11
8(a)	Cadmium and its compounds in one shot pellet type thermal cut-offs	Expires on 1 January 2012 and after that date may be used in spare parts for EEE placed on the market before 1 January 2012
8(b)	Cadmium and its compounds in electrical contacts	Applies to categories 8, 9 and 11 and expires on: -21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; -21 July 2023 for category 8 in vitro diagnostic medical devices; -21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11

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	<b>Exemption</b>	<b>Scope and dates of applicability</b>
8(b)-I	Cadmium and its compounds in electrical contacts used in: -circuit breakers, -thermal sensing controls, -thermal motor protectors (excluding hermetic thermal motor protectors), -AC switches rated at: -6 A and more at 250 V AC and more, or -12 A and more at 125 V AC and more, -DC switches rated at 20 A and more at 18 V DC and more, and -switches for use at voltage supply frequency $\geq$ 200 Hz	Applies to categories 1 to 7 and 10 and expires on 21 July 2021
9	Hexavalent chromium as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators up to 0,75 % by weight in the cooling solution	Applies to categories 8, 9 and 11 and expires on: —21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments, —21 July 2023 for category 8 in vitro diagnostic medical devices, —21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.
9(a)-I	Up to 0,75 % hexavalent chromium by weight, used as an anticorrosion agent in the cooling solution of carbon steel cooling systems of absorption refrigerators (including minibars) designed to operate fully or partly with electrical heater, having an average utilised power input < 75 W at constant running conditions	Applies to categories 1-7 and 10 and expires on 5 March 2021.
9(a)-II	Up to 0,75 % hexavalent chromium by weight, used as an anticorrosion agent in the cooling solution of carbon steel cooling systems of absorption refrigerators: —designed to operate fully or partly with electrical heater, having an average utilised power input $\geq$ 75 W at constant running conditions, —designed to fully operate with non-electrical heater.	Applies to categories 1-7 and 10 and expires on 21 July 2021.
9(b)	Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) applications	Applies to categories 8, 9 and 11; expires on: -21 July 2023 for category 8 in vitro diagnostic medical devices, -21 July 2024 for category 9 industrial monitoring and control instruments and for category 11, -21 July 2021 for other subcategories of categories 8 and 9.
9(b)-(I)	Lead in bearing shells and bushes for refrigerant-containing hermetic scroll compressors with a stated electrical power input equal or below 9 kW for heating, ventilation, air conditioning and refrigeration (HVACR) applications	Applies to category 1; expires on 21 July 2019.
11(a)	Lead used in C-press compliant pin connector systems C-press	May be used in spare parts for EEE placed on the market before 24 September 2010

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	<b>Exemption</b>	<b>Scope and dates of applicability</b>
11(b)	Lead used in other than C-press compliant pin connector systems	Expires on 1 January 2013 and after that date may be used in spare parts for EEE placed on the market before 1 January 2013
12	Lead as a coating material for the thermal conduction module C-ring	May be used in spare parts for EEE placed on the market before 24 September 2010
13(a)	Lead in white glasses used for optical applications	Applies to all categories; expires on: -21 July 2023 for category 8 in vitro diagnostic medical devices; -21 July 2024 for category 9 industrial monitoring and control instruments and for category 11; -21 July 2021 for all other categories and subcategories
13(b)	Cadmium and lead in filter glasses and glasses used for reflectance standards	Applies to categories 8, 9 and 11; expires on: -21 July 2023 for category 8 in vitro diagnostic medical devices; -21 July 2024 for category 9 industrial monitoring and control instruments and for category 11; -21 July 2021 for other subcategories of categories 8 and 9
13(b)-I	Lead in ion coloured optical filter glass types	Applies to categories 1 to 7 and 10; expires on 21 July 2021 for categories 1 to 7 and 10
13(b)-II	Cadmium in striking optical filter glass types; excluding applications falling under point 39 of this Annex	
13(b)-III	Cadmium and lead in glazes used for reflectance standards	
14	Lead in solders consisting of more than two elements for the connection between the pins and the package of microprocessors with a lead content of more than 80 % and less than 85 % by weight	Expired on 1 January 2011 and after that date may be used in spare parts for EEE placed on the market before 1 January 2011
15	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages	Applies to categories 8, 9 and 11 and expires on: -21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; -21 July 2023 for category 8 in vitro diagnostic medical devices; -21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11
15(a)	Lead in solders to complete a viable electrical connection between the semiconductor die and carrier within integrated circuit flip chip packages where at least one of the following criteria applies: -a semiconductor technology node of 90 nm or larger; -a single die of 300 mm <sup>2</sup> or larger in any semiconductor technology node; -stacked die packages with die of 300 mm <sup>2</sup> or larger, or silicon interposers of 300 mm <sup>2</sup> or larger	Applies to categories 1 to 7 and 10 and expires on 21 July 2021
16	Lead in linear incandescent lamps with silicate coated tubes	Expires on 1 September 2013
17	Lead halide as radiant agent in high intensity discharge (HID) lamps used for professional reprography applications	

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	<b>Exemption</b>	<b>Scope and dates of applicability</b>
18(a)	Lead as activator in the fluorescent powder (1 % lead by weight or less) of discharge lamps when used as speciality lamps for diazoprinting reprography, lithography, insect traps, photochemical and curing processes containing phosphors such as SMS ((Sr,Ba)2MgSi2O7:Pb)	Expired on 1 January 2011
18(b)	Lead as activator in the fluorescent powder (1 % lead by weight or less) of discharge lamps when used as sun tanning lamps containing phosphors such as BSP (BaSi2O5:Pb)	-21 July 2021 for categories 1-7 and 10; -21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; -21 July 2023 for category 8 in vitro diagnostic medical devices; -21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11
18(b)-I	Lead as activator in the fluorescent powder (1 % lead by weight or less) of discharge lamps containing phosphors such as BSP (BaSi2O5:Pb) when used in medical phototherapy equipment	Applies to categories 5 and 8, excluding applications covered by entry 34 of Annex IV, and expires on 21 July 2021
19	Lead with PbBiSn-Hg and PbInSn-Hg in specific compositions as main amalgam and with PbSn-Hg as auxiliary amalgam in very compact energy saving lamps (ESL)	Expires on 1 June 2011
20	Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCDs)	Expires on 1 June 2011
21	Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses	Applies to categories 8, 9 and 11 and expires on: -21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; -21 July 2023 for category 8 in vitro diagnostic medical devices; -21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11
21(a)	Cadmium when used in colour printed glass to provide filtering functions, used as a component in lighting applications installed in displays and control panels of EEE	Applies to categories 1 to 7 and 10 except applications covered by entry 21(b) or entry 39 and expires on 21 July 2021
21(b)	Cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses	Applies to categories 1 to 7 and 10 except applications covered by entry 21(a) or 39 and expires on 21 July 2021
21(c)	Lead in printing inks for the application of enamels on other than borosilicate glasses	Applies to categories 1 to 7 and 10 and expires on 21 July 2021
23	Lead in finishes of fine pitch components other than connectors with a pitch of 0,65 mm and less	May be used in spare parts for EEE placed on the market before 24 September 2010

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	<b>Exemption</b>	<b>Scope and dates of applicability</b>
24	Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors	Expires on: -21 July 2021 for categories 1-7 and 10, -21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments, -21 July 2023 for category 8 in vitro diagnostic medical devices, -21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11
25	Lead oxide in surface conduction electron emitter displays (SED) used in structural elements, notably in the seal frit and frit ring	
26	Lead oxide in the glass envelope of black light blue lamps	Expires on 1 June 2011
27	Lead alloys as solder for transducers used in high-powered (designated to operate for several hours at acoustic power levels of 125 dB SPL and above) loudspeakers	Expired on 24 September 2010
29	Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC	-21 July 2021 for categories 1-7 and 10; -21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; -21 July 2023 for category 8 in vitro diagnostic medical devices; -21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11
30	Cadmium alloys as electrical/mechanical solder joints to electrical conductors located directly on the voice coil in transducers used in high-powered loudspeakers with sound pressure levels of 100 dB (A) and more	
31	Lead in soldering materials in mercury free flat fluorescent lamps (which, e.g. are used for liquid crystal displays, design or industrial lighting)	
32	Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes	-21 July 2021 for categories 1-7 and 10, -21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments, -21 July 2023 for category 8 in vitro diagnostic medical devices, -21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11
33	Lead in solders for the soldering of thin copper wires of 100 µm diameter and less in power transformers	

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	<b>Exemption</b>	<b>Scope and dates of applicability</b>
34	Lead in cermet-based trimmer potentiometer elements	Applies to all categories; expires on: -21 July 2021 for categories 1-7 and 10, -21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments, -21 July 2023 for category 8 in vitro diagnostic medical devices, -21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.
36	Mercury used as a cathode sputtering inhibitor in DC plasma displays with a content up to 30 mg per display	Expired on 1 July 2010
37	Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body	-21 July 2021 for categories 1-7 and 10; -21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; -21 July 2023 for category 8 in vitro diagnostic medical devices; -21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11
38	Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide	
39(a)	Cadmium selenide in downshifting cadmium-based semiconductor nanocrystal quantum dots for use in display lighting applications (< 0,2 µg Cd per mm <sup>2</sup> of display screen area)	-Expires for all categories on 31 October 2019
40	Cadmium in photoresistors for analogue optocouplers applied in professional audio equipment	Expires on 31 December 2013
41	Lead in solders and termination finishes of electrical and electronic components and finishes of printed circuit boards used in ignition modules and other electrical and electronic engine control systems, which for technical reasons must be mounted directly on or in the crankcase or cylinder of hand-held combustion engines (classes SH:1, SH:2, SH:3 of Directive 97/68/EC of the European Parliament and of the Council (2))	Expires on 31 December 2018
42	Lead in bearings and bushes of diesel or gaseous fuel powered internal combustion engines applied in non-road professional use equipment: -with engine total displacement ≥ 15 litres; or -with engine total displacement < 15 litres and the engine is designed to operate in applications where the time between signal to start and full load is required to be less than 10 seconds; or regular maintenance is typically performed in a harsh and dirty outdoor environment, such as mining, construction, and agriculture applications	Applies to category 11, excluding applications covered by entry 6(c) of this Annex. Expires on 21 July 2024



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	<b>Exemption</b>	<b>Scope and dates of applicability</b>
43	<p>Bis(2-ethylhexyl) phthalate in rubber components in engine systems, designed for use in equipment that is not intended solely for consumer use and provided that no plasticised material comes into contact with human mucous membranes or into prolonged contact with human skin and the concentration value of bis(2-ethylhexyl) phthalate does not exceed:</p> <p>(a)30 % by weight of the rubber for</p> <p>(i)gasket coatings;</p> <p>(ii) solid-rubber gaskets; or</p> <p>(iii) rubber components included in assemblies of at least three components using electrical, mechanical or hydraulic energy to do work, and attached to the engine.</p> <p>(b)10 % by weight of the rubber for rubber-containing components not referred to in point (a).</p> <p>For the purposes of this entry, “prolonged contact with human skin” means continuous contact of more than 10 minutes duration or intermittent contact over a period of 30 minutes, per day.</p>	Applies to category 11 and expires on 21 July 2024.
44	<p>Lead in solder of sensors, actuators, and engine control units of combustion engines within the scope of Regulation (EU) 2016/1628 of the European Parliament and of the Council (*1), installed in equipment used at fixed positions while in operation which is designed for professionals, but also used by non-professional users</p>	Applies to category 11 and expires on 21 July 2024.
45	<p>Lead diazide, lead styphnate, lead dipicramate, orange lead (lead tetroxide), lead dioxide in electric and electronic initiators of explosives for civil (professional) use and barium chromate in long time pyrotechnic delay charges of electric initiators of explosives for civil (professional) use</p>	Applies to category 11 and expires on 20 April 2026.

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\*\*\* End of Report \*\*\*