Dated 2016-09-09



# **Technical Report**

Applicant: HAIYAN YAOHUA LIGHTING CO.,LTD

South Of Jiuqugang, Tongbei Village, Tongyuan Town, Haiyan Country, Zhejiang

Attn: Jack Xia

**Test subject:** The tested object(s) was(were) submitted and described by client as:

Product Name: LED Lamp Product Model: G125-8W



Additional Model: A55-4W, A55-6W, A55-8W, A60-4W, A60-6W, A60-8W, G45-2W, G45-4W, C35-2W, C35-4W, C35T-2W, C35T-4W, C35F-2W, C35F-4W, G80-4W, G80-6W, G80-8W, G95-4W, G95-6W, G95-8W, G125-4W, G125-6W, R50-2W, R50-4W, R63-4W, R63-6W, R80-4W, R80-6W, R80-8W, ST64-4W, ST64-6W, ST64-8W, ST58-4W, ST58-6W, ST58-6W, ST58-8W, T8-2W, T8-4W, ST26-1W, S15-4W-221MM, S15-6W-284MM, S19-7W-310MM, A55-5W, A55-7W, A60-5W, A60-7W, G80-5W, G95-5W, G95-7W, G125-5W, G125-7W, R80-5W, R80-7W, ST64-7W, ST58-5W, ST58-7W, T30-4W, T30-6W, T38-4W, T38-

6W

Test specification: 2011/65/EU (RoHS) Directive

Test with reference to EN62321-1:2013 EN62321-2:2014 EN62321-3-1:2014 EN62321-4:2014 EN62321-5:2014 EN62321-6:2015 EN62321:2009

**Test result:** Refer to the data listed in following pages

**Conclusion:** With regard to the data of tested components, the requirements of Directive

2011/65/EU (ROHS) are complied.

**Remarks:** 1. Test specify was according to client's appointment.

- 2. The result relates only to the items tested.
- 3. Samples were tested as received.
- 4. Since the client was not able to provide the sample of additional model, additional model(s) hasn't been tested, but only based on the guarantee

No extract, abridgment or abstraction from the report can be published or used to advertise a product without the written consent from TÜV SÜD Certification and Testing (China) Co., Ltd. The results contained herein apply only to the tested specimens based on the listed test specifications and not to other samples/conditions in regular production.

TÜV SÜD Certification and Testing (China) Co., Ltd. 10 Huaxia Road(M), Dongting, Wuxi Jiangsu, 214100, P. R. China

No.1999 Duhui Road Shanghai City

Tel.: +86-21-60376368

Dated 2016-09-09



China

letter(self-declaration) provided by the client. TÜV SÜD take no responsibility for any mistakes and the problems of product consistency caused by inaccurate and/or invalid information submitted by the client. The client will take the responsibility of all discrepancy and risk.

No extract, abridgment or abstraction from the report can be published or used to advertise a product without the written consent from TÜV SÜD Certification and Testing (China) Co., Ltd. The results contained herein apply only to the tested specimens based on the listed test specifications and not to other samples/conditions in regular production.

TÜV SÜD Certification and Testing (China) Co., Ltd. 10 Huaxia Road(M), Dongting, Wuxi Jiangsu, 214100, P. R. China

Tel.: +86-21-60376368

No.1999 Duhui Road Shanghai City

2016-09-09 **Dated** 



1. Order

**Date of Purchase Order** 1.1

2016-06-13

1.2 **Customer's Reference** 

**Receipt Date of Test Sample** 1.3

2016-06-16

1.4

**Date of Testing** 2016-06-16 ~ 2016-06-24

**Document submitted** 1.5

Nil

1.6

**Location of Testing**TÜV SÜD Certification and Testing (China) Co., Ltd.

No extract, abridgment or abstraction from the report can be published or used to advertise a product without the written consent from TÜV SÜD Certification and Testing (China) Co., Ltd. The results contained herein apply only to the tested specimens based on the listed test specifications and not to other samples/conditions in regular production.

TÜV SÜD Certification and Testing (China) Co., Ltd. 10 Huaxia Road(M), Dongting, Wuxi Jiangsu, 214100, P. R. China

Tel.: +86-21-60376368

No.1999 Duhui Road Shanghai City

Dated 2016-09-09



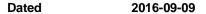
## 2. Description of the tested specimen

Sample No.	Result	Description	Photograph/Location
01	Pass	Bulb, transparent, glass	29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45
02	Pass	Tube, transparent, glass	31 32 33 34 35 36 37 38 39 40 41 42 43 44 A
03	Pass	Lampholder, silvery, metal	33 34 35 36 37
04	Pass	Solder, silvery, alloy	33 34 35 36 37

No extract, abridgment or abstraction from the report can be published or used to advertise a product without the written consent from TÜV SÜD Certification and Testing (China) Co., Ltd. The results contained herein apply only to the tested specimens based on the listed test specifications and not to other samples/conditions in regular production.

TÜV SÜD Certification and Testing (China) Co., Ltd. 10 Huaxia Road(M), Dongting, Wuxi Jiangsu, 214100, P. R. China

Tel.: +86-510-88203737 Fax: +86-510-88203636 www.tuv-sud.cn Info@tuv-sud.cn Shanghai Chemical Lab No.1999 Duhui Road Shanghai City





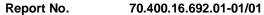
China

Sample No.	Result	Description	Photograph/Location
05	Pass	Insulation, black	33 34 35 36 37
06	Pass	Contact point, silvery, metal	33 34 35 36 37
07	Pass	Insulation, yellow	34 35 36 37 38 39 40
08	Pass	Bar, transparent, glass	34 35 36 37 38 39 40 41 42

No extract, abridgment or abstraction from the report can be published or used to advertise a product without the written consent from TÜV SÜD Certification and Testing (China) Co., Ltd. The results contained herein apply only to the tested specimens based on the listed test specifications and not to other samples/conditions in regular production.

TÜV SÜD Certification and Testing (China) Co., Ltd. 10 Huaxia Road(M), Dongting, Wuxi Jiangsu, 214100, P. R. China

Tel.: +86-510-88203737 Fax: +86-510-88203636 www.tuv-sud.cn Info@tuv-sud.cn Shanghai Chemical Lab No.1999 Duhui Road Shanghai City







China

Sample No.	Result	Description	Photograph/Location
09	Pass	Jacket, transparent, plastic	37 38 39 40 41 42 43
10	Pass	Wire, silvery, metal	37 38 39 40 41 42 43
11	Pass	Wire, silvery, metal	34 35 36 37 38 39 40 41
12	Pass	Plastic, yellow	34 35 36 37 38 39 40 41

No extract, abridgment or abstraction from the report can be published or used to advertise a product without the written consent from TÜV SÜD Certification and Testing (China) Co., Ltd. The results contained herein apply only to the tested specimens based on the listed test specifications and not to other samples/conditions in regular production.

TÜV SÜD Certification and Testing (China) Co., Ltd. 10 Huaxia Road(M), Dongting, Wuxi Jiangsu, 214100, P. R. China

Tel.: +86-510-88203737 Fax: +86-510-88203636 www.tuv-sud.cn Info@tuv-sud.cn Shanghai Chemical Lab No.1999 Duhui Road Shanghai City

Dated 2016-09-09



China

Sample No.	Result	Description	Photograph/Location
13	Pass	Bar, transparent, glass	35 36 37 38 39 40
14	Pass	Terminal, silvery, metal	35 36 37 38 39
15	Pass	PCB, white, plastic	38 39 40 41 43
16	Pass	Solder, silvery, alloy	38 39 40 41 43

No extract, abridgment or abstraction from the report can be published or used to advertise a product without the written consent from TÜV SÜD Certification and Testing (China) Co., Ltd. The results contained herein apply only to the tested specimens based on the listed test specifications and not to other samples/conditions in regular production.

TÜV SÜD Certification and Testing (China) Co., Ltd. 10 Huaxia Road(M), Dongting, Wuxi Jiangsu, 214100, P. R. China

Tel.: +86-510-88203737 Fax: +86-510-88203636 www.tuv-sud.cn Info@tuv-sud.cn Shanghai Chemical Lab No.1999 Duhui Road Shanghai City

Dated 2016-09-09



China

Sample No.	Result	Description	Photograph/Location
17	Pass	Heating shrinkable tube, black, plastic	37 38 39 40 41 42 43
18	Pass	IC, black, plastic	33 34 35 36 37 38 39
19	Pass	Pin, silvery, metal	33 34 35 36 37 38 39
20	Pass	Resistor, grey	33 34 35 36 37 38 39

No extract, abridgment or abstraction from the report can be published or used to advertise a product without the written consent from TÜV SÜD Certification and Testing (China) Co., Ltd. The results contained herein apply only to the tested specimens based on the listed test specifications and not to other samples/conditions in regular production.

TÜV SÜD Certification and Testing (China) Co., Ltd. 10 Huaxia Road(M), Dongting, Wuxi Jiangsu, 214100, P. R. China

Tel.: +86-510-88203737 Fax: +86-510-88203636 www.tuv-sud.cn Info@tuv-sud.cn Shanghai Chemical Lab No.1999 Duhui Road Shanghai City

Dated 2016-09-09



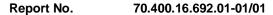
China

Sample No.	Result	Description	Photograph/Location
21	Pass	Pin, silvery, metal	33 34 35 36 37 38 39
22	Pass	Chip capacitor, brown	33 34 35 36 37 38 39
23	Pass	Capacitor jacket, black, plastic	3 34 35 36 37 48 39
24	Pass	Potting compound, black, plastic	3 34 35 36 37 48 39

No extract, abridgment or abstraction from the report can be published or used to advertise a product without the written consent from TÜV SÜD Certification and Testing (China) Co., Ltd. The results contained herein apply only to the tested specimens based on the listed test specifications and not to other samples/conditions in regular production.

TÜV SÜD Certification and Testing (China) Co., Ltd. 10 Huaxia Road(M), Dongting, Wuxi Jiangsu, 214100, P. R. China

Tel.: +86-510-88203737 Fax: +86-510-88203636 www.tuv-sud.cn Info@tuv-sud.cn Shanghai Chemical Lab No.1999 Duhui Road Shanghai City



Dated 2016-09-09



China

Sample No.	Result	Description	Photograph/Location
25	Pass	Pin, silvery, metal	3 34 35 36 37 6 39
26	Pass	Capacitor enclosure, silvery, aluminium alloy	33 34 35 36 37 38 3
27	Pass	Inner film, brown, plastic	33 34 35 36 37 38 39

No extract, abridgment or abstraction from the report can be published or used to advertise a product without the written consent from TÜV SÜD Certification and Testing (China) Co., Ltd. The results contained herein apply only to the tested specimens based on the listed test specifications and not to other samples/conditions in regular production.

TÜV SÜD Certification and Testing (China) Co., Ltd. 10 Huaxia Road(M), Dongting, Wuxi Jiangsu, 214100, P. R. China

Tel.: +86-510-88203737 Fax: +86-510-88203636 www.tuv-sud.cn

Info@tuv-sud.cn

Shanghai Chemical Lab No.1999 Duhui Road Shanghai City

Dated 2016-09-09



### 3. Test Results

3.1 ED-XRF Spectrometer test for total Cadmium, Chromium, Mercury, Lead and Bromine according to EN62321-3-1:2014

### Criteria of XRF test results

#### Pass:

Because of the nature of the testing procedure (caused by the uncertainty of the used, XRF method), a definite pass is given only if the XRF test score is less than 60% of the respective ROHS limit.

### Inconclusive:

If the XRF test score is between 60% and 150% of the respective ROHS limit, further chemical test on the sample is required.

### Fail:

A definite FAIL is given if the XRF test score is above 150% of the respective ROHS limit

### \*Explanation for ROHS limit

Regarding Chromium and Bromine, the XRF test score shows the total Chromium and the total Bromine, but the ROHS limit of 1000 mg/kg, according to the directive 2011/65/EU, is only for Hexavalent Chromium and Brominated Flame Retardants. Therefore, if the XRF test result for the total Chromium and the total Bromine is more than 600 mg/kg and 300 mg/kg respectively, further analytical tests are necessary to find out the exact amount of Hexavalent Chromium and Brominated Flame Retardants

No extract, abridgment or abstraction from the report can be published or used to advertise a product without the written consent from TÜV SÜD Certification and Testing (China) Co., Ltd. The results contained herein apply only to the tested specimens based on the listed test specifications and not to other samples/conditions in regular production.

TÜV SÜD Certification and Testing (China) Co., Ltd. 10 Huaxia Road(M), Dongting, Wuxi Jiangsu, 214100, P. R. China

Tel.: +86-21-60376368

Shanghai Chemical Lab

No.1999 Duhui Road

Shanghai City

Dated 2016-09-09



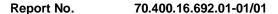
China

Compounds	Total Cadmium [mg/kg]	Total Lead [mg/kg]	Total Mercury [mg/kg]	Total Chromium [mg/kg]	Total Bromine [mg/kg]	OVERALL RESULT
ROHS Limit	100	1000	1000	1000	1000	
Pass result	< 60	< 600	< 600	< 600	< 300	
Inconclusive result	60 - 150	600 - 1500	600 - 1500	> 600	> 300	
Fail result	> 150	> 1500	> 1500			
01	<30	417	<30	<30	<30	Pass
02	<30	484	<30	<30	<30	Pass
03	<30	<30	<30	<30		Pass
04	<30	<30	<30	<30		Pass
05	<30	375	<30	385	<30	Pass
06	<30	69	<30	<30		Pass
07	<30	41	<30	<30	<30	Pass
08	<30	356	<30	<30	<30	Pass
09	<30	<30	<30	<30	<30	Pass
10	<30	<30	<30	<30		Pass
11	<30	63	<30	103		Pass
12	<30	<30	<30	<30	<30	Pass
13	<30	<30	<30	<30	<30	Pass
14	<30	<30	<30	<30		Pass
15	<30	<30	<30	<30	39011	Inconclusive
16	<30	78	<30	41		Pass
17	<30	<30	<30	<30	<30	Pass
18	<30	245	<30	<30	4059	Inconclusive
19	<30	<30	<30	<30		Pass
20	<30	<30	<30	68	<30	Pass
21	<30	<30	<30	<30		Pass
22	<30	46	<30	<30	739	Inconclusive
23	<30	<30	<30	<30	<30	Pass
24	<30	32	<30	<30	<30	Pass
25	<30	<30	<30	<30		Pass
26	<30	<30	<30	<30		Pass

No extract, abridgment or abstraction from the report can be published or used to advertise a product without the written consent from TÜV SÜD Certification and Testing (China) Co., Ltd. The results contained herein apply only to the tested specimens based on the listed test specifications and not to other samples/conditions in regular production.

TÜV SÜD Certification and Testing (China) Co., Ltd. 10 Huaxia Road(M), Dongting, Wuxi Jiangsu, 214100, P. R. China

Tel.: +86-510-88203737 Fax: +86-510-88203636 www.tuv-sud.cn Info@tuv-sud.cn Shanghai Chemical Lab No.1999 Duhui Road Shanghai City



**Dated** 2016-09-09



China

Compounds	Total Cadmium [mg/kg]	<b>Total</b> <b>Lead</b> [mg/kg]	<b>Total</b> <b>Mercury</b> [mg/kg]	Total Chromium [mg/kg]	Total Bromine [mg/kg]	OVERALL RESULT
ROHS Limit	100	1000	1000	1000	1000	
Pass result	< 60	< 600	< 600	< 600	< 300	
Inconclusive result	60 - 150	600 - 1500	600 - 1500	> 600	> 300	
Fail result	> 150	> 1500	> 1500			
27	<30	<30	<30	<30	<30	Pass

## Remark:

- "<" means "less than".
- "mg/kg" denotes "milligram per kilogram".
- With regard to the stoichiometry of Br in PBBs and PBDEs, the lower limit for Br is set at 300 mg/kg. "--" means the substance for this sample are not tested.

No extract, abridgment or abstraction from the report can be published or used to advertise a product without the written consent from TÜV SÜD Certification and Testing (China) Co., Ltd. The results contained herein apply only to the tested specimens based on the listed test specifications and not to other samples/conditions in regular production.

TÜV SÜD Certification and Testing (China) Co., Ltd. 10 Huaxia Road(M), Dongting, Wuxi Jiangsu, 214100, P. R. China

Tel.: +86-21-60376368

Shanghai Chemical Lab

No.1999 Duhui Road Shanghai City

Dated 2016-09-09

# SUD

### 3.2 Wet chemical test

# Main instruments used for wet chemical test

Testing Target	Instrument	Method
Lead & Cadmium	ICP-OES	EN 62321-5:2014
Mercury	ICP-OES	EN 62321-4:2014
Hexavalent Chromium	UV-Vis	EN 62321:2009
PBBs & PBDEs	GC/MS	EN62321-6:2015

## Criteria of chemical test results

### Pass:

A definite Pass is given If the chemical test result meets the requirements of ROHS.

## Fail:

A definite Fail is given If the chemical test result exceeds the full respective ROHS limit.

No extract, abridgment or abstraction from the report can be published or used to advertise a product without the written consent from TÜV SÜD Certification and Testing (China) Co., Ltd. The results contained herein apply only to the tested specimens based on the listed test specifications and not to other samples/conditions in regular production.

TÜV SÜD Certification and Testing (China) Co., Ltd. 10 Huaxia Road(M), Dongting, Wuxi Jiangsu, 214100, P. R. China

Tel.: +86-21-60376368

Shanghai Chemical Lab

No.1999 Duhui Road

Shanghai City

Dated 2016-09-09



China

Test Sample	Cadmium [mg/kg]	Lead [mg/kg]	Mercury [mg/kg]	Chromium (VI) [mg/kg]	PBBs (Sum) [mg/kg]	PBDEs (Sum) [mg/kg]	OVERALL RESULT
Limit	100	1000	1000	1000	1000	1000	
15					<50	<50	Pass
18					<50	<50	Pass
22					<50	<50	Pass

### Remark:

- 1. ND = Not detected (Detected limit of Cd :2mg/kg;Pb, Hg, and Cr(VI):5mg/kg; PBBs and PBDEs: 5mg/kg)
- 2. "mg/kg" denotes "milligram per kilogram".
- 3. "--" means the substance for this sample are not tested.

# TÜV SÜD Certification and Testing (China) Co., Ltd.

Prepared by:



Mr. Jialong HAN

Checked by:



Mr. Feng ZHANG

No extract, abridgment or abstraction from the report can be published or used to advertise a product without the written consent from TÜV SÜD Certification and Testing (China) Co., Ltd. The results contained herein apply only to the tested specimens based on the listed test specifications and not to other samples/conditions in regular production.

TÜV SÜD Certification and Testing (China) Co., Ltd. 10 Huaxia Road(M), Dongting, Wuxi Jiangsu, 214100, P. R. China

No.1999 Duhui Road Shanghai City

Tel.: +86-21-60376368

Dated 2016-09-09

## **APPENDIX I: Official Exemption Items**



Below items are quoted based on Directives of 2011/65/EU and its valid Amending Directives.

	Exemption	Scope and dates of applicability
1	Mercury in single capped (compact) fluorescent lamps not exceeding (per burner)	
1(a)	For general lighting purpose< 30 W:5mg	Expires on 31 December 2011; 3,5mg maybe used per burner after 31 December 2011 until 31 December 2012; 2.5mg shall be used per burner after 31 December 2012
1(b)	For general lighting purposes ≥ 30 W and < 50 W:5mg	Expires on 31 December 2011; 3,5mg maybe used per burner after 31 December 2011 until 31 December 2012; 2.5mg shall be used per burner after 31 December 2012
1(c)	For general lighting purposes ≥ 50 W and < 150 W:5mg	
1(d)	For general lighting purpose ≥ 30 W and ≥ 150 W:15mg	
1(e)	For general lighting purpose with circular or square structural shape san tube diameter <17mm	No limitation of use until 31 December 2011; 7 mg may be used per burner after 31 December 2011
1(f)	For special purposes:5mg	
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): 5mg	Expires on 31 December 2011; 4mg may be used per lamp after 31 December 2011
2(a)(2)	Tri-band phosphor with normal lifetime and a tube diameter ≥ 9 mm and ≤ 17mm (e.g. T5): 5mg	Expires on 31 December 2011; 3mg 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 ≤ 28mm (e.g. T8): 5mg	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 >28mm (e.g. T12): 5mg	Expires on 31 December 2011; 3,5 mg may be used per lamp after 31 December 2011
2(a)(5)	Tri-band phosphor with long lifetime(≥25 000h):8mg	Expires on 13 December 2011;5mg 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): 10mg	Expires on 13 April 2012

No extract, abridgment or abstraction from the report can be published or used to advertise a product without the written consent from TÜV SÜD Certification and Testing (China) Co., Ltd. The results contained herein apply only to the tested specimens based on the listed test specifications and not to other samples/conditions in regular production.

TÜV SÜD Certification and Testing (China) Co., Ltd. 10 Huaxia Road(M), Dongting, Wuxi Jiangsu, 214100, P. R. China

Tel.: +86-510-88203737 Fax: +86-510-88203636 www.tuv-sud.cn Info@tuv-sud.cn Shanghai Chemical Lab No.1999 Duhui Road Shanghai City

Dated 2016-09-09



China

Exemption		Scope and dates of applicability	
2(b)(2)	Non-linear halophosphate lamps (all diameters):15mg	Expires on 13 April 2016	
2(b)(3)	Non-linear tri-band phosphor lamps with tube diameter >17mm (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)		
3(a)	Short length(≤500mm)	No limitation of use until 31 December 2011; 3,5 mg may be used per lamp after 31 December 2011	
3(b)	Medium length (> 500mm and ≤ 1 500mm)	No limitation of use until 31 December 2011; 5 mg may be used per lamp after 31 December 2011	
3(c)	Long length (> 1 500mm)	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 Ra >60;		
4(b)-l	P≤155 W	No limitation of use until 31 December 2011; 30mg may be used per burner after 31 December 2011	
4(b)-II	155 W < P ≤ 405 W	No limitation of use until 31 December 2011; 40mg may be used per burner after 31 December 2011	
4(b)-III	P > 405 W	No limitation of use until 31 December 2011; 40mg 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≤155 W	No limitation of use until 31 December 2011; 30mg may be used per burner after 31 December 2011	
4(c)-II	155 W < P ≤ 405 W	No limitation of use until 31 December 2011; 40mg may be used per burner after 31 December 2011	
4(c)-III	P > 405 W	No limitation of use until 31 December 2011; 40mg may be used per burner after 31 December 2011	
4(d)	Mercury in High Pressure Mercury (vapour) lamps (HPMV)	Expires on 13 April 2015	

No extract, abridgment or abstraction from the report can be published or used to advertise a product without the written consent from TÜV SÜD Certification and Testing (China) Co., Ltd. The results contained herein apply only to the tested specimens based on the listed test specifications and not to other samples/conditions in regular production.

TÜV SÜD Certification and Testing (China) Co., Ltd. 10 Huaxia Road(M), Dongting, Wuxi Jiangsu, 214100, P. R. China

Tel.: +86-510-88203737 Fax: +86-510-88203636 www.tuv-sud.cn Info@tuv-sud.cn Shanghai Chemical Lab No.1999 Duhui Road Shanghai City

Dated 2016-09-09



China

Exemption		Scope and dates of applicability
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 1 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	
6(a)	Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0,35 % lead by weight	
6(b)	Lead as an alloying element in aluminium containing up to 0,4 % lead by weight	
6(c)	Copper alloy containing up to 4 % lead by weight	
7(a)	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)	
7(b)	Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications	
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	
7(c)-II	Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher	
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 being part of integrated circuits or discrete semiconductors'	
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

No extract, abridgment or abstraction from the report can be published or used to advertise a product without the written consent from TÜV SÜD Certification and Testing (China) Co., Ltd. The results contained herein apply only to the tested specimens based on the listed test specifications and not to other samples/conditions in regular production.

TÜV SÜD Certification and Testing (China) Co., Ltd. 10 Huaxia Road(M), Dongting, Wuxi Jiangsu, 214100, P. R. China

Tel.: +86-510-88203737 Fax: +86-510-88203636 www.tuv-sud.cn

Info@tuv-sud.cn

Shanghai Chemical Lab No.1999 Duhui Road Shanghai City

Dated 2016-09-09



China

Exemption		Scope and dates of applicability
8(b)	Cadmium and its compounds in electrical contacts	
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	
9(b)	Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) applications	
11(a)	Lead used in C-press compliant pin connector systems	May be used in spare parts for EEE placed on the market before 24 September 2010
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	
13(b)	Cadmium and lead in filter glasses and glasses 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	Expires 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	
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	
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) <sub>2</sub> MgSi <sub>2</sub> O <sub>7</sub> :Pb)	Expires 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(BaSi 2O5:Pb)	
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

No extract, abridgment or abstraction from the report can be published or used to advertise a product without the written consent from TÜV SÜD Certification and Testing (China) Co., Ltd. The results contained herein apply only to the tested specimens based on the listed test specifications and not to other samples/conditions in regular production.

TÜV SÜD Certification and Testing (China) Co., Ltd. 10 Huaxia Road(M), Dongting, Wuxi Jiangsu, 214100, P. R. China

Tel.: +86-510-88203737 Fax: +86-510-88203636 www.tuv-sud.cn

Info@tuv-sud.cn

Shanghai Chemical Lab No.1999 Duhui Road Shanghai City

Dated 2016-09-09



China

Exemption		Scope and dates of applicability
21	Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses	
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
24	Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors	
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 ( 1 )	
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	
33	Lead in solders for the soldering of thin copper wires of 100 um diameter and less in power transformers	
34	Lead in cermet-based trimmer potentiometer elements	
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	
38	Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide	
39	Cadmium in colour converting II-VI LEDs (< 10 ug Cd per mm 2 of light-emitting area) for use in solid state illumination or display systems	Expires on 1 July 2014
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	Expires on 1 December 2018

No extract, abridgment or abstraction from the report can be published or used to advertise a product without the written consent from TÜV SÜD Certification and Testing (China) Co., Ltd. The results contained herein apply only to the tested specimens based on the listed test specifications and not to other samples/conditions in regular production.

TÜV SÜD Certification and Testing (China) Co., Ltd. 10 Huaxia Road(M), Dongting, Wuxi Jiangsu, 214100, P. R. China

Tel.: +86-510-88203737 Fax: +86-510-88203636 www.tuv-sud.cn Info@tuv-sud.cn Shanghai Chemical Lab No.1999 Duhui Road Shanghai City

Dated 2016-09-09



China

Exemption	Scope and dates of applicability
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.	

-- END OF REPORT--

No extract, abridgment or abstraction from the report can be published or used to advertise a product without the written consent from TÜV SÜD Certification and Testing (China) Co., Ltd. The results contained herein apply only to the tested specimens based on the listed test specifications and not to other samples/conditions in regular production.

TÜV SÜD Certification and Testing (China) Co., Ltd. 10 Huaxia Road(M), Dongting, Wuxi Jiangsu, 214100, P. R. China

Tel.: +86-510-88203737 Fax: +86-510-88203636 www.tuv-sud.cn Info@tuv-sud.cn Shanghai Chemical Lab No.1999 Duhui Road Shanghai City