Declaration of ROHS Compliance

We, Taoglas Ltd., hereby declare that all our products manufactured from the 13th of February 2018 are in full compliance with EU Directive 2015/863/EU, with respect to the following substances:

1) Lead (Pb),
2) Mercury (Hg),
3) Cadmium (Cd),
4) Hexavalent chromium (Cr (VI)),
5) Polybrominated biphenyls (PBB)
6) Polybrominated diphenyl ethers (PBDE)
7) Bis(2-ethylhexyl) phthalate (DEHP)
8) Butyl benzyl phthalate (BBP)
9) Dibutyl phthalate (DBP)
10) Diisobutyl phthalate (DIBP)

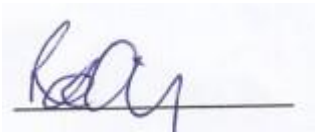
Lead free soldering was implemented in all or our subcontractors plants since the 1st of January 2006. Lead is present in ceramic antennas but is exempt under the RoHS directive (2015/863/EU) (see exemption No.7). Ceramics are exempt as the lead is chemically bound and totally inert. The only way for it to escape or leach into the surroundings is for it to be heated to temperatures exceeding 600C.

Compliance is evidenced by written declaration from our suppliers, assuring that any potential trace contamination levels of the substances listed above are below the maximum level set by EU 2015/863/EU, or are exempt due to their application.

The products supplied by Taoglas Limited meet the requirements of EU 2015/863/EU; however, some assemblies are customized to client specifications. Addition of specialized, customer-specified materials or processes which do not meet the requirements of EU 2015/866/EU may negate RoHS compliance of the assembly. To guarantee compliance of the assembly, the need for compliant product must be communicated to Taoglas in written form.

This declaration is issued based on our current level of knowledge, and covers all products. Part numbers will remain the same. Since conditions of use are outside our control, Taoglas Limited makes no warranties, express or implied, and assumes no liability in connection with the use of this information

Yours sincerely,



Ronan Quinlan
Joint Managing Director

ROHS Exemption List

No	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 2011/12/31; 3.5mgmaybeusedperburnerafter 2011/12/31 until 2012/12/31; 2.5mgshallbeusedperburnerafter 2012/12/31
1(b)	For general lighting purposes ≥ 30 W and < 50 W：5 mg	Expires on 2011/12/31; 3.5mgmaybeusedperburnerafter 2011/12/31
1(c)	For general lighting purposes ≥ 50 W and < 150 W：5 mg	
1(d)	For general lighting purposes ≥ 150 W：15 mg	
1(e)	For general lighting purposes with circular or square structural shape and tube diameter ≤ 17 mm	No limitation of use until 2011/12/31; 7mgmaybeusedperburnerafter 2011/12/31
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 2017/12/31
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 2011/12/31; 4mgmaybeusedperlampafter 2011/12/31
2(a)(2)	Tri-band phosphor with normal lifetime and a tube diameter ≥ 9 mm and ≤ 17 mm (e.g. T5)：5 mg	Expires on 2011/12/31; 3mgmaybeusedperlampafter 2011/12/31
2(a)(3)	Tri-band phosphor with normal lifetime and a tube diameter > 17 mm and ≤ 28 mm (e.g. T8)：5 mg	Expires on 2011/12/31; 3.5mgmaybeusedperlampafter 2011/12/31
2(a)(4)	Tri-band phosphor with normal lifetime and a tube diameter > 28 mm (e.g. T12)：5 mg	Expires on 2012/12/31; 3.5mgmaybeusedperlampafter 2012/12/31
2(a)(5)	Tri-band phosphor with long lifetime (≥ 25 000 h)：8 mg	Expires on 2011/12/31; 5mgmaybeusedperlampafter 2011/12/31
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 2012/4/13
2(b)(2)	Non-linear halophosphate lamps (all diameters)：15 mg	Expires on 2016/4/13
2(b)(3)	Non-linear tri-band phosphor lamps with tube diameter > 17 mm (e.g. T9)	No limitation of use until 2011/12/31; 15 mg may be used per lamp after 2011/12/31
2(b)(4)	Lamps for other general lighting and special purposes (e.g. induction lamps)	No limitation of use until 2011/12/31; 15 mg may be used per lamp after 2011/12/31
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 (≤ 500 mm)	No limitation of use until 2011/12/31; 3.5 mg may be used per lamp after 2011/12/31
3(b)	Medium length (> 500 mm and ≤ 1 500 mm)	No limitation of use until 2011/12/31; 5 mg may be used per lamp after 2011/12/31

No	Exemption	Scope and dates of applicability
3(c)	Long length (> 1 500 mm)	No limitation of use until 2011/12/31; 13 mg may be used per lamp after 2011/12/31
4(a)	Mercury in other low pressure discharge lamps (per lamp)	No limitation of use until 2011/12/31; 15 mg may be used per lamp after 2011/12/31
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)-I	P ≤ 155 W	No limitation of use until 2011/12/31; 30 mg may be used per burner after 2011/12/31
4(b)-II	155 W < P ≤ 405 W	No limitation of use until 2011/12/31; 40 mg may be used per burner after 2011/12/31
4(b)-III	P > 405 W	No limitation of use until 2011/12/31; 40 mg may be used per burner after 2011/12/31
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 2011/12/31; 25 mg may be used per burner after 2011/12/31
4(c)-II	155 W < P ≤ 405 W	No limitation of use until 2011/12/31; 30 mg may be used per burner after 2011/12/31
4(c)-III	P > 405 W	No limitation of use until 2011/12/31; 40 mg may be used per burner after 2011/12/31
4(d)	Mercury in High Pressure Mercury (vapour) lamps (HPMV)	Expires on 2015/4/13
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: 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; 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 2018/12/31
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 galvanised 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	

No	Exemption	Scope and dates of applicability
	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 2013/1/1 and After that date may be used in spare parts for EEE placed on the market before 2013/1/1
7(c)-IV	Lead in PZT based dielectric ceramic materials for capacitors which are part of integrated circuits or discrete semiconductors.	Expires on 2016/7/21
8(a)	Cadmium and its compounds in one shot pellet type thermal cut-offs	Expires on 2012/1/1 and After that date may be used in spare parts for EEE placed on the market before 2012/1/1
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	For Cat. 8 & 9: 21 July 2021; For Sub-Cat. 8 in-vitro: 21 July 2023; For Sub-Cat. 9 industrial / Cat. 11: 21 July 2024
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	For Cat. 1: 21 July 2019
11(a)	Lead used in C-press compliant pin connector systems	May be used in spare parts for EEE placed on the market before 2010/9/24
11(b)	Lead used in other than C-press compliant pin connector systems	Expires on 2013/1/1 and After that date may be used in spare parts for EEE placed on the market before 2013/1/1
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 2010/9/24
13(a)	Lead in white glasses used for optical applications	For other than below Cat.: 21 July 2021; For Sub-Cat. 8 in-vitro: 21 July 2023; For Sub-Cat. 9 industrial / Cat. 11: 21 July 2024
13(b)	Cadmium and lead in filter glasses and glasses used for reflectance standards	For Cat. 8 & 9: 21 July 2021; For Sub-Cat. 8 in-vitro: 21 July 2023; For Sub-Cat. 9 industrial: 21 July 2024
13(b)-(I)	Lead in ion coloured optical filter glass types	For Cat. 1 to 7 & 10: 21 July 2021
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 2011/1/1 and After that date may be used in spare parts for EEE placed on the market before 2011/1/

No	Exemption	Scope and dates of applicability
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 2013/9/1
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)2 MgSi2O7:Pb)	Expired on 2011/1/1
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)	
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 2011/6/1
20	Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCDs)	Expires on 2011/6/1
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 2010/9/24
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 2011/6/1
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 2010/9/24
29	Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC	
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 µm 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 2010/7/1
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 µg Cd per mm2 of light-emitting area) for use in solid state illumination or display systems	Expires on 2014/7/1
40	Cadmium in photoresistors for analogue opto couplers applied in professional audio equipment	Expires on 2013/12/31
41	lead in solders and termination finishes of electrical and electronic components and finishes of printed circuit boards	Expires on 2018/12/31

No	Exemption	Scope and dates of applicability
	used in ignition modules and other electrical and electronic engine control systems.	