

Rinnai Chemical Substance Policy

Ver. 4.1

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Rinnai Corporation



Rinnai

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Related documents for this policy is on Rinnai Website.

URL: https://www.rinnai.co.jp/corp/green_procurement/

1. Objective

The objective Rinnai Chemical Substance Policy is to achieve compliance of Rinnai-group (hereafter, Rinnai) supplied products with regulations, by informing suppliers about the chemical substance restricted due to its environment or human health effects.

In this policy, the chemical substance refers to the substance present in or released from items delivered to Rinnai (hereafter, present substance).

This policy is an appendix of Rinnai Green Procurement Standards (hereafter, E-Procurement Standards).

2. Definition of term

Term	Definition
Substance of concern	Chemical substances classified by Rinnai as Prohibited substance and Reporting substance.
Prohibited substance	Substance that shall not be present in or released from delivered items above the threshold value. Exempted use defined in this policy or any regulations may apply. The substance is numbered with "RS – sequential number".
Reporting substance	Substance that shall be managed its amount if it is intentionally applied to delivered items and present above the threshold value. The substance is numbered with "RS – sequential number".
Threshold value	Defined for the amount of Substance of concern present, or released.
Concentration	Ratio of single Substance of concern present in homogeneous material.
Homogeneous material	Materials that cannot be separated mechanically.
Intentional-use	Application of the substance to delivered items or its component for manufacturing purposes.
Exempted use number	Identification number of the exempted use defined by RoHS directive or Rinnai.

3. Substance of concern¹

Prohibited substance

No.	Substance group	Synonym	Threshold value	Ex. ²
PS1	Cadmium and its compounds	-	≤ 100ppm as Cd *Battery: 20ppm by its weight	Y
PS2	Chromium(VI) compounds	-	≤ 1000ppm as Cr+6	Y
PS3	Lead and its compounds	-	≤ 1000ppm as Pb	Y
PS4	Mercury and its compounds	-	≤ 1000ppm as Hg *Battery: 5ppm by its weight	Y
PS5	Bis(tributyltin)oxide	TBTO	No intentional-use	-
PS6	Tri-substituted organostannic compounds(incl. TBTO)	-	≤ 1000ppm as Tin	-
PS7	Dibutyltin compounds	DBT	≤ 1000ppm as Tin	-
PS8	Diocyltin compounds	DOT	≤ 1000ppm as Tin	Y
PS9	Short chain chlorinated paraffins	SCCP	No intentional-use If not intentional, ≤ 1500ppm	-
PS10	Polychlorinated naphthalenes (1 or more chlorine atoms)	PCN	No intentional-use	-
PS11	Polychlorinated biphenyls	PCB	No intentional-use	-
PS12	Polychlorinated terphenyls	PCT	No intentional-use If not intentional, ≤ 50ppm	-
PS13	Polybrominated biphenyls	PBB	No intentional-use If not intentional, ≤ 1000ppm	-
PS14	Polybrominated diphenyl ethers	PBDE	No intentional-use If not intentional, ≤ 1000ppm	-
PS15	Formaldehyde	-	< 0.005mg/m ² ·h (Satisfy JIS or JAS F-Four-Star standard)	Y
PS16	Perfluorooctane sulfonic acid and its derivatives	PFOS	No intentional-use If not intentional, ≤ 1000ppm *Textile/surface finishing: ≤ 1 μg/m ²	-
PS17	Asbestos	-	No intentional-use	-
PS18	Azocolourants and azodyes releasing aromatic amines	AZO	No intentional-use If not intentional, ≤ 30ppm as aromatic amines	Y
PS19	Ozone depleting substances	-	No intentional-use	-
PS20	2-benzotriazol-2-yl-4,6-di-tert-butylphenol	-	No intentional-use	-
PS21	Dimethylfumarate	DMF	≤ 0.1ppm	-
PS22	Polycyclic aromatic hydrocarbons	PAH	≤ 1ppm	Y
PS23	Hexabromocyclododecanes	HBCD	No intentional-use If not intentional, ≤ 100ppm	-
PS24	Bis(2-ethylhexyl) phthalate	DEHP	Sum of 4 phthalates ≤ 1000ppm	Y
PS25	Benzyl butyl phthalate	BBP	Sum of 4 phthalates ≤ 1000ppm	Y
PS26	Dibutyl phthalate	DBP	Sum of 4 phthalates ≤ 1000ppm	Y
PS27	Diisobutyl phthalate	DIBP	Sum of 4 phthalates ≤ 1000ppm	Y
PS28	Chlorinated phosphate ester flame retardants	-	≤ 1000ppm	-
PS29	Hydrofluorocarbons	HFC	No intentional-use	Y
PS30	Perfluorooctanoic acid, its salts and related substances	PFOA	PFOA(incl. its salts) ≤ 25ppb Combination of one or multi. PFOA related substances ≤ 1000ppb	Y

Reporting Substance

No.	Substance group	Synonym	Threshold value	Ex.
RS**	REACH Substances of very high concern	SVHC	Intentional-use and ≤ 1000ppm	-

¹ Indicative list available in the related documents. URL: https://www.rinnai.co.jp/corp/green_procurement/

² If exempted use exist. See Art. 4 Exempted use for Prohibited substance.

4. Exempted use for Prohibited substance³

4.1. Exempted use defined by RoHS

Rinnai product falls in the category of electrical and electric equipment defined by RoHS as below. Supplier shall not deliver exempted items to Rinnai 6 months before the due date set by the regulation.

Category of Rinnai Product

Class	Product	Category
Water heating appliance	Hybrid water heating system	1
	Gas water heater	
	Bathroom TV	4
Cooking appliance	Built-in hob	1
	Table cooker	
	Dishwasher	
	Oven	
Air-conditioning appliance	Gas fan heater	1
	Forced flue gas heater	
	Gas fireplace	
	Bathroom heater	
	Gas clothes dryer	
-	Other product not listed above	11

³ See the related documents for exempted use highly related to Rinnai.
URL: https://www.rinnai.co.jp/corp/green_procurement/

4.1.1. Cadmium and its compound (PS1)

Exempted use No.	Exempted use	Scope and dates of applicability
8(a)	Cadmium and its compounds in one shot pellet type thermal cut-offs	Spare parts for EEE placed on the market before 1 January 2012
8(b)	Cadmium and its compounds in electrical contacts	-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(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	21 July 2021 for categories 1 to 7 and 10
13(b)	Cadmium and lead in filter glasses and glasses used for reflectance standards	-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)-(II)	Cadmium in striking optical filter glass types; excluding applications falling under point 39 of this Annex	21 July 2021 for categories 1 to 7 and 10
13(b)-(III)	Cadmium and lead in glazes used for reflectance standards	21 July 2021 for categories 1 to 7 and 10
21	Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses	-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	21 July 2021 for categories 1 to 7 and 10 except applications covered by entry 21(b) or entry 39
21(b)	Cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses	21 July 2021 for categories 1 to 7 and 10 except applications covered by entry 21(a) or 39
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	21 July 2016
38	Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide	21 July 2016
39	Cadmium in colour converting II-VI LEDs ($< 10 \mu\text{g Cd per mm}^2$ of light-emitting area) for use in solid state illumination or display systems	1 July 2014
39(a)	Cadmium selenide in downshifting cadmium-based semiconductor nanocrystal quantum dots for use in display lighting applications ($< 0,2 \mu\text{g Cd per mm}^2$ of display screen area)	31 October 2019
40	Cadmium in photoresistors for analogue optocouplers applied in professional audio equipment	31 December 2013

4.1.2. Chromium(VI) compounds (PS2)

Exempted use No.	Exempted use	Scope and dates of applicability
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	Under review

4.1.3. Lead and its compounds (PS3)

Exempted use No.	Exempted use	Scope and dates of applicability
5(a)	Lead in glass of cathode ray tubes	21 July 2016
5(b)	Lead in glass of fluorescent tubes not exceeding 0,2 % by weight	Under review
6(a)	Lead as an alloying element in steel for machining purposes and in galvanised steel containing up to 0,35 % lead by weight	-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	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	-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	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	18 May 2021 for categories 1-7 and 10.
6(c)	Copper alloy containing up to 4 % lead by weight	-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)	-21 July 2021 for categories 1-7 and 10 (except applications covered by point 24) -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(b)	Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications	21 July 2016
7(c)-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectric devices, or in a glass or ceramic matrix compound	-21 July 2021 for categories 1-7 and 10 (except applications covered under point 34) -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

Exempted use No.	Exempted use	Scope and dates of applicability
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. -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	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.
9(b)	Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) applications	-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	21 July 2019 for category 1
11(a)	Lead used in C-press compliant pin connector systems	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	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	Spare parts for EEE placed on the market before 24 September 2010
13(a)	Lead in white glasses used for optical applications	-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	-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	21 July 2021 for categories 1 to 7 and 10
13(b)-(III)	Cadmium and lead in glazes used for reflectance standards	21 July 2021 for categories 1 to 7 and 10
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	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	-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

Exempted use No.	Exempted use	Scope and dates of applicability
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 ² or larger in any semiconductor technology node; —stacked die packages with die of 300 mm ² or larger, or silicon interposers of 300 mm ² or larger.	21 July 2021 for categories 1 to 7 and 10
16	Lead in linear incandescent lamps with silicate coated tubes	1 September 2013
17	Lead halide as radiant agent in high intensity discharge (HID) lamps used for professional reprography applications	21 July 2016
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 MgSi ₂ O ₇ :Pb)	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 ₂ O ₅ :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 (BaSi ₂ O ₅ :Pb) when used in medical phototherapy equipment	21 July 2021 for categories 5 and 8, excluding applications covered by entry 34 of Annex IV
19	Lead with PbBiSn-Hg and PblnSn-Hg in specific compositions as main amalgam and with PbSn-Hg as auxiliary amalgam in very compact energy saving lamps (ESL)	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)	1 June 2011
21	Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses	-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(c)	Lead in printing inks for the application of enamels on other than borosilicate glasses	21 July 2021 for categories 1 to 7 and 10
23	Lead in finishes of fine pitch components other than connectors with a pitch of 0,65 mm and less	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	-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	21 July 2016
26	Lead oxide in the glass envelope of black light blue lamps	1 June 2011
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

Exempted use No.	Exempted use	Scope and dates of applicability
31	Lead in soldering materials in mercury free flat fluorescent lamps (which, e.g. are used for liquid crystal displays, design or industrial lighting)	21 July 2016
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	21 July 2016
34	Lead in cermet-based trimmer potentiometer elements	-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
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
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)	Under review
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	21 July 2024 for category 11, excluding applications covered by entry 6(c)

4.1.4. Mercury and its compounds (PS4)

Exempted use No.	Exempted use	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	Under review
1(b)	For general lighting purposes ≥ 30 W and < 50 W: 5 mg	Under review
1(c)	For general lighting purposes ≥ 50 W and < 150 W: 5 mg	Under review
1(d)	For general lighting purposes ≥ 150 W: 15 mg	Under review
1(e)	For general lighting purposes with circular or square structural shape and tube diameter ≤ 17 mm	Under review
1(f)	For special purposes: 5 mg	Under review
1(g)	For general lighting purposes < 30 W with a lifetime equal or above 20 000 h: 3,5 mg	Under review
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	Under review
2(a)(2)	Tri-band phosphor with normal lifetime and a tube diameter ≥ 9 mm and ≤ 17 mm (e.g. T5): 5 mg	Under review
2(a)(3)	Tri-band phosphor with normal lifetime and a tube diameter > 17 mm and ≤ 28 mm (e.g. T8): 5 mg	Under review
2(a)(4)	Tri-band phosphor with normal lifetime and a tube diameter > 28 mm (e.g. T12): 5 mg	Under review
2(a)(5)	Tri-band phosphor with long lifetime (≥ 25 000 h): 8 mg	Under review
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	13 April 2012
2(b)(2)	Non-linear halophosphate lamps (all diameters): 15 mg	13 April 2016
2(b)(3)	Non-linear tri-band phosphor lamps with tube diameter > 17 mm (e.g. T9)	Under review
2(b)(4)	Lamps for other general lighting and special purposes (e.g. induction lamps)	Under review
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)	Under review
3(b)	Medium length (> 500 mm and ≤ 1 500 mm)	Under review
3(c)	Long length (> 1 500 mm)	Under review
4(a)	Mercury in other low pressure discharge lamps (per lamp)	Under review
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 ≤ 155W: 30mg	Under review
4(b)-II	155W < P ≤ 405W: 40mg	Under review
4(b)-III	P > 405W: 40mg	Under review
4(c)	Mercury in other High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner):	-
4(c)-I	P ≤ 155W: 25mg	Under review
4(c)-II	155W < P ≤ 405W: 30mg	Under review
4(c)-III	P > 405W: 40mg	Under review
4(d)	Mercury in High Pressure Mercury (vapour) lamps (HPMV)	13 April 2015
4(e)	Mercury in metal halide lamps (MH)	Under review
4(f)	Mercury in other discharge lamps for special purposes not specifically mentioned in Directive 2011/65/EU (RoHS)	Under review
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.	31 December 2018

4.2. Other Exempted use

4.2.1. Dioctyltin compounds (DOT) (PS8)

Exempted use No.	Exempted use
DOT-1	Other than the following purposes: Textile articles intended to come into contact with the skin, gloves, footwear or part of footwear intended to come into contact with the skin, wall and floor coverings, childcare articles, female hygiene products, nappies, two-component room temperature vulcanisation moulding kits (RTV-2 moulding kits)

4.2.2. Formaldehyde (PS15)

Exempted use No.	Exempted use
FO-1	Other than the following purposes: 1. Building material Chipboard, wooden flooring, structural panel, bonded wood, laminated veneer lumber, medium density fiberboard, particle board, other wooden materials, urea formaldehyde resin plate, wallpaper, adhesive, lagging material, buffer material, insulating material 2. Building material applied during construction Paint, coating, adhesive

4.2.3. Azocolourants and Azodyes releasing aromatic amines (AZO) (PS18)

Exempted use No.	Exempted use
AZO-1	Azocolourants and Azodyes releasing the aromatic amines, that is used in other than textile and leather articles which may come into direct and prolonged contact with the human skin or oral cavity

4.2.4. Polycyclic aromatic hydrocarbons (PAH) (PS22)

Exempted use No.	Exempted use
PAH-1	PAHs used in other than rubber or plastic components that come into direct and prolonged or short-term repetitive contact with the human skin or the oral cavity

4.2.5. Phthalates (PS24, PS25, PS26, PS27)

Exempted use No.	Exempted use
Ph-1	Phthalates used in components designed by Rinnai before July 2018
Ph-2	Phthalates used in products covered by RoHS directive and concentration of the single substance is below or equal to 1000ppm

4.2.6. Hydrofluorocarbons (HFC) (PS29)

Exempted use No.	Exempted use
HFC-1	HFCs used in water heating or air-conditioning appliance

4.2.7. Perfluorooctanoic acid, its salts and related substances (PFOA) (PS30)

Exempted use No.	Exempted use
PFOA-1	PFOAs used in specific parts accepted by Rinnai

5. Management and report of substance information

5.1. Substance information

Supplier shall properly manage present substance in delivered items (hereafter, substance information). Substance information is consist of following items.

Item		Detail
Presence		If Substance of concern is present or released
Substance name		Names defined in this policy
Condition of inclusion		<ul style="list-style-type: none"> • Concentration of presence or release is equal to or below the threshold value, or • Concentration of presence or release is above the threshold value, or • Applicable of Exempted use
Amount	Mass	<ul style="list-style-type: none"> • Maximum mass (g) of the substance, and • If metal compounds in prohibited substance, maximum mass of metallic element
	Concentration	<ul style="list-style-type: none"> • Maximum concentration (%) of substance present in homogeneous material, and • If metal compounds in prohibited substance, maximum concentration of metallic element
Portion used		Name or drawing number of part in delivered item
Usage		<ul style="list-style-type: none"> • Usage of substance, or • If prohibited substance, exempted use No.
Evidence		<ul style="list-style-type: none"> • Document specifying present substance, or • Document specifying mass or concentration of present substance

5.2. Evidence

Examples of evidence

1. Safety Data Sheet (SDS)
2. Material certification (e.g. Mill sheet)
3. chemSHERPA-AI (Information for articles)
4. chemSHERPA-CI (Information for chemicals)
5. Information exchange sheet defined by trade associations (e.g. JAMA sheet)
6. Document issued by supplier (e.g. Declaration of conformity, Test report)
7. Other document that specify any of required item

5.3. Identification of substance information

Supplier manages substance information in a rational manner. Examples as below.

1. Measure using internal or external analyzing devices
2. Collect information from suppliers
3. Determine by material specification or study report at own risk

5.4. Report to Rinnai

Supplier reports substance information to Rinnai by following methods, except for parts provided by Rinnai.

1. Rinnai Supplier Portal site, R-LINE
URL: <http://rgs-net.r-talk.jp/>
2. Declaration sheet
Available on Rinnai Website.
URL: https://www.rinnai.co.jp/corp/green_procurement/
3. Other method requested by Rinnai

5.5. Report of non-conformity

Supplier shall notify Rinnai the non-conformity of the requirements set out in this policy. Notification shall be sent by Supplier to Rinnai's buyer and mutually discuss the implementation of corrective actions.

5.6. Modification of substance information

Supplier shall notify Rinnai in advance of substance information change. Notification shall be sent by Supplier to Rinnai's buyer and Environment division.

6. Referenced regulation

6.1. Prohibited substance

Region	No.	Name of regulation (relevant section or substance list)	Acronym
JP	1	Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (Class I Specified Chemical Substance)	JP Chem
	2	Industrial Safety and Health Act (Article 55: Prohibition of Manufacturing, etc.)	JP Labor
	3	Building Standards Act (Article 28-2: Measure for asbestos)	JP Building
	4	Order for Enforcement of the Building Standards Act (Article 20-7: Standards for formaldehyde for building material)	JP Building-F
	5	Notification No. 1113, 1114 and 1115 from MILT (Defining Class I, II, III formaldehyde releasing building materials)	JP MILT-F
	6	Classification of released amount and speed of formaldehyde, defined by JP industrial standards (JIS) or JP agricultural standards (JAS)	JIS/JAS-F
	7	Act on the Promotion of Effective Utilization of Resources (Requirements for management of the chemical substance present in "Specified Reuse-Promoted Product" as defined in Article 2-10)	JP Resource
	8	Act on the Protection of the Ozone Layer Through the Control of Specified Substances and Other Measures (Specified Substances, alternative substances)	JP Ozone
EU	9	Directive 2011/65/EU (Annex II)	RoHS Directive
	10	Directive 94/62/EC (Article 11: Concentration levels of heavy metals present in packaging)	Packaging Directive
	11	Regulation (EC) No 1907/2006 (Annex XVII)	REACH Regulation
	12	Regulation (EC) 2019/1021 (Annex I)	POPs Regulation
	13	Directive 91/157/EEC (Article 4: Prohibitions)	Battery Directive
US	14	Specific states, Toxic in packaging regulations	US Packaging
	15	Specific states, Flame Retardants regulations	US Flame Retardants
	16	State of Maryland, Environment (Section 6-1201 to 6-1205: Subtitle 12. Brominated Flame Retardants)	Maryland Flame Retardants
	17	State of California, Health and Safety Code (HSC) (Section 116875 to 116890: ARTICLE 4. Lead Materials)	California Lead
TW	18	Commodity Inspection Act (Marking of presence, Section 5, CNS 15663)	TW RoHS
CN	19	Management Methods for the Restriction of the Use of Hazardous Substances in Electrical and Electronic Products (Art. 3.5 Toxic substance)	CN RoHS
Other	20	Rinnai-Customer defined substances	-

6.2. Exempted-use of Prohibited substance

No.	Substance group	Regulation	Applicable section
PS1 PS2 PS3 PS4	Cadmium Cr(VI) Lead Mercury	RoHS Directive	2011/65/EU Annex III 2012/50/EU Annex - 7(c)-IV 2012/51/EU Annex - 40 2014/14/EU Annex - 1(g) 2014/72/EU Annex - 41 2014/76/EU Annex - 4(g) (EU) 2017/1009 Annex - 13(b), 13(b)-(I), 13(b)-(II), 13(b)-(III) (EU) 2017/1010 Annex - 9(b), 9(b)-(I) (EU) 2017/1011 Annex - 13(a) (EU) 2017/1975 Annex - 39(a) (EU) 2018/736 Annex - 7(c)-I (EU) 2018/737 Annex - 24 (EU) 2018/738 Annex - 34 (EU) 2018/739 Annex - 6(a) (EU) 2018/740 Annex - 6(b) (EU) 2018/741 Annex - 6(c) (EU) 2018/742 Annex - 7(a) (EU) 2019/169 Annex - 7(c)-II (EU) 2019/170 Annex - 7(c)-IV (EU) 2019/171 Annex - 8(b), 8(b)-I (EU) 2019/172 Annex - 15, 15(a) (EU) 2019/173 Annex - 21, 21(a), 21(b), 21(c) (EU) 2019/174 Annex - 29 (EU) 2019/175 Annex - 32 (EU) 2019/176 Annex - 37 (EU) 2019/177 Annex - 18(b), 18(b)-I (EU) 2019/178 Annex - 42
PS8 PS18 PS22 PS24 PS25 PS26 PS27	DOT AZO PAH DEHP BBP DBP DIBP	REACH Regulation	(EC) No 1907/2006 Annex XVII - Entry 20: DOT - Entry 43: AZO (EU) No 1272/2013 Annex - Entry 50: PAH (EU) 2018/2005 Annex - Entry 51: Phthalates

6.3. Reporting substance

Region	No.	Name of regulation (relevant section or substance list)	Acronym
EU	21	Regulation (EC) No 1907/2006 (Article 33: Duty to communicate information on substances in articles)	REACH Regulation

Revision history

1 st edition	30 August 2004	Version 1
Revised	20 April 2011	Version 2
	2 July 2012	Version 3.0
	1 April 2018	Version 4
	29 July 2019	Version 4.1

Main changes from previous version

Due to the amendment of referenced regulations, the policy is amended as below. Underline represents the modification from the previous version.

Change in prohibited substance

Version 4	Version 4.1 (Current)
<i>Newly inserted</i>	<u>Chlorinated phosphate ester flame retardants</u> <u>Hydrofluorocarbons</u> <u>Perfluorooctanoic acid, its salts and related substances</u>
Perfluorooctane sulfonic acid and its derivatives	<u>Perfluorooctane sulfonic acid and its derivatives</u> (Changed name in Japanese)

Change in threshold value of prohibited substance

No.	Substance group	Version 4	Version 4.1 (Current)
PS24	Bis(2-ethylhexyl) phthalate	≤ 1000ppm	<u>Sum of 4 phthalates</u> ≤ 1000ppm
PS25	Benzyl butyl phthalate	≤ 1000ppm	
PS26	Dibutyl phthalate	≤ 1000ppm	
PS27	Diisobutyl phthalate	≤ 1000ppm	

Change in exempted-use of prohibited substance

No.	Substance group	Version 4	Version 4.1 (Current)
PS1	Cadmium and its compounds	<i>Omit</i>	<i>Omit</i> (Applied RoHS amendments)
PS3	Lead and its compounds	<i>Omit</i>	
PS4	Mercury and its compounds	<i>Omit</i>	
PS16	Perfluorooctane sulfonic acid and its derivatives	<i>Omit</i>	<i>Deleted</i>
PS24	Bis(2-ethylhexyl) phthalate	<i>Newly inserted</i>	<u>Phthalates used in products covered by RoHS directive and concentration of the single substance is below or equal to 1000ppm</u>
PS25	Benzyl butyl phthalate		
PS26	Dibutyl phthalate		
PS27	Diisobutyl phthalate		
PS29	Hydrofluorocarbons	<i>Newly inserted</i>	<u>HFC used in water heating or air-conditioning appliance</u>
PS30	Perfluorooctanoic acid, its salts and related substances	<i>Newly inserted</i>	<u>PFOA used in specific parts accepted by Rinnai</u>

Change in referenced regulation

Version 4	Version 4.1 (Current)
Regulation (EC) No 850/2004 (Annex I)	Regulation (EC) 2019/1021 (Annex I)
<i>Newly inserted</i>	<u>Specific states, Flame Retardants regulation</u>

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