

Audio-Technica Group
Environmental Quality Standards
for Products
Tenth Edition

Published on November 1, 2024

Prepared by: Audio-Technica Product Environmental Quality Committee
Issued by: Quality Assurance Department of Audio-Technica Corporation

Management's Philosophy Regarding the Environment

Protection of the global environment and appreciation of nature are concepts closely tied to Audio-Technica's ongoing quest for exquisite sound. Determined to leave a more beautiful planet to our children, we at Audio-Technica Group are highly cognizant of the importance of our planet, and all of our corporate activities are designed to be consistent with environmental conservation efforts.

Kazuo Matsushita
President of Audio-Technica corporation

Contents

1. Objective	2
2. Scope	2
3. Definition of Terms	3
4. Environment Control Substances Subject to These Standards	5
5. Control Level of Environment Control Substances	7
6. Appendix	23
7. Amended Contents	26

1. Objective

Based on the environmental policy of Audio-Technica Group (hereafter referred to as the A-T Group), and in an effort to both abide by relevant laws & regulations and offer environmentally friendly products to our customers, we have outlined in this document the A-T Group's internal regulations regarding Environment-related Substances to be Controlled. These regulations are to be used in the carrying out of management and surveillance activities relating to product parts, semi-processed goods provision, assembly, manufacturing and sales. Other important objectives include the clarification of prohibited substances and control substances; the dissemination of important, topical information within the A-T Group and amongst suppliers; and improvements in, and maintenance of, the environmental quality of the A-T Group's products.

2. Scope

These standards apply for materials, parts, half-finished products and finished products that are procured, machined and assembled, and sold by AT Group. Note that the standards may separately be specified for particular management methods varied depending on destinations of the finished products.

These standards are applicable for the following member companies and offices of AT Group.

Audio-Technica Corporation
Audio-Technica Fukui Co., Ltd.
Audio-Technica U.S.INC
Audio-Technica Canada.INC
Audio-Technica America Latina S.A.
Audio-Technica DO BRASIL
Audio-Technica Europe Holding B.V
Audio-Technica(GC)LTD
Audio-Technica(S.E.A.)Pte.LTD
Audio-Technica Taiwan Co., Ltd.
Audio-Technica Hangzhou Co., Ltd.
Audio-Technica Haining Co., Ltd.
Hangzhou Tengyu Photoelectric Co., Ltd.
Audio-Technica Haining Trading Co., Ltd.

< Contact >

For any question arisen on these standards, contact the AT Group department with which you have business relations. For a particular green procurement procedure applicable for your products or parts, follow that indicated by the AT Group department with which you have business relations.

3. Definition of Terms

These standards use the following terminology:

- (1) Environment-related Substances to be controlled
Environment-related Substances to be controlled are substances contained in parts and/or half-finished products constituting finished products that are judged by Audio-Technica to burden the global environment and/or have a high impact on the human body.
- (2) Prohibited substances
Prohibited substances are those whose use or inclusion is prohibited by Audio-Technica. The use of such substances must immediately be stopped if intentionally used or contained.
The following substances are also included in the prohibited substances:
 - those whose inclusion in products or use in production processes is regulated by laws and regulations domestically and/or abroad,
 - those that can be controlled in the near future, and
 - those specified by AT on its own.
- (3) Control substances
These are substances for which AT determines that it is necessary to understand the current status of their inclusion and use.
When any of these substances is contained, information must be disclosed on a request from AT.
The following substances are also included in the control substances:
 - those for which it is required by laws and regulations domestically and/or abroad to disclose the information about the current status of their use in products and production processes,
 - those that can be controlled in the near future, and
 - those specified by AT on its own.
- (4) Substances subject to REACH SVHC (candidate substances)
These are substances designated as Substances of Very High Concern (SVHC : Substances of Very High Concern)* in REACH regulation of European Union (EU) or those subject to authorization thereof (candidate substances).
* Information on SVHC of which content is more than 0.1 wt% in products destined for EU must be provided by upstream manufacturers to downstream manufacturers.
- (5) Inclusion
Inclusion is defined as addition, incorporation or adherence of substances to materials used for parts or products regardless whether intentionally or not, and incorporation or adherence of those in production processes, resulting in their presence in final products. For example, if molds, jigs or machining facilities in a production process directly contact and possibly contaminate portions of a product, such portions must be considered subject to inclusion-prohibition of prohibited substances.

(6) Intentional use

Intentional use is defined as intentionally using particular substances during production of parts or products when continuous inclusion of the substances is desired in order to provide particular characteristics, appearance or quality.

(7) Regulation value

When prohibited substances are unintentionally contained as impurities, the threshold value of inclusion concentration, if specified as the regulation value, must be met.

(8) Exemption

Exemption is applicable to substances and their applications exempted by laws and regulations or to substances for which no alternative technology exists at present. Still, reporting their inclusion amounts is mandatory.

The expiration date of exemptions relevant to EU Directive 2011/65/EU (EU RoHS) is subject to change. Refer to the latest status of each.

[Implementation of the RoHS Directive](#)

(9) Concentration values

Concentration value is calculated using the weight of a homogeneous material as denominator. Note that a homogeneous material is defined as a material in the smallest unit which cannot be mechanically broken down.

Concentration value [wt%] = Content of substance of homogeneous material / Weight of homogeneous material *100

- Compounds, polymer alloy, metal alloy, etc.
- Materials ultimately formed by assumed usage of such raw materials as paint, adhesive, ink, paste, resin polymer, glass powder and ceramic powder.
Example: Paint and adhesive dried and hardened; resin polymer formed and shaped; glass and ceramic formed and shaped.
- Single layer of paint, printing or plating; each layer of multiple layers of those

Refer to IEC 62321 (Determination of certain substances in electrotechnical products) for the main analysis methods.

<https://webstore.iec.ch/>

4. Environment Control Substances Subject to These Standards

4-1. Prohibited substances (P**)

The number is assigned to each substance with the initial letter “P” of “Prohibited” affixed. See Sections 5-1 and 5-2 for details of substances together with their applications.

No.	Name of substance
P01	Cadmium and its compounds
P02	Hexavalent chromium compounds
P03	Lead and its compounds
P04	Mercury and its compounds
P05	Polybrominated biphenyls (PBBs)
P06	Polybrominated diphenyl ethers (PBDEs)
P07	Phthalate esters (DEHP, DBP, BBP and DIBP)
P08	Bis(tributyltin)oxide (TBTO)
P09	Tri-substituted organostannic compounds (including tributyltin and triphenyltin compounds)
P10	Polychlorinated biphenyls (PCBs)
P11	Polychlorinated terphenyls (PCTs)
P12	Polychlorinated naphthalene (number of chlorine elements: 1 or more)
P13	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)
P14	Asbestos
P15	Azocolourants and azodyes which form certain aromatic amines
P16	Ozone depleting substances
P17	Radioactive substances
P18	Formaldehyde
P19	Polyvinyl chloride (PVC)
P20	Perfluorooctane sulfonate (PFOS) and its salts and PFOS-related substances
P21	2-(2 <i>H</i> -1,2,3-benzotriazole-2-yl)-4,6-di- <i>tert</i> -butylphenol (UV -320)
P22	Cobalt dichloride
P23	Beryllium oxide
P24	Dimethyl fumarate (DMF)
P25	Dibutyltin (DBT) compounds
P26	Dioctyltin (DOT) compounds
P27	Hexabromocyclododecane (HBCDD)
P28	Polycyclic aromatic hydrocarbons (PAHs)
P29	Perfluorooctanoic acid (PFOA) and its salts and PFOA-related substances
P30	Phosphate ester flame retardants (TCEP, TCPP and TDCPP)
P31	Fluorinated greenhouse gases (HFC, PFC and SF ₆)
P32	Perfluorocarboxylic acids (PFCAs) C9-14 and its salts and PFCA-related substances
P33	Phenol, Isopropylated, Phosphate (3:1) (PIP(3:1))
P34	Pentachlorothiophenol (PCTP)

No.	Name of substance
P35	Pentachlorophenol (PCP) and its salts, and esters
P36	1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10] octadeca-7,15-diene ("Dechlorane Plus" TM)
P37	2-(2 <i>H</i> -benzotriazol-2yl)-4,6-ditertpentylphenol (UV-328)
P38	Perfluorohexanesulfonic acid (PFHxS) and its salts and PFHxS-related substances
P39	Perfluorohexanoic acid (PFHxA) and its salts and PFHxA-related substances
P40	Perfluoroalkyl substances and Polyfluoroalkyl substances (PFAS)
P41	Mineral oil (MOAH and MOSH)

4-2. Control substances (C^{**})

The number is assigned to each substance with the initial letter "C" of "Controlled" affixed. See Section 5-3 for details of substances together with their applications.

No.	Name of substance
C01	Phthalate esters (DINP, DIDP, DNOP and DnHP)
C02	Nickel and its compounds
C03	Brominated flame retardants (Other than PBB, PBDE, HBCDD, DBDPE and TBBPA)
C04	Perchlorate
C05	Bisphenol A (BPA)
C06	Decabromodiphenylethane (DBDPE)
C07	Tetrabromobisphenol A (TBBPA)
C08	Mediumchain chlorinated paraffins (MCCPs)- Alkanes, 14-17, chloro

4-3. Substances subject to REACH SVHC (candidate substances) (R^{***})

The number is assigned to each substance with the initial letter "R" of "REACH" affixed. See Schedule 1 for details of substances together with their applications.

No.	Name of substance
R ^{***}	Substances subject to REACH SVHC (candidate substances)

For the latest information, refer to the website of European Chemicals Agency (ECHA).
<https://echa.europa.eu/candidate-list-table>

5. Control Level of Environment Control Substances

5-1. Control level of prohibited substances

P01. Cadmium and its compounds

Control level	Target application	Criterion/threshold value
Prohibited	Packaging material	<u>*Refer to article 5-2-1</u>
	Battery and battery pack	<u>*Refer to article 5-2-4</u>
	All applications except for the items exempted Example: <ul style="list-style-type: none"> - Plastics (including rubber and film) - Paint, ink, pigment and dye (The regulation value shall be met under the condition with absence of volatilization components.) - Electric contacts such as switches and relays - Soluble elements of thermal fuses - Solder - Surface finishing (plating, etc.) or coating - Fluorescent materials contained in fluorescent display units - Resistive elements (glass frit) - Pigment and dye for glass or glass paint - All metals 	Less than 100 ppm in homogeneous material
Exemption	Filter glass	

P02. Hexavalent chromium compounds

Control level	Target application	Criterion/threshold value
Prohibited	Packaging material	<u>*Refer to article 5-2-1</u>
	All applications except for the items exempted Example: <ul style="list-style-type: none"> - Rustproofing of metals - Resin, paint, ink, pigment 	Less than 1000 ppm in homogeneous material
	Natural leather products and parts in contact with skin	Less than 3 ppm of total Cr ⁶⁺ in dry weight of the leather
Exemption	Metal chrome and chrome contained in alloy are excluded.	

P03. Lead and its compounds

Control level	Target application	Criterion/threshold value
Prohibited	Packaging material	*Refer to article 5-2-1
	Battery and battery pack	*Refer to article 5-2-4
	The resin coating of an electric wire, a cable or the cord (include a plug and a connector)	Less than 300 ppm in homogeneous material
	All applications except for those above-mentioned and the items exempted Example: - Soldering of external electrode of parts and wire lead terminals - Electroless nickel plating (lead contained in the membrane)	Less than 1000 ppm in homogeneous material
Exemption	Alloys listed below in which regulation values are exceeded: - Steel product and galvanized steel sheet - Aluminum alloy - Copper alloy	In homogeneous material, - less than 3500 ppm - less than 4000 ppm - less than 40000 ppm
	- Glass fluorescent tubes with lead content not exceeding 0.2 wt% - High-melting point solder for internal connection (Lead-based alloy with lead content of 85 wt% or more) - 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 - Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher - Optical glass and filter glass - Lead in the solder necessary to ensure electric connection between the internal semiconductor die and the carrier of integrated circuit packages (flip chips)	

P04. Mercury and its compounds

Control level	Target application	Criterion/threshold value
Prohibited	Packaging material	*Refer to article 5-2-1
	Battery and battery pack	*Refer to article 5-2-4
	All applications other than the above Example: Preparation agent for pigment, paint, ink and plastic	Less than 1000 ppm in homogeneous material

P05. Polybrominated biphenyls (PBBs)

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example : Flame retardant for plastics	Less than 1000 ppm in homogeneous material

P06. Polybrominated diphenyl ether (PBDEs)

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example: Flame retardant for plastics	Less than 1000 ppm in homogeneous material

P07. Phthalate esters (DEHP, DBP, BBP and DIBP)

Control level	Target application	Criterion/threshold value
Prohibited	Electrical and electronic equipment Example: - Polyvinyl chloride, rubber, and other soft plastic products (electric wire, cable, plug, insulation cap, insulation sleeve, O ring, resins sheet, molding part, and others) - Plasticizer, dye, pigment, paint, ink, adhesive and lubricant	Less than 1000 ppm in homogeneous material
	Other than electric and electronic equipment Example: Parts and materials for carrying bags, carrying cases, and carrying pouches	Less than 1000 ppm as the sum of the phthalate concentrations (DEHP, DBP, BBP, and DIBP) in homogeneous material
	Packaging materials	*Refer to article 5-2-2
	Battery and battery pack	*Refer to article 5-2-5

CAS No.	Name of substance subject to control	Abbreviation
117-81-7	Bis (2-ethylhexyl) phthalate	DEHP
84-74-2	Dibutyl phthalate	DBP
85-68-7	Benzyl butyl phthalate	BBP
84-69-5	Diisobutyl phthalate	DIBP

P08. Bis(tributyltin)oxide (TBTO) (CAS No. 56-35-9)

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example: Paint, ink, antiseptic agent and anti-mold agent	Intentional use prohibited or less than 1000 ppm in article

P09. Tri-substituted organostannic compounds (including tributyltin (TBT) and triphenyltin (TPT) compounds)

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example: Paint, ink, antiseptic agent and anti-mold agent	Intentional use prohibited or less than 1000 ppm of tin in part

P10. Polychlorinated biphenyls (PCBs)

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example: Oil-contained capacitor, capacitor, insulating oil, lubricating oil and plastic flame retardant	Intentional use prohibited or less than 50 ppm

P11. Polychlorinated terphenyls (PCTs)

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example: Lubricating oil and paint	Less than 50 ppm

P12. Polychlorinated naphthalene (number of chlorine elements: 1 or more)

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example: Lubricating oil and paint	Intentional use prohibited

P13. Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example: Printed circuit boards and outer casings of products including accessories	Intentional use prohibited or less than 1000 ppm

P14. Asbestos

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example: Insulating and filling materials	Intentional use prohibited

P15. Azocolourants and azodyes which form certain aromatic amines

Azo compounds that may produce specific amines listed in the table below when decomposed in accordance with the method specified in Appendix XVII of REACH regulation (EC) No. 1907/2006.

Control level	Target application	Criterion/threshold value
Prohibited	Material (Cloth or hides product and part) to use for a part touching the direct skin for a long time	Less than 30 mg/kg (30 ppm)
	Pigment on particular portions of products that are made as having the function to continually contact human body (earphone, headphones, belt, strap, etc.), where such portions directly contact human body	Intentional use prohibited
Exemption	Azo compounds used for regions not continually contacting human body	

Specific amines that must not be produced through reductive decomposition

CAS No.	Name of substance
60-09-3	4-aminoazobenzene
90-04-0	<i>o</i> -anisidine
91-59-8	2-naphthylamine
91-94-1	3,3'-dichlorobenzidine
92-67-1	4-aminodiphenyl
92-87-5	Benzidine
95-53-4	<i>o</i> -toluidine
95-69-2	4-chloro- <i>o</i> -toluidine
95-80-7	2,4-toluenediamine
97-56-3	<i>o</i> -Aminoazotoluene
99-55-8	5-nitro- <i>o</i> -toluidine
101-14-4	4,4'-methylenebis (2-chloroaniline)
101-77-9	4,4'-diaminodiphenylmethane
101-80-4	4,4'-oxydianiline
106-47-8	<i>p</i> -chloroaniline
119-90-4	3,3'-dimethoxybenzidine
119-93-7	3,3'-dimethylbenzidine
120-71-8	<i>p</i> -cresidine
137-17-7	2,4,5-trimethylaniline
139-65-1	4,4'-thiodianiline
615-05-4	2,4-diaminoanisole
838-88-0	4,4'-Diamino-3,3'-dimethyldiphenylmethane
95-68-1	2,4-Dimethylaniline
87-62-7	2,6-Dimethylaniline

P16. Ozone depleting substances

Substances subject to Appendix A, B, C or E of Montreal Protocol (including CFCs, HCFCs, HBFCs and carbon tetrachloride)

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example: Cleaning agent for parts	Intentional use prohibited

P17. Radioactive substances

Control level	Target application	Criterion/threshold value
Prohibited	All radioactive substances	Intentional use prohibited

P18. Formaldehyde (CAS No. 50-00-0)

Control level	Target application	Criterion/threshold value
Prohibited	Textile parts/products which come into contact with human skin under normal conditions of use.	Less than 75 ppm
	Woodwork products and parts (speaker, rack, etc.)	*Refer to the following laws and regulations
	- Chemicals prohibitive regulation of Germany	Aerial density of less than 0.1 ppm
	- Formaldehyde regulation of Denmark	Aerial density of less than 0.15 mg/m ³
	-The U.S. TSCA -Formaldehyde Emissions from Composite Wood Products Regulations of Canada	Emissions from a composite wood panel or laminated product must not exceed the following limits. (a) for hardwood plywood, 0.05 ppm (b) for particleboard, 0.09 ppm (c) for medium-density fibreboard, 0.11 ppm (d) for thin medium-density fibreboard, 0.13 ppm (e) for a laminated product, 0.05 ppm
	-EU REACH regulation	Emissions of less than 0.062 mg/m ³
	Wooden products for North America shall meet the regulatory requirements of the U.S. (TSCA Title VI) and Canada (SOR/2021-148). Wooden products for the EU shall meet the regulatory requirements for products to be placed on the market after August 6, 2026.	

P19. Polyvinyl chloride (PVC) (CAS No. 9002-86-2)

Control level	Target application	Criterion/threshold value
Prohibited	- Packaging materials used for parts and products supplied with the products (for example, bag, tape, clear carton, blister pack, etc.) - Banding band	Intentional use prohibited
Controlled	All applications other than the above	

P20. Perfluorooctane sulfonate (PFOS) and its salts and PFOS-related substances

Control level	Target application	Criterion/threshold value
Prohibited	All applications	Intentional use prohibited and less than 25 ppb (0.025 ppm) of PFOS including its salts, in article or mixture
		Intentional use prohibited and less than 1000 ppb (1 ppm) of one or a combination of PFOS-related substances, in article or mixture

P21. 2-(2H-1,2,3-benzotriazole-2-yl)-4,6-di-*tert*-butylphenol (UV-320) (CAS No. 3846-71-7)

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example: Plastic molded product, decorative laminate (plastic architectural material) or photographic paper as ultraviolet protectant or absorbent	Intentional use prohibited or less than 1000 ppm in article

P22. Cobalt dichloride (CAS No. 7646-79-9)

Control level	Target application	Criterion/threshold value
Prohibited	Humidity indicator used for desiccant (such as silica gel)	Intentional use prohibited
	Humidity indicator card which is impregnated with cobalt dichloride	Less than 1000 ppm
Exemption	Cobalt chloride used for applications other than the above	

P23. Beryllium oxide (CAS No. 1304-56-9)

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example: Raw materials for ceramics	Less than 1000 ppm of product

P24. Dimethyl fumarate (DMF) (CAS No. 624-49-7)

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example: Anti-mold agent and desiccant	Less than 0.1 ppm

P25. Dibutyltin (DBT) compounds

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example: Stabilizer for polyvinyl chloride, hardening catalyst for silicone resin and urethane resin, glass coating agent	Less than 1000 ppm in homogeneous material (tin equivalent)

P26. Dioctyltin (DOT) compounds

Control level	Target application	Criterion/threshold value
Prohibited	Applications as additives for textile products which come in contact with skin	Less than 1000 ppm in homogeneous material (tin equivalent)
Exemption	All applications other than the above	

P27. Hexabromocyclododecane (HBCDD)

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example: - Applications as flame retardant for resin and that for fiber - Resin flux cored solder	Intentional use prohibited and less than 75 ppm

P28. Polycyclic aromatic hydrocarbons (PAHs)

Control level	Target application	Criterion/threshold value
Prohibited	Rubber or plastic components that come in direct contact with or prolonged or short-term repetitive contact with skin or oral cavity	Less than 1 ppm of any for homogeneous materials
Exemption	All applications other than the above	

CAS No.	Name of substance subject to control	Abbreviation
50-32-8	Benzo[a]pyrene	BaP
192-97-2	Benzo[e]pyrene	BeP
56-55-3	Benzo[a]anthracene	BaA
218-01-9	Chrysene	CHR
205-99-2	Benzo[b]fluoranthene	BbFA
205-82-3	Benzo[j]fluoranthene	BjFA
207-08-9	Benzo[k]fluoranthene	BkFA
53-70-3	Dibenzo[a,h]anthracene	DBAhA

P29. Perfluorooctanoic acid (PFOA) and its salts and PFOA-related substances

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example: Water-repellent coating, fluorine-based polymer, emulsifier of the fluorine-based elastomer, lubricant.	Intentional use prohibited and less than 25 ppb (0.025 ppm), for PFOA including its salts, in article or mixture
		Intentional use prohibited and less than 1000 ppb (1 ppm) for one or a combination, for PFOA-related substances, in article or mixture

P30. Phosphate ester flame retardants (TCEP, TCPP and TDCPP)

Control level	Target application	Criterion/threshold value
Prohibited	Applications as flame retardant for plastic, resin, fiber or fabric material	Less than 1000 ppm

CAS No.	Name of substance subject to control	Abbreviation
115-96-8	Tris (2-chloroethyl) phosphate	TCEP
13674-84-5	Tris (1-methyl-2-chloroethyl) phosphate	TCPP
13674-87-8	Tris (1,3-dichloro-2-propyl) phosphate	TDCPP

P31. Fluorinated greenhouse gases (HFC, PFC and SF₆)

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example: Cleaning agent for parts, refrigerant, heat insulator, insulating material	Intentional use prohibited

P32. Perfluorocarboxylic acids (PFCAs) C9-14 and its salts and PFCA-related substances

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example: Water repellent, coating and lubricant etc.	Intentional use prohibited and less than 25 ppb (0.025 ppm) for C9-14 PFCAs including its salts, in article or mixture
		Intentional use prohibited and less than 260 ppb (0.260 ppm) for one or a combination, for C9-14 PFCA-related substances, in article or mixture

P33. Phenol, Isopropylated, Phosphate (3:1) (PIP(3:1)) (CAS No. 68937-41-7)

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example: Flame retardant, plasticizer, lubricant, greases, adhesive and sealant	Intentional use prohibited

P34. Pentachlorothiophenol (PCTP) (CAS No. 133-49-3)

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example: Peptizer	Intentional use prohibited

P35. Pentachlorophenol (PCP) and its salts, and esters

Control level	Target application	Criterion/threshold value
Prohibited	All applications	Intentional use prohibited or less than 5 ppm in article or mixture

P36. 1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10] octadeca-7,15-diene ("Dechlorane Plus"TM) (CAS No. 13560-89-9; 135821-03-3; 135821-74-8)

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example: Chlorine- based flame retardant, etc.	Intentional use prohibited

P37. 2-(2H-benzotriazol-2yl)-4,6-ditertpentylphenol (UV-328) (CAS No. 25973-55-1)

Control level	Target application	Criterion/threshold value
Prohibited	All applications Example: Ultraviolet absorbent, etc.	Intentional use prohibited

P38. Perfluorohexanesulfonic acid (PFHxS) and its salts and PFHxS-related substances

Control level	Target application	Criterion/threshold value
Prohibited	All applications	Intentional use prohibited and less than 25 ppb (0.025 ppm) of PFHxS including its salts, in article or mixture
		Intentional use prohibited and less than 1000 ppb (1 ppm) of one or a combination of PFHxS-related substances, in article or mixture

P39. Perfluorohexanoic acid (PFHxA) and its salts and PFHxA-related substances

Control level	Target application	Criterion/threshold value
Prohibited	Textiles, leather and furs	Intentional use prohibited or less than 25 ppb (0.025 ppm) of PFHxA including its salts, in homogenous material
		Intentional use prohibited or less than 1000 ppb (1 ppm) of one or a combination of PFHxA-related substances, in homogenous material

P40. Perfluoroalkyl substances and Polyfluoroalkyl substances (PFAS)

Control level	Target application	Criterion/threshold value
Prohibited	Textiles, leather and furs	Intentional use prohibited or less than 50 ppm of total organic fluorine in part
Controlled	All applications other than the above	

P41. Mineral oil (MOAH and MOSH)

Control level	Target application	Criterion/threshold value
Prohibited	Inks for packaging components, packaging materials and printed materials	*Refer to article 5-2-3

5-2. Control level in special application of prohibited substances

5-2-1. Heavy metals for packaging materials (cadmium, hexavalent chromium, lead and mercury)

Control level	Target application	Criterion/threshold value
Prohibited	The inclusion amount of heavy metal (mercury, cadmium, hexavalent chromium and lead) is regulated in terms of each homogeneous material in members comprising packaging. Example of packaging materials: Individual packaging, shipping carton, clear carton, polyethylene bag, tape, etc. Example of homogeneous materials: Paper, ink, paint, polyethylene film, adhesive, etc.	Total heavy metal concentration of less than 100 ppm for homogeneous material

5-2-2. Phthalate esters for packaging materials (DEHP, DBP, BBP and DIBP)

Control level	Target application	Criterion/threshold value
Prohibited	The inclusion amount of Phthalate esters (DEHP, DBP, BBP and DIBP) is regulated in terms of each homogeneous material in members comprising packaging. Example of packaging materials: Individual packaging, shipping carton, clear carton, polyethylene bag, tape, etc. Example of homogeneous materials: Paper, ink, paint, polyethylene film, adhesive, etc.	Less than 1000 ppm as the sum of the phthalate esters (DEHP, DBP, BBP, and DIBP) concentrations, for homogeneous material

5-2-3. Mineral oil in packaging materials and printed materials (MOAH and MOSH)

Control level	Target application	Substance subject to control	Criterion/threshold value
Prohibited	Ink 1) In packaging materials 2) In printed materials	Mineral oil aromatic hydrocarbons (MOAH) comprising from 1 to 7 aromatic rings	Less than 1000 ppm in ink
		Mineral oil aromatic hydrocarbons (MOAH) comprising from 3 to 7 aromatic rings	Less than 1 ppm in ink
		Hydrocarbons saturated with mineral oil (MOSH) containing 16 to 35 carbon atoms	Less than 1000 ppm in ink

5-2-4. Heavy metal in battery (cadmium, lead and mercury)

Control level	Substance subject to control	Target application	Criterion/threshold value
Prohibited	Cadmium	Carbon zinc batteries, Alkaline manganese batteries and Nickel hydrogen rechargeable batteries (except button cells each)	Less than 0.001 wt% (10 ppm) of battery
		All other batteries except above	Less than 0.002 wt% (20 ppm) of battery
	Lead	Alkaline manganese batteries (including button cells)	Less than 0.004 wt% (40 ppm) of battery
		All other batteries except above	Less than 0.01 wt% (100ppm) of battery
	Mercury	All batteries	Intentionally added or less than 0.0001 wt% (1 ppm) of battery
			Less than 0.0005 wt% (5 ppm) of total Hg in homogenous material
Note : For heavy metal contained in plastics, paint or ink used for battery packs and other parts, the regulation values shall be followed.			

5-2-5. Phthalate esters in the battery (DEHP, DBP, BBP, and DIBP)

Control level	Target application	Criterion/threshold value
Prohibited	The inclusion amount of Phthalate esters (DEHP, DBP, BBP, and DIBP) is regulated in terms of each homogeneous material in members comprising battery. Example of packaging materials: Electric wire, sleeve, etc. Example of homogeneous materials: Ink, paint, adhesive, etc.	Less than 1000 ppm as the sum of the phthalate esters (DEHP, DBP, BBP, and DIBP) concentrations, for homogeneous material

5-3. Control level of controlled substances

< Control range >

Where the substances listed below are intentionally used or their inclusion is known, applications using those substances shall be subject to control.

C01. Phthalate esters (DINP, DIDP, DNOP and DnHP)

Control level	Target application
Controlled	All applications Example: Plasticizer, dye, pigment, paint, ink, adhesive and lubricant

CAS No.	Name of substance subject to control	Abbreviation
28553-12-0	Di-isononyl phthalate	DINP
26761-40-0	Di-isodecyl phthalate	DIDP
117-84-0	Di- <i>n</i> -octyl phthalate	DNOP
84-75-3	Di- <i>n</i> -Hexyl Phthalate	DnHP

C02. Nickel and its compounds

Control level	Target application
Controlled	All applications Example: Nickel plating and stainless component

C03. Brominated flame retardants (Other than PBB, PBDE, HBCDD, DBDPE and TBBPA)

Control level	Target application
Controlled	Bromine-related flame retardant other than PBB, PBDE, HBCDD DBDPE and TBBPA. Applications as flame retardant for plastics and flame retardant used for printed wiring.

C04. Perchlorate

Control level	Target application	Criterion/threshold value
Controlled	All applications Example: Coin cell battery	Less than 0.006 ppm per part

C05. Bisphenol A (BPA) (CAS No. 80-05-7)

Control level	Target application
Controlled	All applications Example: Plasticizer, etc.

C06. Decabromodiphenylethane (DBDPE) (CAS No. 84852-53-9)

Control level	Target application
Controlled	All applications Example: Bromine-related flame retardant, etc.

C07. TetrabromobisphenolA (TBBPA) (CAS No. 79-94-7)

Control level	Target application
Controlled	All applications Example: Bromine-related flame retardant, etc.

**C08. Mediumchain chlorinated paraffins (MCCPs)- Alkanes, 14-17, chloro
(CAS No. 85535-85-9; 198840-65-2; 1372804-76-6)**

Control level	Target application
Controlled	All applications Example: Paint, adhesive, sealant, flame retardant and plasticizer, etc.

5-4. Control level of substances subject to REACH SVHC (candidate substances)

< Control range >

Where the substances listed below are intentionally used or their inclusion is known, applications using those substances shall be subject to report.

R*.** Substances subject to REACH SVHC (candidate substances)

* See Schedule 1 for the list of the substances.

Control level	Target application	Criterion/threshold value
Report	All applications	More than 0.1 wt% (1000 ppm) in an article

For the target applications of each substance and their details, refer to the website of European Chemicals Agency (ECHA).

<https://echa.europa.eu/candidate-list-table>

6. Appendix

Environment control substances and main examples of laws and regulations in some countries

Reference laws and regulations do not include all laws, ordinances, and standards to be the basis, but give only examples.

Details of regulations should be checked with latest editions thereof, as they are subject to revision.

No.	Name of substance	Reference laws and regulations	
P01	Cadmium and its compounds	EU	RoHS Directive (2011/65/EU), REACH regulation (No.1907/2006), Battery regulation ((EU) 2023/1542) and Packaging & Packaging Waste Directive (94/62/EC)
		U.S.	Proposition 65
		China	GB24427-2021
P02	Hexavalent chromium compounds	EU	RoHS Directive (2011/65/EU), REACH regulation (No.1907/2006) and Packaging & Packaging Waste Directive (94/62/EC)
P03	Lead and its compounds	EU	RoHS Directive (2011/65/EU), REACH regulation (No.1907/2006), Battery regulation ((EU) 2023/1542) and Packaging & Packaging Waste Directive (94/62/EC)
		U.S.	Proposition 65
		China	GB24427-2021
P04	Mercury and its compounds	EU	RoHS Directive (2011/65/EU), REACH regulation (No.1907/2006), Battery regulation ((EU) 2023/1542) and Packaging & Packaging Waste Directive (94/62/EC)
		China	GB24427-2021
P05	Polybrominated biphenyls (PBBs)	EU	RoHS Directive (2011/65/EU), REACH regulation (No.1907/2006) and POPs regulation ((EU) 2019/1021)
P06	Polybrominated diphenyl ethers (PBDEs)	EU	RoHS Directive (2011/65/EU), REACH regulation (No.1907/2006) and POPs regulation ((EU) 2019/1021)
P07	Phthalate esters (DEHP, DBP, BBP and DIBP)	EU	RoHS Directive (2011/65/EU) and REACH regulation (No.1907/2006)
		U.S.	Proposition 65
P08	Bis(tributyltin)oxide (TBTO)	EU	REACH regulation (No.1907/2006)
		Japan	Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., Specified Chemical Substances Class 1
P09	Tri-substituted organostannic compounds (including tributyltin and triphenyltin compounds)	EU	REACH regulation (No.1907/2006)
		Japan	Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., Specified Chemical Substances Class 1

No.	Name of substance	Reference laws and regulations	
P10	Polychlorinated biphenyls (PCBs)	EU	REACH regulation (No.1907/2006) and POPs regulation ((EU) 2019/1021)
		U.S.	TSCA
		Japan	Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., Specified Chemical Substances Class 1
P11	Polychlorinated terphenyls (PCTs)	EU	REACH regulation (No.1907/2006)
P12	Polychlorinated naphthalene	EU	POPs regulation ((EU) 2019/1021)
		Japan	Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., Specified Chemical Substances Class 1
P13	Short-chained chlorinated paraffin	EU	REACH regulation (No.1907/2006) and POPs regulation ((EU) 2019/1021)
P14	Asbestos	EU	REACH regulation (No.1907/2006)
		U.S.	TSCA
		Japan	Industrial Safety and Health Law
P15	Azocolourants and azodyes which form certain aromatic amines	EU	REACH regulation (No.1907/2006)
P16	Ozone depleting substances	EU	Directive on Ozone Depleting Substances ((EC) No 1005/2009)
		U.S.	Clean Air Act
		Japan	Law Concerning the Protection of the Ozone Layer through the Control of Specified Substances and Other Measures
P17	Radioactive substances	Japan	Nuclear Reactor Regulation Law
P18	Formaldehyde	EU	REACH regulation (No.1907/2006)
		U.S.	TSCA
		Canada	Formaldehyde Emissions from Composite Wood Products Regulations (SOR/2021-148)
		Germany	Chemicals prohibitive regulation
		Denmark	Formaldehyde regulation
P19	Polyvinyl chloride (PVC)	Republic of Korea	Act on the promotion of saving and recycling of resources
P20	Perfluorooctane sulfonate (PFOS) and its salts and PFOS-related substances	EU	POPs regulation ((EU) 2019/1021)
		Japan	Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., Specified Chemical Substances Class 1.
P21	2-(2 <i>H</i> -1,2,3-benzotriazole-2-yl)-4,6-di- <i>tert</i> -butylphenol (UV-320)	EU	REACH regulation (No.1907/2006)
		Japan	Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., Specified Chemical Substances Class 1.
P22	Cobalt dichloride	EU	REACH regulation (No.1907/2006)
P23	Beryllium oxide	Japan	Industrial Safety and Health Law
P24	Dimethyl fumarate (DMF)	EU	REACH regulation (No.1907/2006)
P25	Dibutyltin (DBT) compounds	EU	REACH regulation (No.1907/2006)

P26	Diocetyl tin (DOT) compounds	EU	REACH regulation (No.1907/2006)
No.	Name of substance	Reference laws and regulations	
P27	Hexabromocyclododecane (HBCDD)	EU	REACH regulation (No.1907/2006) and POPs regulation ((EU) 2019/1021)
		Japan	Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., Specified Chemical Substances Class 1.
P28	Polycyclic aromatic hydrocarbon (PAH)	EU	REACH regulation (No.1907/2006)
P29	Perfluorooctanoic acid (PFOA) and its salts and PFOA-related substances	EU	POPs regulation ((EU) 2019/1021)
		Norway	Product Regulations
P30	Phosphate ester flame retardants (TCEP, TCPP and TDCPP)	EU	REACH regulation (No. 1907/2006)
		U.S.	Vermont's Act 85 and Proposition 65
P31	Fluorinated greenhouse gases (HFC, PFC and SF ₆)	EU	(EU) No. 517/2014 on fluorinated greenhouse gases
P32	Perfluorocarboxylic acids (PFCAs) C9-14 and its salts and PFCA-related substances	EU	REACH regulation (No.1907/2006)
		Canada	Prohibition of certain toxic substances regulations
P33	Phenol, Isopropylated, Phosphate (3:1) (PIP(3:1))	U.S.	TSCA
P34	Pentachlorothiophenol (PCTP)	U.S.	TSCA
P35	Pentachlorophenol (PCP) and its salts, and esters	EU	POPs regulation ((EU) 2019/1021)
P36	1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus" TM)	EU	POPs regulation ((EU) 2019/1021)
P37	2-(2 <i>H</i> -benzotriazol-2yl)-4,6-ditertp entylphenol (UV-328)	EU	POPs regulation ((EU) 2019/1021)
		Japan	Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., Specified Chemical Substances Class 1.
P38	Perfluorohexanesulfonic acid (PFHxS) and its salts and PFHxS-related substances	EU	POPs regulation ((EU) 2019/1021)
P39	Perfluorohexanoic acid (PFHxA) and its salts and PFHxA-related substances	EU	REACH regulation (No. 1907/2006)
P40	Perfluoroalkyl substances and Polyfluoroalkyl substances (PFAS)	U.S.	California Health and Safety Code (Textile Articles: PFAS) (AB1817, 2022)
P41	Mineral oil (MOAH and MOSH)	France	France's Anti-waste and Circular Economy Law

7. Amended Contents

10th Edition	Main change points
2. Scope	"Audio-Technica Haining Trading Co., Ltd." was added onto the list of member companies and offices of AT Group.
Prohibited substances	<ul style="list-style-type: none"> • Updated of target applications and Criterion/threshold values. <ul style="list-style-type: none"> P02 「Hexavalent chromium compounds」 P08 「Bis(tributyltin)oxide (TBTO)」 P09 「Tri-substituted organostannic compounds (including tributyltin and triphenyltin compounds)」 P18 「Formaldehyde」 P20 「Perfluorooctane sulfonate (PFOS) and its salts and PFOS-related substances」 P21 「2-(2<i>H</i>-1,2,3-benzotriazole-2-yl)-4,6-di-<i>tert</i>-butylphenol (UV-320)」 P27 「Hexabromocyclododecane (HBCDD)」 • Changed the below controlled substance to prohibited substance. <ul style="list-style-type: none"> P36 「1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"TM)」 P37 「2-(2<i>H</i>-benzotriazol-2yl)-4,6-ditertpentylphenol (UV-328)」 • Added the below substances. <ul style="list-style-type: none"> P20 「Perfluorooctane sulfonate (PFOS) and its salts and PFOS-related substances」 P35 「Pentachlorophenol (PCP) and its salts, and esters」 P38 「Perfluorohexanesulfonic acid (PFHxS) and its salts and PFHxS-related substances」 P39 「Perfluorohexanoic acid (PFHxA) and its salts and PFHxA-related substances」 P40 「Perfluoroalkyl substances and Polyfluoroalkyl substances (PFAS)」 P41 「Mineral oil (MOAH and MOSH)」
5-2-3. Mineral oil in packaging materials and printed materials (MOAH and MOSH)	• Added the below substances.
5-2-4. Heavy metal in battery (cadmium, lead and mercury)	<ul style="list-style-type: none"> • Updated of target applications and Criterion/threshold values. <ul style="list-style-type: none"> P03 「Lead and its compounds」