WWP - World-Wide Procedure

Global Specification for the Environment (GSE): Product Substances & Material Requirements

WWP-751707.007

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Logitech Company Confidential

Table of Contents

1. Purpose

As part of Logitech commitment to health, safety and the environment, Logitech is responsible for ensuring that Logitech's products or parts, product-packaging and transport materials delivered to Logitech and some manufacturing processes used to make Logitech parts, are safe at any stage of production. We must monitor all harmful substances strictly and make sure that our products comply with regulations and further control potentially risky substances to reduce the impact on users and the environment.

2. Scope

This specification (GSE: Product Substances & Material Requirements) is one component of *WWP-750779.0000 "Logitech (GSE) Global Specification for Environment Requirements"* This document establishes Logitech requirements for control of hazardous or toxic substances and materials in Logitech products and packaging. All of the requirements set out in this specification are defined by law or Logitech mandatory policy.

This specification applies to:

- All materials for use in Logitech Products and packaging.
- Logitech Suppliers, including relevant Component Suppliers and Joint Design Manufactures (JDMs).
- All Sites/Regions

This specification does not apply to:

- Workplace emissions WWW-751712

3. Definitions

The following defined terms and acronyms are used in this document.

Term	Definition
Logitech mandatory limits	It means that Logitech goes beyond regulatory requirements and spontaneously strengthens the control of certain hazardous substances based on best industry practices.
Threshold	It means maximum concentration value. When the threshold is reached, the further obligations will be implemented depending on the regulations.
Limits	The maximum concentration at which a restricted substance can be present. No exceedances are allowed.
Intentionally added	It means the deliberate use in the formulation of a product or subpart where its continued presence is desired in the final product or subpart to provide a specific characteristic, appearance or quality
Prohibited	Substances listed are not allowed to be present at or above detectable concentrations. Substances are not allowed to be intentionally or unintentionally added (due to impurities or recycled content) to the Product, packaging, label, etc.
CAS no.	It means unique numerical identifiers for chemical substances.
EC no.	It means a unique seven-digit identifier that was assigned to substances for regulatory purposes within the European Union by the European Commission.
Homogeneous materials	It means one material of uniform composition throughout or a material, consisting of a combination of materials, that cannot be disjointed or separated into different materials by mechanical actions such as unscrewing, cutting, crushing, grinding and abrasive processes. The definition is consistent with Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS).
Material	Materials are chemical substances and preparations that are supplied for the production of parts and Products (for example structural plastics, metals, coatings, paints, adhesives) and chemical substances or preparations that are shipped with Products, such as cleaners, lubricants, oils, and refrigerants.

Term	Definition
ppm	This is an abbreviation for "parts per million" and it also can be expressed as milligrams per liter (mg/L). This measurement is the mass of a chemical or contaminate per unit volume of water.
ppb	Parts per billion by weight of a substance; equivalent to 0.001 mg/kg or 0.0000001 percent by weight.
Parts	An amount or section which, when combined with others, makes up the whole of the article or product.
Battery or accumulator	Any source of electrical energy generated by direct conversion of chemical energy and consisting of one or more primary battery cells (non-rechargeable) or consisting of one or more secondary battery cells (rechargeable). This definition is from the EU Directive 2006/66/EC on batteries and accumulators and waste batteries and accumulators
Packaging	Material that is used to protect or contain a product during transportation, storage, marketing or use. Packaging also includes any item that is physically attached to, or included with, a product or its contents for the purpose of marketing the product or communicating information about the product.

4. Document Control

This specification is subject to review and potential update a minimum of once annually and where necessary to ensure continued alignment with relevant legal requirements and international good practice.

5. Requirements for product substances and materials

5.1 EU RoHS Restricted Substances

Table 1 : The following restricted substances are also applicable to other relevant regulatory restrictions, such as battery regulations, US TPCH regulations, REACH annex XVII, etc.

Restrictions in Table 1 apply to all homogeneous materials used in Logitech products, accessories, and packaging. =>Where Logitech policy includes a substance limit, this limit is mandatory and applies without restrictions, even when this threshold is set below the limit found in the most stringent legislation.

Substance category	CAS no.	References	Scope	Logitech mandatory limits	Examples of Use
Cadmium (Cd) and its compounds.	7440-43-9 Several	RoHS Directive 2011/65/EU ANNEX XVII of REACH Regulation (EC) No 1907/2006 China MII Methods; Korea RoHS; Japan J-MOSS; US/CA SB-20/50	All, except batteries	50 ppm	Pigment, anti-corrosion surface treatment, optical glass, plating, solder, electric contact, contact point, zinc plating, stabilizer,
		Regulation (EU) 2019/1020	All batteries	20 ppm	All batteries
Hexavalent chromium (Cr VI) and its compounds	18540-29-9 Several	RoHS Directive 2011/65/EU ANNEX XVII of REACH Regulation (EC) No 1907/2006 China MII Methods; Korea RoHS; Japan J-MOSS; US/CA SB-20/50	All, except Leather	500 ppm	Plating, anti-corrosion surface treatment. Zinc chromate, screws passivation decorative surface treatment
			Leather	3 ppm	Leather articles coming into contact with the skin
Lead (Pb) and its compounds	7439-92-1 Several	RoHS Directive 2011/65/EU China MII Methods; Korea RoHS; Japan J-MOSS; US/CA SB-20/50	All other materials	1000 ppm	Tin solder materials, free-machining alloy, free-cutting steels, optical materials, curing agent, vulcanizing agent, ferroelectrics. Rubber hardener,
		Consumer Product Safety Improvement Act of 2008 (CPSIA)	In homogeneous PVC, plastic, ink, display and paint materials.	90 ppm	Pigment, paint, inks, rubber hardener.
		Regulation (EU) 2019/1020	All batteries	40 ppm	All batteries
Mercury (Hg) and its compounds	7439-97-6 Several	RoHS Directive 2011/65/EU China MII Methods; Korea RoHS; Japan J-MOSS; US/CA SB-20/50 Vermont management of exposure to mercury Rhode Island General Laws 23- 24.9 and amendment of 2007 Louisiana Mercury Risk Reduction Act	All, except batteries	Not intentionally added 1000 ppm	Fluorescent bulb, contact point material, pigment, anti-corrosion, switches, Antibacterial treatment.
		Regulation (EU) 2019/1020	All batteries	5 ppm	All batteries

Substance category	CAS no.	References	Scope	Logitech mandatory limits	Examples of Use
Polybrominated biphenyls (PBBs)	59536-65-1 Several	RoHS Directive 2011/65/EU; China MII Methods; Korea RoHS; Japan J-MOSS POPs Regulation (EU) 2019/1021	All	Not intentionally added[1] 1000 ppm	Flame retardant
Polybrominated diphenyl ethers (PBDEs)	1163-19-5 Several	RoHS Directive 2011/65/EU; China MII Methods; Korea RoHS; Japan J-MOSS, Japan J-MOSS, Japan Law concerning the evaluation of chemical substances. POPs Regulation (EU) 2019/1021	All	Not intentionally added 500 ppm	Flame retardant in polymers Packaging materials.
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	RoHS Directive 2011/65/EU California Prop 65 ANNEX XVII of REACH Regulation (EC) No 1907/2006 US TPCH US CPSIA, EU Toys	All, except packaging	1000 ppm.	PVC on wires, cables, insulation materials. Transparent films made of PVC, PU, flexible materials. Plasticised material.
Dibutyl phthalate (DBP)	84-74-2				
Benzyl butyl phthalate (BBP)	85-68-7		Packaging	100 ppm (Total)	Packaging
Diisobutyl phthalate (DIBP)	84-69-5				

[1] Unavoidable impurities or unintentional trace contaminants such incidental material is not intentionally added

5.2 Additional Substances Restricted by Legislation in Force.

TABLE 2 : The following substances are regulated by one or more legislations around the world

Restrictions in Table 2 apply to all parts/materials used in Logitech products, accessories, and packaging. =>Where a Logitech voluntary restricted threshold is specified for a given substance, this mandatory limit applies without restrictions, even when this threshold is set below the limit found in the most stringent legislation.

Substance category	CAS no.	References	Scope	Logitech mandatory limits	Examples of Use
Antimicrobial & Biocidal substances	Several https://echa.europa.eu/regulations/biocidal-products-regulation/understanding-bpr	EU No. 528/2012 (BPR) US EPA	All	Exceptional approvals may be granted following special review of specific biocides by Logitech	Additive in polymers, leather, external parts and other coated materials
Arsenic (As) compounds	7440-38-2 Several	[Japan PRTR; EU 2009/251/EC (wood)] ANNEX XVII of REACH Regulation (EC) No 1907/2006	All, except packaging Semiconductors are exempt.	1000 ppm	Display glass, Ceramic
			Packaging	Prohibited for treated wooden materials	Wood preservative Packaging materials.
Asbestos and its compounds	Appendix A	ANNEX XVII of REACH Regulation (EC) No 1907/2006; US TSCA; Swiss Ordinance on Reduction of Risk from Chemical Products	All	Prohibited	Insulator, filler, pigment, paint, talc
Azocolourants and Azodyes (Azo compounds)	Appendix B	ANNEX XVII of REACH Regulation (EC) No 1907/2006	Textiles and leather	30 ppm (Total)	Pigment, dyes, colorants
Chlorinated Paraffins, Short Chain (SCCP)	Appendix C	POPs Regulation (EU) 2019/1021; Swiss Ordinance on Reduction of Risk from Chemical Products.	All	1000 ppm (Total)	Plasticizer for PVC, paints, adhesives and sealants; flame retardants in textiles and polymeric materials
DecaBDE	1163-19-5	EPA, TSCA section 6(h) POPs Regulation (EU) 2019/1021	All	Not intentionally added[1]	Plastics, wire and cable insulation
Dimethyl fumarate (DMFu)	624-49-7	ANNEX XVII of REACH Regulation (EC) No 1907/2006	All	0.1 ppm	Biocide, mold treatment of electronic, leather products, mixed with desiccant Packaging materials.

[1] Unavoidable impurities or unintentional trace contaminants such incidental material is not intentionally added

Substance category	CAS no.	References	Scope	Logitech mandatory limits	Examples of Use
Elemental Chlorine	7782-50-5 Several	IEEE 1680.1-2018	Packaging	Prohibited	Paper-based and fiber-based packaging
Ethylene Glycol Ethers	Various	GB 30981-2020	All	Less than 1%	Used as solvent
Expanded Polystyrene (EPS)	9003-53-6	Plastic Reduction Act 2021 Western Australia's Plan for Plastics Logitech Policy	Packaging	Prohibited	Loose-fill Expandable Polystyrene (commonly known as "Styrofoam packing peanuts) Molded EPS to be banned in July 2024
Fluorinated greenhouse gases (GHG, F-gases) (PFC, SF6, HFC)	Appendix D	EU Regulation No 517/2014	All	Prohibited	Refrigerants, blowing agents, extinguishing agents, cleaning agents, insulating media, caustic gas.
Formaldehyde	50-00-0	U.S. EPA TSCA Title VI CARB Rule Germany-ChemVerbotsV	Composite wood products or components	In composite wood CARB phase 2 PB 0.09 ppm MDF 0.11 ppm ThinMDF 0.13 ppm HWPW 0.05 ppm ≤ 0.1 ppm (DIN EN 16516)	Speaker subwoofer Stereo cabinets, kiosk enclosures Packaging materials.
		[Austria] BGB I 1990/194: Formaldehyde Restriction §2, 12/2/1990; GB 18401-2003/2005; GB 20400-2006, Lithuanian Hygiene Norm HN 96:2000 (Hygiene standards and regulations) ANNEX XVII of REACH Regulation (EC) No 1907/2006	Textiles	75 ppm	Textiles
Halogenated Diphenyl Methanes	76253-60-6 81161-70-8 99688-47-8	ANNEX XVII of REACH Regulation (EC) No 1907/2006	All	1000 ppm	Capacitor, transformer
Heavy metals Cd, Cr6+, Pb and Hg	7440-43-9 18540-29-9 7439-97-6 7439-92-1	ANNEX XVII of REACH Regulation (EC) No 1907/2006 US TPCH	Packaging	100 ppm (Total)	Packaging materials
Hexabromocyclododecane (HBCDD)	25637-99-4 3194-55-6 134237-50-6 134237-51-7 134237-52-8	ANNEX XVII of REACH Regulation (EC) No 1907/2006 POPs Regulation (EU) 2019/1021	Plastics, PVC, PCB	Not intentionally added; 100 ppm if incidentally present[2]	Flame retardant in PVC, connector housing.

[2] Incidentally present means presence as unavoidable impurities or unintentional trace contaminants; such incidental material is not intentionally added.

Substance category	CAS no.	References	Scope	Logitech mandatory limits	Examples of Use
Hexachlorobutadiene (HCBD)	87-68-3	EPA, TSCA section 6(h)	All	Prohibited	Primarily generated as a by-product of the manufacture of chlorinated hydrocarbons
Mineral Oil MOAH consisting of 1 to 7 aromatic rings MOSH consisting of 16 to 35 carbon atoms	Several	Article D543-45-1 and D543-213 of the environment code	Ink for packaging and printed paper	≤ 0.1% and ≤ 1 ppm MOAH compounds containing 3 to 7 aromatic rings	Inks in cardboard-paper packaging Pretty box , manual , label… etc.
Nickel (Ni) and its compounds	7440-02-0 Several	ANNEX XVII of REACH Regulation (EC) No 1907/2006	All, where prolonged skin contact is expected	Release greater than 0.5 µg/cm2 /week must not be used on the external surface of any product part designed to be frequently handled or touched while carrying the product (or intended to be in direct and prolonged skin contact)	Stainless steel, plating; example application for prolonged skin contact is headphone, mobile phone, buttons and keys.
Oxo-biodegradable Plastics		Directive 2019/904	Packaging	Prohibited	Packaging materials
Ozone depleting substances (ODS) (CFCs, halons, HBFCs, HCFCs)	Appendix E	EU EC No. 2037/2000 EC 1005/2009 US Clean Air Act Montreal Protocol EC No. 2037/2000	All	Prohibited	Added refrigerant, foaming agent, extinguishant, solvent cleaner. Packaging materials.
Pentachlorophenol and its salts and esters	87-86-5 Several	POPs Regulation (EU) 2019/1021	All	Prohibited	Textile Bactericide in leather tanning and textiles; biocide for wood. Packaging materials.
Pentachlorothiophenol (PCTP)	133-49-3	EPA, TSCA section 6(h)	All	≤ 1 % by weight	Is used to make rubber more pliable in industrial uses
Perfluoroalkyl and polyfluoroalkyl substances (PFAS)	Appendix F	US TPCH	Packaging	Prohibited	Packaging materials or packaging components.
PFCAs (C9-C14), their salts and related substances	Appendix F	ANNEX XVII of REACH Regulation (EC) No 1907/2006	All	25 ppb for the sum of C9-C14 PFCAs and their salts 260 ppb for the sum of C9-C14 PFCA-related substances	Waterproof coating, semiconductor manufacturing.
PFHxA, its salts and related substances	Appendix F	Draft in ANNEX XVII of REACH Regulation (EC) No 1907/2006	All	25 ppb for the sum of PFHxA and its salts 1000 ppb for the sum of PFHxA related substances	Stain-resistant fabrics and packaging
PFHxS, its salts and related substances	Appendix F	Draft in POPs Regulation (EU) 2019/1021	All	25 ppb for the sum of PFHxS and its salts 1000 ppb for the sum of PFHxS related substances	Stain and water-resistant materials and paint additives.

Substance category	CAS no.	References	Scope	Logitech mandatory limits	Examples of Use
Perfluorooctanoic acid (PFOA), and its salts and related substances	Appendix G	FOR-2004-06-01 Nr 922 (Section 2-32) ANNEX XVII of REACH Regulation (EC) No 1907/2006 amended by EU 2017/1000 Logitech Policy POPs Regulation (EU) 2020/784 US TPCH	Packaging	Prohibited	Packaging materials Fabric and Latex printing inks
			All, except packaging and coated materials	≤ 25 ppb for PFOA and any of its salts ≤ 1 ppm for each PFOA-related compound and a combination of PFOA-related compounds ≤ 1 ppm for PFOA and its salts in PTFE micropowders produced by specified techniques.	Emulsion stabilizer in plastic part Surfactant, impregnation agent in textiles
			Coated materials	< 1 µg/m2 coated area	Textiles and other coated materials
Perfluorooctane Sulfonates (PFOS) and compounds	Appendix H	POPs Regulation (EU) 2019/1021 US TPCH	Packaging	Prohibited	Packaging materials
			All, except packaging	≤ 10 ppm in substances or in mixtures. ≤ 0.1% in semi-products or Articles. < 1 µg/m^2 textile or coating materials	Antistatic agent for films and plastics, textiles
Phenol,2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)- (UV320)	3846-71-7	ANNEX XVII of REACH Regulation (EC) No 1907/2006 Japan (Law Concerning the Examination and Regulation of Manufacture)	All	Prohibited	Adhesives, paints, printing inks, plastics, inked ribbons, putty, caulking or sealing fillers
2,4,6-Tris(tert-butyl)phenol (2,4,6-TTBP)	732-26-3	EPA, TSCA section 6(h)	All	≤ 0.3% by weight	Oil or lubricant additive
Phthalates (DEHP, DBP, BBP, DIBP, DIDP, DnHP, DNOP, DINP, DMEP, DnPP)	Appendix I	ANNEX XVII of REACH Regulation (EC) No 1907/2006 US CPSIA, EU Toys Logitech Policy	All	1000 ppm	PVC on wires, cables, insulation materials Transparent films made of PVC. PU. flexible materials.
		US TPCH	Packaging	100 ppm (Total)	Package or packaging component
Phenol, isopropylated phosphate (3:1) (PIP (3:1))	68937-41-7	EPA, TSCA section 6(h)	All	Prohibited	Plasticizer, a flame retardant, an anti-wear additive, or an anti-compressibility additive in hydraulic fluid, lubricating oils, lubricants and greases, various industrial coatings, adhesives, sealants, and plastic articles
Polychlorinated biphenyls (PCBs) and specific substitutes	1336-36-3 Several	Japan Law concerning the evaluation of chemical substances; Directive 96/59/EC US TSCA. POPs Regulation (EU) 2019/1021	All	Prohibited	Insulation oil, lubricant oil, electrical insulation medium, solvent, electrolytic solution; plasticizers, flame retardants, dielectric sealants
Polychlorinated naphthalenes (PCNs) (more than 3 chlorine atoms)	70776-03-3 Several	Japan Law concerning the evaluation of chemical substances	All	Prohibited	Lubricant, paint, stabilizer (electric characteristic, flame resistant, water resistant), insulator

Substance category	CAS no.	References	Scope	Logitech mandatory limits	Examples of Use
Polychlorinated terphenyls (PCTs)	61788-33-8 Several	ANNEX XVII of REACH Regulation (EC) No 1907/2006	All	50 ppm	Insulation oil, lubricant oil, electrical insulation medium, solvent, electrolytic solution; plasticizers, flame retardants, coatings for electrical wire and cable, dielectric sealants
Polycyclic aromatic hydrocarbons (PAHs)	Appendix J	2019 GS-mark certification requirement ANNEX XVII of REACH Regulation (EC) No 1907/2006	Plastics, cable and rubbers External parts only	(GS mark certification) Use by children under 14 individual ≤ 0.2 ppm Sum of 15 PAHs less than 5 ppm Other consumers individual ≤ 0.5 ppm Sum of 15 PAHs less than 10 ppm (REACH) Each PAHs in below ≤ 1 ppm 1 Benzo[a]pyrene 2 Benzo[e]pyrene 3 Benzo[a]anthracene 4 Chrysen 5 Benzo[b]fluoranthene 6 Benzo[j]fluoranthene 7 Benzo[k]fluoranthene 8 Dibenzo[a,h]anthracene And Sum of 15 PAHs less than 10 ppm	Plastics, cable and rubbers…etc external parts
Radioactive substances	Several	EU-D 96/29/Euratom; Japan Law for the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors, 1986; Japan Law Concerning Prevention from Radiation Hazards; US NRC	All	Prohibited	Optical properties (thorium), measuring substances devices, gauges, detector
REACH Annex XVII	Search for the latest substance restriction on the ECHA website https://echa.europa.eu/substances-restricted-under-reach	ANNEX XVII of REACH Regulation (EC) No 1907/2006 and amendments	All	As the restriction on the list	REACH, Annex XVII
Tris(aziridinyl) phosphinoxide (TEPA)	545-55-1	ANNEX XVII of REACH Regulation (EC) No 1907/2006	Textile	Prohibited	Textile
Tris(2,3-dibromopropyl)phosphate (TDBPP)	126-72-7	ANNEX XVII of REACH Regulation (EC) No 1907/2006	Textile	Prohibited	Textile
Organotin compounds	Appendix K	ANNEX XVII of REACH Regulation (EC) No 1907/2006 Japan Law concerning the evaluation of chemical substances; Norwegian product regulation	All	1000 ppm	Stabilizer for PVC, curing catalyst for silicone resin and urethane resin

5.3 Additional Substances Restricted by Logitech

TABLE 3: The following substances may not be regulated by current regulations, but Logitech wants to reduce or limit their use within the given concentration limits on a voluntary and mandatory basis.

Restrictions in Table 3 apply to all parts/materials used in Logitech products, accessories, and packaging. =>Where a Logitech voluntary restricted threshold is specified for a given substance, this mandatory limit applies without restrictions, even when this threshold is set below the limit found in the most stringent legislation.

Substance category	CAS no.	References	Scope	Logitech mandatory limits	Examples of Use
Beryllium oxide (BeO)	1304-56-9	IEC 62474	All	1000 ppm	Ceramics
n-Hexane	110-54-3	2006/15/EC Occupational safety & health administration, Department of Labor, U.S.A. Occupational exposure limits for hazardous agents in the workplace, Chemical hazardous agents, China	Cleaning agents, degreasers, de-molder solutions in all manufacturing processes	Prohibited	Used as a cleaner to clean the product surface.
Latex Natural rubber	None	None	Materials intended to come into contact with the skin	Prohibited Refer to 5.3.1 for Labeling requirement	Mouse mate, elastic parts,
Polyvinyl chloride (PVC)	9002-86-2	JIG-101 ed 4.0, IEEE 1680 (EPEAT)	All	Prohibited (1) hard plastic parts (2) packaging material. (3) Flexible parts restrict PVC on external parts (ref. to Logitech PVC Free policy)	Insulator, transparency material, plastic films, tapes, suction cups. Packaging materials.
Zinc-air button cell battery		Maine Act Concerning Mercury-added Button Cell Batteries	Zinc-air button cell battery	Prohibited	Zinc-air button cell battery

5.3.1 Label requirement for the use of Latex (Natural rubber)

Use of natural rubber shall bear the following statement in bold print on the packaging. Following statement shall appear on the outside package, container or wrapper.

"Products containing Natural Rubber Latex may cause allergic reactions in some individual

5.4 Declarable Substances

TABLE 4: Contains more additional substances, not yet regulated, but either known as being hazardous for humans or the environment, or candidate for coming regulations. Even if not restricted, the presence of those substances inside components, sub-assemblies or products shall be disclosed to Logitech when the concentration is above the threshold level/Reporting level for declaration

Restrictions in Table 4 apply to all parts/materials used in Logitech products, accessories, and packaging. The substances that need to be declared are not limited to this table, and any substances required to be declared by regulations must meet the requirements.

Substance category	CAS no.	References	Scope	Logitech mandatory limits	Examples of Use
Antimony (Sb) and its compounds	7440-36-0 Several	None	Plastic polymer, epoxy	1000 ppm	Flame retardant (Sb2O3)
Beryllium (Be) and its compounds except BeO	7440-41-7 Several	IEC 62474 IEEE 1680 (EPEAT)	All	1000 ppm	Be-Cu alloys,
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV328)	25973-55-1	Draft in POPs Regulation (EU) 2019/1021	All	1000 ppm	UV-absorbers, especially for transparent plastic materials. UV-protection agents for plastics, rubber and polyurethanes.
Bismuth (Bi) and its compounds	7440-69-9 Several	None	Lead free solder	1000 ppm	Lead free solder
Boric Acid	10043-35-3	CLP Regulation Annex VI	Packaging	1000 ppm	Wood veneers/ pressed wooden panels Packaging materials.
Bisphenol A (BPA)	80-05-7	ANNEX XVII of REACH Regulation (EC) No 1907/2006 California Proposition 65	All	Detectable	Adhesives, plastics, epoxy resin
Chlorinated flame retardant (CFR)	Various	DIGITALEUROPE 2/CECED/AeA 3/ EERA guidance Halogen Free / BFR free initiatives	All, except PCB	1000 ppm	Epoxy and plastic
			PCB laminates	900 ppm	PCB
Cobalt dichloride (CoCl2)	7646-79-9	REACH SVHC	All, except Battery	1000 ppm	Silica gel desiccants and humidity indicators
Long-Chain Perfluoroalkyl Carboxylate (LC-PFACs) and Perfluoroalkyl Sulfonate	Appendix G & L	EPA TSCA 40 CFR part 721	All	Detectable	Coating materials

Substance category	CAS no.	References	Scope	Logitech mandatory limits	Examples of Use
Chlorinated Paraffins, Medium Chain (MCCP)	Appendix C	EPA TSCA Section 5	All	1000 ppm (Total)	Plasticizer for PVC, paints, adhesives and sealants; flame retardants in textiles and polymeric materials
Other brominated flame retardants (BFR) (other than PBBs, PBDEs & HBCDD)	Various	DIGITALEUROPE 2/CECED/ AeA 3/ EERA guidance Halogen Free / BFR free initiatives	All	900 ppm	Plastic parts > 25g, wires & cables theathing, labels… etc PCB, epoxy, plastics
Other phthalates (others than BBP, DBP, DEHP, DINP,DIDP,DNOP, DIBP,DnHP, DMEP, DnPP)	Various	None	All	1000 ppm	PVC cables & wires sheathing, flexible PVC materials
Other perfluoroalkyl and polyfluoroalkyl substances (PFAS)	Appendix F	Draft in POPs Regulation (EU) 2019/1021	All, except packaging	1000 ppm	Stain and water-resistant materials and paint additives.
PFCAs (C9-C21), their salts and related substances	Appendix F	Draft in POPs Regulation (EU) 2019/1021	All	1000 ppm	Stain and water-resistant materials and paint additives.
Perchlorates	14797-73-0	California Code of regulations, Title 22, Division 4.5, Chapter 33	All batteries	Labeling	Batteries, including accumulators.
Selenium (Se) and its compounds	7782-49-2 Several	IEEE 1680 (EPEAT)	All	1000 ppm	Anti-microbial coating in plastic products
Tetrabromobisphenol A (TBBPA)	79-94-7	California Prop 65	All	1000 ppm	Flame retardant use on electrical and mechanical components.
REACH Candidate list of SVHC	Search for the latest substance restriction on the ECHA website https://echa.europa.eu/candidate-list-table	REACH 1907/2006 and amendments	All	1000 ppm	All materials
Prop 65 list of chemicals	Search for the latest substance restriction on the OEHHA website https://oehha.ca.gov/proposition-65/proposition-65-list	California Proposition 65	All	Detectable	DMFa for PU leather. Carbon black for Resin
IEC 62474 Substances	Search for the latest substance restriction on the IEC website https://std.iec.ch/iec62474/iec62474.nsf/Index?open&q=075159	IEC 62474 database on material declaration	All	Various, as required by standard	All materials

5.5 CMR Substances of EU REACH Regulation (entry 72)

TABLE 5: The restriction of 33 CMRs in clothing, textiles and footwear is set out in entry 72 of Annex XVII to REACH by Regulation (EU) 2018/1513. The scope of entry 72 applies to textiles that are expected to be in contact with human skin under normal or reasonably foreseeable conditions of use:

Substance category	CAS no.	Threshold level / Reporting level	Analytical method
Cadmium (Cd) and its compounds (listed in Annex XVII, Entry 28, 29, 30, Appendices 1-6)	-	1 mg/kg after extraction (expressed as Cd metal that can be extracted from the material)	EN 16711-2:2015
Chromium VI (CrVI) compounds (listed in Annex XVII, Entry 28, 29, 30, Appendices 1-6)	-	1 mg/kg after extraction (expressed as Cr VI that can be extracted from the material)	EN ISO 17075-1:2017; EN ISO 17075-2 :2017 DIN 38405; Oekotex ST 201 M10ML102017
Arsenic (As) compounds (listed in Annex XVII, Entry 28, 29, 30, Appendices 1-6)	-	1 mg/kg after extraction (expressed as As metal that can be extracted from the material)	EN 16711-2:2015
Lead (Pb) and its compounds (listed in Annex XVII, Entry 28, 29, 30, Appendices 1-6)	-	1 mg/kg after extraction (expressed as Pb metal that can be extracted from the material)	
Benzene	71-43-2	5 mg/kg	e.g. VDA 278
Benz[a]anthracene	56-55-3	1 mg/kg (each)	AFPS GS 2014
Benz[e]acephenanthrylene	205-99-2		
benzo[a]pyrene; benzo[def]chrysene	50-32-8		
Benzo[e]pyrene	192-97-2		
Benzo[j]fluoranthene	205-82-3		
Benzo[k]fluoranthene	207-08-9		
Chrysene	218-01-9		
Dibenz[a,h]anthracene	53-70-3		
α,α,α,4-tetrachlorotoluene; p-chlorobenzotrichloride	5216-25-1		DIN 54232:2010
α,α,α-trichlorotoluene; benzotrichloride	98-07-7		
α-chlorotoluene; benzyl chloride	100-44-7		

Substance category	CAS no.	Threshold level / Reporting level	Analytical method
Formaldehyde	50-00-0	75 mg/kg	EN ISO 14184-1:2011 ISO 17226-1:2008
1,2-benzenedicarboxylic acid; di- C 6-8-branched alkylesters, C 7- rich	71888-89-6	1000 mg/kg (individually or in combination with other phthalates in this entry or in other entries of Annex XVII that are classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 in any of the hazard classes carcinogenicity, germ cell mutagenicity or reproductive toxicity, category 1A or 1B	EN ISO 14389:2014
Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8		
Diisopentylphthalate (DIPP)	605-50-5		
Di-n-pentyl phthalate (DnPP)	131-18-0		
Di-n-hexyl phthalate (DnHP)	84-75-3		
N-methyl-2-pyrrolidone; 1- methyl-2-pyrrolidone (NMP)	872-50-4	3000 mg/kg (each)	CEN ISO/TS 16189:2013
N,N-dimethylacetamide (DMAC)	127-19-5		
N,N-dimethylformamide; dimethyl formamide (DMF)	68-12-2		
1,4,5,8-tetraaminoanthraquinone; C.I. Disperse Blue 1	2475-45-8	50 mg/kg (each)	DIN 54231:2005
Benzenamine, 4,4'-(4-iminocyclohexa-2,5-dienylidenemethylene)dianiline hydrochloride; C.I. Basic Red 9	569-61-9		EN ISO 16373-2:2014 DIN 54231:2005
[4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien- 1-ylidene]dimethylammonium chloride; C.I. Basic Violet 3 with ≥ 0,1 % of Michler's ketone (EC no. 202-027-5)	548-62-9		
4-chloro-o-toluidinium chloride	3165-93-3	30 mg/kg (each)	EN ISO 14362:2017
2-Naphthylammoniumacetate	553-00-4		
4-methoxy-m-phenylene diammonium sulphate; 2,4-diaminoanisole sulphate	39156-41-7		
2,4,5-trimethylaniline hydrochloride	21436-97-5		
Quinoline	91-22-5	50 mg/kg	Extraction with methanol or THF, analysis by HPLC- MS/MS or HPLC-DAD

5.6 China Volatile Organic Compound (VOC) Regulations

China VOC regulations are mandatory requirements under Chinese law and cover a wide range of topics. Four of the standards relate to coatings, adhesives, inks and cleaning agents and are specifically relevant to Logitech standards.

Suppliers are required to comply with all relevant legal requirements, including and more particularly, the following standards. Please refer to each standard for more details on specific requirements.

GB standard	Standard name	Implement date
GB 30981-2020	Limit of harmful substances of industrial protective Coatings	2020-12-01
GB 33372-2020	Limit of volatile organic compounds content in Adhesive	
GB 38507-2020	Limits of volatile organic compounds (VOCs) in Printing inks	
GB 38508-2020	Limits for volatile organic compounds content in Clean agents	2020-04-01

5.6.1 GB 30981-2020 Limit of harmful substances of industrial protective Coatings

The standard specifies the product classification, requirements, test methods, inspection rules, packaging labels, and implementation of standards involved in the allowable limits of substances harmful to humans and the environment in industrial protective coatings. This standard applies to all types of industrial protective coatings (except ship coatings) that protect the surfaces of metals, concrete, plastics, etc.

Exemptions: Special functional coatings refer to insulating coatings, anti-fingerprint coatings for touch screens and optical plastic sheets, and PTFE coatings sintered at a high temperature above 150°C (chemical medium resistance, wear resistance, lubrication, no Adhesive, functional), fluorosilicone paint for elastomers, silver electroplating effect paint (radiation curing type), marking paint, electronic component protection paint (anti-acid mist, dust and moisture and other special functions).

TABLE 6: Limit of harmful substances of industrial protective Coatings

Coating (Paint)		Solvent-based	Solvent-free coatings	Water-based	Radiation curing- Water base	Radiation curing- Non water base
VOC (g/L)	Coatings for electrical and electronic products	Primer ≤ 600 Paint ≤ 700 Varnish ≤ 650	≤ 100	Primer ≤ 420 Paint ≤ 420 Varnish ≤ 420	Spray ≤ 400 Other ≤ 150	Spray ≤ 550 Other ≤ 200
	Package Coating Non-stick coating	≤ 420		Primer ≤ 480 Floating coat ≤ 350 Finishing coat ≤ 300		
	Package Coating Other	Roll coating (coiled material) ≤ 780 Roll coating (sheet) ≤ 680 Spray coating ≤ 750		Roll coating (sheet) ≤ 480 Spray coating ≤ 400		
Solvent	Benzene CAS # 71-43-2	≤ 0.3%				≤ 0.3%
	Sum of Toluene, Xylene, Ethylene benzene	≤ 35%				≤ 35%
	Sum of halogenated hydrocarbon	≤ 1%				≤ 1%
	Sum of PAHs	≤ 500 ppm				≤ 500 ppm
	Methanol	≤ 1% (Inorganic coating only)				
	Sum of glycol ether and ether ester*	≤ 1%		≤ 1%	≤ 1%	≤ 1%
Heavy metal	Pb	≤ 1000 ppm	≤ 1000 ppm	≤ 1000 ppm	≤ 1000 ppm	≤ 1000 ppm
	Cd	≤ 100 ppm	≤ 100 ppm	≤ 100 ppm	≤ 100 ppm	≤ 100 ppm
	Cr6+	≤ 1000 ppm	≤ 1000 ppm	≤ 1000 ppm	≤ 1000 ppm	≤ 1000 ppm
	Hg	≤ 1000 ppm	≤ 1000 ppm	≤ 1000 ppm	≤ 1000 ppm	≤ 1000 ppm

*Total content of glycol ether and ether ester (water-based paint, solvent-based paint, radiation-curable paint) %,
Limit to Ethylene glycol monomethyl ether (109-86-4), Ethylene glycol monomethyl ether acetate (111-15-9), Ethylene glycol ethyl ether (110-80-5), Ethylene glycol monoethyl ether acetate(CAC) (111-15-9), Ethylene glycol dimethyl ether (110-71-4) , Ethylene glycol diethyl ether (629-14-1), Diethylene glycol dimethyl ether (111-96-6), Triethylene glycol monomethyl ether (112-49-2)

Remarks:
VOC (Volatile organic compounds) Organic compounds under standard atmospheric pressure 101.3 kPa and initial boiling point less than or equal to 250°C participate in the photochemical reaction. Test method: Refer to GB/T 5206-2015. Definition 2.271

5.6.2 GB 33372-2020 Limit of volatile organic compounds content in Adhesive

This standard specifies the limit requirements, test methods, inspection rules and packaging marks for the content of volatile organic compounds (VOC) in adhesives under specified conditions. This standard applies to the limitation of the content of volatile organic compounds in solvent-based, water-based and bulk adhesives.

Exemptions: As an intermediate or an adhesive that has not yet entered the market as a raw material for production. Adhesives used in any research, development, quality assurance and analysis laboratory experiment evaluation. Urea formaldehyde, phenol formaldehyde and melamine formaldehyde adhesive. Special functional surface treatment agent when bonding materials.

TABLE 7: Limit of volatile organic compounds content in Adhesive

Product type	Adhesive type											
VOC (g/L)	Solvent-based					Water-based						
	CR, Chloroprene rubber	SBS rubber	PU type	Acrylics	Other	Polyvinyl acetates	Polyvinyl alcohol	Rubber	PU type	Vinyl acetate-ethylene copolymer emulsions(VAE)	Acrylics	Other
Assembling	≤ 600	≤ 550	≤ 250	≤ 510	≤ 250	≤ 100	--	≤ 100	≤ 50	≤ 50	≤ 50	≤ 50
Packaging	≤ 600	≤ 500	≤ 400	≤ 510	≤ 500	≤ 50	--	≤ 50	≤ 50	≤ 50	≤ 50	≤ 50
Other	≤ 600	≤ 500	≤ 250	≤ 510	≤ 250	≤ 50	≤ 50	≤ 50	≤ 50	≤ 50	≤ 50	≤ 50
-Adhesive products are expressly used for a variety of purposes, taking the minimum amount of each requirement.												

VOC (g/L)	Bulk Adhesive								
	Silicones	MS*	PU type	Polysulfides	Acrylics	Epoxy resins	α-cyano-acrylic acids	Thermo-plastics**	Others
Assembling	≤ 100	≤ 100	≤ 50	≤ 50	≤ 200	≤ 100	≤ 20	≤ 50	≤ 50
Packaging	≤ 100	≤ 50	≤ 50	--	--	--	--	≤ 50	≤ 50
Other	≤ 100	≤ 50	≤ 50	≤ 50	≤ 200	≤ 50	≤ 20	≤ 50	≤ 50
* MS refers to the adhesive with silane modified polymer as the main material. ** Thermoplastics refer to thermoplastic polyolefin or thermoplastic rubber.									

Single VOC	Benzene Type (Benzene, Toluene, Xylene)	The content of single volatile organic compounds in the adhesive product, should meet the requirements of GB 30982 or GB 19340
	Halogenated hydrocarbon*	
	Toluene diisocyanate	
	Free formaldehyde	

Remarks:
VOC (Volatile organic compounds) Organic compounds under standard atmospheric pressure 101.3 kPa and initial boiling point less than or equal to 250°C participate in the photochemical reaction. Test method: Refer to GB 33372-2020.

5.6.3 GB 38507-2020 Limits of volatile organic compounds content in Printing inks

This standard specifies the content limit of VOCs, provides the relevant ink terms and defines classification requirements, test methods, inspection rules and packaging marks for printing ink. This standard applies to various inks in factory status.
Exemptions: The additives and diluents used to adjust the functionality of the ink and ink detergent used for the printing cleanness.

TABLE 8: Limits of volatile organic compounds (VOCs) in Printing inks

GB 38507-2020 Limits of volatile organic compounds (VOCs) in printing ink			
Product type	**Printing inks type**		**VOC Limit (%)**
Solvent-based ink	Gravure ink		≤ 75
	Flexographic ink		≤ 75
	Ink-jet ink		≤ 95
	Screen ink		≤ 75
Water-based ink	Gravure ink	Absorbent printed material	≤ 15
		Non-absorbent printed material	≤ 30
	Flexographic ink	Absorbent printed material	≤ 5
		Non-absorbent printed material	≤ 25
	Ink-jet ink		≤ 30
	Screen ink		≤ 30

GB 38507-2020 Limits of volatile organic compounds (VOCs) in printing ink		
Product type	**Printing inks type**	**VOC Limit (%)**
Offset ink	Sheet-fed offset ink	≤ 3
	Cold-set web-fed ink	≤ 3
	Heat-set web-fed ink	≤ 10
Energy curing ink	Offset ink	≤ 2
	Flexographic ink	≤ 5
	Screen ink	≤ 5
	Ink-jet ink	≤ 10
	Gravure ink	≤ 10
Engraving gravure ink		≤ 20

Remarks:
VOC (Volatile organic compounds) Organic compounds under standard atmospheric pressure 101.3 kPa and initial boiling point less than or equal to 250°C participate in the photochemical reaction. Test method: Refer to GB/T38608—2020. Except the energy curing ink-Gravure ink refers to GB/T34675-2017.

TABLE 9: Prohibited solvents in printing ink

Name	CAS #
Halohydrocarbons	Various
Ethylbenzene	100-41-4
Propylene oxide	75-56-9
Styrene	100-42-5
Benzene	71-43-2
Isopropyl nitrite	541-42-4
Butyl nitrite	544-16-1
2-Ethoxyethanol	110-80-5
Ethyl glycol acetate	111-15-9
2-Methoxyethanol	109-86-4
2-Methoxyethyl acetate	110-49-6
2-Nitropropane	79-46-9
2-Nitropropane	79-46-9
N-Methyl-2-pyrrolidone	872-50-4
Triethylene Glycol Dimethyl Ether	112-49-2
1,2-Dimethoxyethane	110-71-4
Ethylene Glycol Diethyl Ether	629-14-1
Toluene	108-88-3
Xylene	1330-20-7

5.6.4 GB 38508-2020 Limits for volatile organic compounds content in Clean agents

This standard defines classification requirements, the content limit of VOCs, test methods, inspection rules and packaging marks for clean agents. This standard applies to the use of clean agents in industrial production and service activities production.
Exemptions: The clean agents used in semiconductor (including integrated circuits) manufacturing.

TABLE 10: Limits for volatile organic compounds content in Clean agents

GB 38508-2020 Limits for volatile organic compounds content in cleaning agent					
Product type		Clean Agent Type			
		Water-based	Semi-water-based		Organic solvent
			Standard	Low VOC	
VOC (g/L)		≤ 50	≤ 300	≤ 100	≤ 900
Solvent	Sum of Dichloromethane, Trichloromethane, Trichloroethylene, Tetrachloroethylene (%)	≤ 0.5	≤ 2	≤ 0.5	≤ 20
	Formaldehyde (g/Kg)	≤ 0.5	≤ 0.5	≤ 0.5	---
	Sum of Benzene, Ethylbenzene, Toluene, Xylene (%)	≤ 0.5	≤ 1	≤ 0.5	≤ 2

Remarks:
VOC (Volatile organic compounds) Organic compounds under standard atmospheric pressure 101.3 kPa and initial boiling point less than or equal to 250°C participate in the photochemical reaction. VOC Test method: Refer to GB/T13137-2008. Sum of Dichloromethane, Trichloromethane, Trichloroethylene, Tetrachloroethylene VOC test: Refer to GB/T 23990-2009. Formaldehyde VOC test: Refer to GB/T 23993. Sum of Benzene, Ethylbenzene, Toluene, Xylene VOC test: Refer to GB/T 23992.

6. Requirements for Demonstrating Compliance

Logitech may request analytical test reports to prove compliance with any of the substances listed in this specification, and the cost will be borne by the supplier. In addition, the test report shall from an accredited laboratory to prove that it meets the requirements for the following substances in homogeneous materials:

Substance	Test method (Reference)	Legislation	Textile/Fabric	PU leather	Plastic	Metal
RoHS Substances Cadmium (Cd) Lead (Pb) Mercury (Hg) Hexavalent chromium (CrVI) Polybrominated biphenyls (PBB) Polybrominated diphenyl ethers (PBDE) Bis(2-ethylhexyl) phthalate (DEHP) Butyl benzyl phthalate (BBP) Dibutyl phthalate (DBP) Diisobutyl phthalate (DIBP)	IEC 62321-4:2013 +AMD1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017, IEC 62321-6:2015 IEC 62321-8:2017,	EU RoHS	N	N	**Y**	**Y**
PFAS eg. PFOA, PFOS, PFCA (C9-C21), PFHxS, PFHxA	CEN/TS 15968:2010	EU REACH-Annex XVII EU POPs Regulation	**Y**	**Y**	N	N
Hexabromocyclododecane (HBCDD)	ISO 17881-1: 2016	EU POPs Regulation	**Y**	**Y**	**Y**	N
10 Phthalates	IEC 62321-8:2017	EU RoHS EU REACH-Annex XVII CA Prop 65	**Y**	**Y**	**Y**	N
Formaldehyde	CNS14940 CNS 15580-1	EU REACH-Annex XVII China GB 18401 China GB 20400	**Y**	**Y**	N	N
Pentachlorophenol (PCP) and its salts and esters	LFBG 82.02.8	EU POPs Regulation	**Y**	**Y**	N	N
Organotin compounds	CNS15853-1	EU REACH-Annex XVII	**Y**	**Y**	N	N
Azocolourants and Azodyes	CNS 15204, CNS 16113-1&-3	EU REACH-Annex XVII China GB 18401 China GB 20400	**Y**	**Y**	N	N
Dimethylformamide (DMFa)	CEN ISO/TS 16189:2013	EU REACH-Annex XVII CA Prop65	**Y**	**Y**	N	N
15 PAHs	AfPS GS 2019:01 PAK	EU REACH CA Prop65 GS Mark	**Y**	**Y**	**Y**	N
Cadmium (Cd)	CNS 4797-2	EU RoHS EU REACH-Annex XVII	**Y**	**Y**	N	N
Lead (Pb)	CNS 4797-2	EU RoHS EU REACH-Annex XVII	**Y**	**Y**	N	N
Chromium (VI) (Cr^{6+})	EN ISO 17075-2:2017	EU RoHS EU REACH-Annex XVII	**Y**	**Y**	N	N
SCCP/MCCP	US EPA 3550C: 2007	EU POPs Regulation Norway PoHS	**Y**	**Y**	**Y**	N
Arsenic (As)	EN 16711-2: 2015	EU RoHS EU REACH-Annex XVII	**Y**	**Y**	N	N

Substance	Test method (Reference)	Legislation	Textile/Fabric	PU leather	Plastic	Metal
Dimethyl fumarate (DMFu)	US EPA 3550C:2007 US EPA 8270E:2018	EU REACH-Annex XVII	**Y**	**Y**	N	N
Benzene	US EPA 3550C:2007 US EPA 8270E:2018	EU REACH-Annex XVII	**Y**	**Y**	N	N
N,N-dimethylacetamide (DMAC)	CEN ISO/TS 16189:2013	EU REACH-Annex XVII	**Y**	**Y**	N	N
Bisphenol A (BPA)	US EPA 3550C: 2007	EU REACH-Annex XVII CA Prop 65	**Y**	**Y**	**Y**	N
Tetrabromobisphenol A (TBBPA)	US EPA 3540C	CA Prop 65	**Y**	**Y**	**Y**	N
Tris(aziridinyl) phosphinoxide (TEPA)	US EPA 3550C:2007 US EPA 8270E:2018	EU REACH-Annex XVII	**Y**	**Y**	N	N
Tris(2,3-dibromopropyl)phosphate (TDBPP)	US EPA 3550C:2007 US EPA 8270E:2018	EU REACH-Annex XVII	**Y**	**Y**	N	N
CMR REACH annex XVII Entry 72	Refer to Table 5	EU REACH-Annex XVII	Optional	Optional	N	N

7. Reference

7.1 Documents Referenced by this Document

Doc ID	Document Title
WWP-750779-0000	Logitech GSE Requirements

7.2 Specification Changes History

Summary of changes made to this specification.

Rev.	Revision description	Remarks	Date
001	Changes versus original STD 750779-0000 Rev C June 5, 2006 Deep changes made on layout & content. New tables of substances. - Following Section removed, now available as separate documents - Sect. 8 Packaging - Sect. 9 Batteries - Sect. 10 OEM specific requirements - Following Section obsolete: - Sect. 14 Appendix 5: Halogen Free design - Sect. 16 Appendix 7: additional Requirements for Toys design - Following Substances obsolete : - Chlorinated Hydrocarbons- duplication. - Halogenated Diphenyl methanes (includes in PCBs) - Pentachlorophenol – Wood only. - PFOA - no legislation from Norway - PCDF, PCDD - Not relevant. - TBBP-A, TBBP_A-bis - other BFRs. Triphenyl Phosphate – not relevant - New Substances added - Sect. 5.3 DMF - Sect. 5.3 Formaldehyde in composite wood - Sect. 5.3 Ban 10 phthalates - Concentration threshold changed : - Sect. 5 Increase cadmium content from 5 ppm to 100 ppm for plastic resins, paints and inks. - TABLE 5 SVHC candidate substances	Full update Phthalate Policy Logitech 2011	June, 27th, 2012

Rev.	Revision description	Remarks	Date
002	Adapted thresholds to EPEAT requirements for Cd and Cr(VI) Changed threshold for Cr(VI) (others materials) from 1000 to 500 ppm , to reflect requirements from EPEAT specification Minor change on reference for Swiss law		August, 9th, 2012
003	- RoHS 2 is now in place, RoHS 1 is obsoleted - Completed Table 5 : SVHC addition of 54 additional SVHC candidate substances - Clarified threshold for organostannic compounds, DBT, DOT,	ECHA Dec 2012	March, 7th, 2013
004	Table 1 – RoHS restricted substances - updated Chromium VI and Lead Table 2 – Restricted substances by regulation - added Biocidal substances, Pentachlorophenol, PFOA and Phenol,2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl) - updated PFOS and PAHs Table 3 – Logitech restricted substances, - added n-Hexane - updated Arsenic and PVC Table 4 – Reportable substances, - updated CFR Table 5 - SVHC candidate substances, - added 13 new substances - Removed Section 5.6- JIG 101 Annex 1 - updated Table A11 PFOS	ECHA Jun and Dec 2013	March,27th, 2014
005	Updated Logitech logo Updated Scope Removed 4.1 External Documents and 4.2 Notes Databases Modified Definitions -Added Logitech mandatory limits, Intentionally added, CAS no. and EC no. -Revised Threshold or Limits and Homogenous materials Modified Tables -Remove # column, legal threshold level(reporting level) and in spec. from columns. Replace “Others Regulatory or Industry Standard Agreement”, “Key legal & Regulatory or Industry Standard Agreement” and “Industry Standard Agreement” with “References” -Table 1. Simplified table, updated Logitech mandatory limits and added 4 phthalates DEHP, DBP, BBP and DIBP. -Table 2. Simplified table, updated Logitech mandatory limits and added Arsenic and its compounds, Ethylene Glycol Ethers and HBCDD and removed Cadmium/cadmium compounds, Chromium VI, Lead/lead compounds, Mercury/mercury compounds, PBBs and PBDEs.	Full update	May, ,20th, 2021

Rev.	Revision description	Remarks	Date
005	- Add bisphenol A requirements - Add TSCA PBTs five substances requirements - Add TPCH new requirements for packaging -Table 3. Simplified table, updated Logitech mandatory limits and removed Arsenic, Ethylene Glycol Ethers and HBCDD. -Table 4. Simplified table, updated Logitech mandatory limits and **removed PVC** and added REACH Candidate list of SVHC - Add LC-PFACs, Boric acid and Cobalt dichloride requirements - Table 5. Added CMR substances of EU REACH regulation (entry 72). - Add China VoC regulation - Add requirements for demonstrating compliance and table - Combine Battery and Packaging hazardous substance specifications into GSE 751707.	Full update	May, ,20th, 2021
006	Update 6.2 Table 2 - Add California Proposition 65 to Bisphenol A reference - Revised Bisphenol A limits to ≤ 200 ppm - Revised POPs Regulation (EU) 2019/1021 in the reference - update HBCDD limits to Prohibited only. Update 6.4 Table 4 Revised the description of the use of antimony (Sb) and its compounds as Flame retardant Update 7. Requirements for Demonstrating Compliance Removed pH test item Removed Cr VI test item Added Halogen test item Update 6.2 Table 2 - Modified substance category for Mineral Oil and its limited value		June, ,30th, 2022 Sept, ,26th, 2022
007	Table 1. - Simplified Cd, Pb and Hg battery limits - Revised references to PBBs and PBDEs, Logitech mandatory limits to PBDEs - Added packaging requirements for DEHP, DBP, BBP and DIBP Table 2 - Moved BPA to Table 4 and revised the examples of use - Revised decaBDE Logitech mandatory limits - Revised and modified references, Logitech mandatory limits, example of use and substance category to EPS, PCP, PFAS, PFOA and UV320 accordingly. - Added LC-PFCAs (C9-C14), PFHxS, its salts and related substances, PFHxA, its salts and related substances and Halogenated Diphenyl Methanes with relevant references, scope, limits and examples Table 4 - Added PFAS, LC-PFCAs (C9-C21) and UV328 with relevant references, scope, limits and examples. Section 6 - Modified the material type in the table - Added Arsenic, flame retardant TDBPP, DMAC, PFAS, TBBPA and DMFu requirements	POPs regulations REACH XVII new restricted substances update	May, 20th, 2023

8. Appendices: Families of Substances

Appendix A: Asbestos and its compounds

Chemical/Substance	CAS no.
Asbestos	1332-21-4
Actinolite	77536-66-4
Amosite (Grunerite)	12172-73-5
Anthophyllite	77536-67-5
Chrysolite	12001-29-5 and 132207-32-0
Crocidolite	12001-28-4
Tremolite	77536-68--6

Chemical/Substance	CAS no.
4,4'-oxydianiline	101-80-4
4,4'-thiodianiline	139-65-1
o-toluidine	95-53-4
4-methyl-m-phenylenediamine	95-80-7
2,4,5-trimethylaniline	137-17-7
o-anisidine	90-04-0
4-amino azobenzene	60-09-3

Appendix B: Azocolourants and Azodyes (Azo compounds)

Chemical/Substance	CAS no.
Biphenyl-4-ylamine	92-67-1
Benzidine	92-87-5
4-chloro-o-toluidine	95-69-2
2-naphthylamine	91-59-8
o-aminoazotoluene	97-56-3
5-nitro-o-toluidine	99-55-8
4-chloroaniline	106-47-8
4-methoxy-m-phenylenediamine	615-05-04
4,4'-methylenedianiline	101-77-9
3,3'-dichlorobenzidine	91-94-1
3,3'-dimethoxybenzidine	119-90-4
3,3'-dimethylbenzidine	119-93-7
4,4'-methylenedi-o-toluidine	838-88-0
6-methoxy-m-toluidine	120-71-8
4,4'-methylene-bis(2-chloroaniline)	101-14-4

Appendix C: Chlorinated Paraffins (SCCP and MCCP)

Chemical/Substance	CAS no.
Short-Chain Chlorinated Paraffins (SCCPs) $C_xH_{2x+2-y}Cl_y$, where x=10-13 and y=1-13 [4 items]	
Alkanes, C10-13, chloro	85535-84-8
Alkanes, C10-12, chloro	108171-26-2
Alkanes, C12-13, chloro	71011-12-6
Alkanes, C8-22, chloro	61788-76-9
Other shortchain chlorinated paraffins (C10-13)	-
Medium-Chain Chlorinated Paraffins (MCCPs) $C_xH_{2x+2-y}Cl_y$, where x=14-17 and y=1-17 [1 item]	
Alkanes, C14-17, chloro	85535-85-9

Appendix D: Fluorinated greenhouse gases (GHG, F-gases)

Chemical/Substance	CAS no.
Tetrafluoromethane (Carbon tetrafluoride, PFC-14)	75-73-0
Hexafluoroethane (PFC-116)	76-16-4
Octafluoropropane (PFC-218)	76-19-7
Decafluorobutane (PFC-31-10)	355-25-9
Dodecafluoropentane (PFC-41-12)	678-26-2
Tetradecafluorohexane (PFC-51-14)	355-42-0
Octafluorocyclobutane (PFC-c318)	115-25-3
Sulfur Hexafluoride (SF6)	2551-62-4
Trifluoromethane (HFC-23)	75-46-7
Difluoromethane (HFC-32)	75-10-5
Methyl fluoride (HFC-41)	593-53-3
2H,3H-Decafluoropentane (HFC-43-10mee)	138495-42-8
Pentafluoroethane (HFC-125)	354-33-6
1,1,2,2-Tetrafluoroethane (HFC-134)	359-35-3
1,1,1,2-Tetrafluoroethane (HFC-134a)	811-97-2
1,1-Difluoroethane (HFC-152a)	75-37-6
1,1,2-Trifluoroethane (HFC-143)	430-66-0
1,1,1-Trifluoroethane (HFC-143a)	420-46-2
2H-Heptafluoropropane (HFC-227ea)	431-89-0
1,1,1,2,2,3-Hexafluoro-propane (HFC-236cb)	677-56-5
1,1,1,2,3,3-Hexafluoropropane (HFC-236ea)	431-63-0
1,1,1,3,3,3-Hexafluoropropane (HFC-236fa)	690-39-1
1,1,2,2,3-Pentafluoropropane (HFC-245ca)	679-86-7
1,1,1,3,3-Pentafluoropropane (HFC-245fa)	460-73-1
1,1,1,3,3-Pentafluorobutane (HFC-365mfc)	406-58-6

Appendix E: Ozone depleting substances (ODS)

Chemical/Substance	CAS no.
Trichlorofluoromethane (CFC11)	75-69-4
Dichlorodifluoromethane (CFC12)	75-71-8
Chlorotrifluoromethane (CFC 13)	75-72-9
Pentachlorofluoroethane (CFC 111)	354-56-3
Tetrachlorodifluoroethane (CFC 112)	76-12-0
1,1,2,2-Tetrachloro-1,2-difluoroethane (CFC-112)	76-12-0
1,1,1,2-Tetrachloro-2,2-difluoroethane (CFC-112a)	76-11-9
Trichlorotrifluoroethane (CFC 113)	76-13-1
1,1,2-Trichloro-1,2,2 trifluoroethane (CFC-113)	76-13-1
1,1,1-Trichloro-2,2,2 trifluoroethane (CFC-113a)	354-58-5
Dichlorotetrafluoroethane (CFC 114)	76-14-2
Monochloropentafluoroethane (CFC 115)	76-15-3
Heptachlorofluoropropane (CFC 211)	422-78-6 135401-87-5
1,1,1,2,2,3,3-Heptachloro-3-fluoropropane (CFC-211aa)	422-78-6
1,1,1,2,3,3,3-Heptachloro-2-fluoropropane (CFC-211ba)	422-81-1
Hexachlorodifluoropropane (CFC 212)	3182-26-1
Pentachlorotrifluoropropane (CFC 213)	2354-06-5 134237-31-3
Tetrachlorotetrafluoropropane (CFC 214)	29255-31-0
1,2,2,3-Tetrachloro-1,1,3,3-tetrafluoropropane	2268-46-4
1,1,1,3-Tetrachlorotetrafluoropropane	-
Trichloropentafluoropropane (CFC-215)	1599-41-3
1,2,2-Trichloropentafluoropropane (CFC-215aa)	1599-41-3
1,2,3-Trichloropentafluoropropane (CFC-215ba)	76-17-5
1,1,2-Trichloropentafluoropropane (CFC-215bb)	-
1,1,3-Trichloropentafluoropropane (CFC-215ca)	-

Appendix E: Ozone depleting substances (ODS) continued

Chemical/Substance	CAS no.
1,1,1-Trichloropentafluoropropane (CFC-215cb)	4259-43-2
Dichlorohexafluoropropane (CFC 216)	661-97-2
Monochloroheptafluoropropane (CFC 217)	422-86-6
Bromochloromethane (Halon-1011)	74-97-5
Dibromodifluoromethane (Halon-1202)	75-61-6
Bromochlorodifluoromethane (Halon 1211)	353-59-3
Bromotrifluoromethane (Halon 1301)	75-63-8
Dibromotetrafluoroethane (Halon 2402)	124-73-2
Carbon Tetrachloride (tetrachloromethane)	56-23-5
1,1,1 - Trichloroethane (methyl chloroform)	71-55-6
Bromomethane (methyl bromide)	74-83-9
Bromoethane (ethyl bromide)	74-96-4
1-Bromopropane (n-propyl bromide)	106-94-5
Trifluoroiodomethane (trifluoromethyl iodide)	2314-97-8
Chloromethane (methyl chloride)	74-87-3
Dichlorotrifluoroethane(HCFC-123)	34077-87-7
Dibromofluoromethane (HBFC-21 B2)	1868-53-7
Bromodifluoromethane (HBFC-22 B1)	1511-62-2
Bromofluoromethane (HBFC-31 B1)	373-52-4
Tetrabromofluoroethane (HBFC-121 B4)	306-80-9
Tribromodifluoroethane (HBFC-122 B3)	-
Dibromotrifluoroethane (HBFC-123 B2)	354-04-1
Bromotetrafluoroethane (HBFC-124 B1)	124-72-1
Tribromofluoroethane (HBFC-131B3)	-
Dibromodifluoroethane (HBFC-132 B2)	75-82-1
Bromotrifluoroethane (HBFC-133B1)	421-06-7
Dibromofluoroethane (HBFC-141B2)	358-97-4
Bromodifluoroethane (HBFC-142 B1)	420-47-3

Chemical/Substance	CAS no.
Bromofluoroethane (HBFC-151 B1)	762-49-2
Hexabromofluoropropane (HBFC-221 B6)	-
Pentabromodifluoropropane (HBFC-222 B5)	-
Tetrabromotrifluoropropane (HBFC-223 B4)	-
Tribromotetrafluoropropane (HBFC-224 B3)	-
Dibromopentafluoropropane (HBFC-225 B2)	431-78-7
Bromohexafluoropropane (HBFC-226 B1)	2252-78-0
Pentabromofluoropropane (HBFC-231 B5)	-
Tetrabromodifluoropropane (HBFC-232 B4)	-
Tribromotrifluoropropane (HBFC-233 B3)	-
Dibromotetrafluoropropane (HBFC-234 B2)	-
Bromopentafluoropropane (HBFC-235B1)	460-88-8
Tetrabromofluoropropane (HBFC-241 B4)	-
Tribromodifluoropropane (HBFC-242 B3)	70192-80-2
Dibromotrifluoropropane (HBFC-243 B2)	431-21-0
Bromotetrafluoropropane (HBFC-244 B1)	679-84-5
Tribromofluoropropane (HBFC-251 B3)	75372-14-4
Dibromodifluoropropane (HBFC-252 B2)	460-25-3
Bromotrifluoropropane (HBFC-253 B1)	421-46-5
Dibromofluoropropane (HBFC-261 B2)	51584-26-0
Bromodifluoropropane (HBFC-262 B1)	-
Bromofluoropropane (HBFC-271 B1)	1871-72-3
Dichlorofluoromethane (HCFC 21)	75-43-4
Chlorodifluoromethane (HCFC 22)	75-45-6
Chlorofluoromethane (HCFC 31)	593-70-4
Tetrachlorofluoroethane (HCFC 121)	134237-32-4
1,1,2,2-tetracloro-1-fluoroethane (HCFC 121)	354-14-3
1,1,1,2-tetrachloro-2-fluoroethane (HCFC 121a)	354-11-0

Appendix E: Ozone depleting substances (ODS) continued

Chemical/Substance	CAS no.
Trichlorodifluoroethane (HCFC-122)	41834-16-6
1,2,2-Trichloro-1,1-difluoroethane (HCFC-122)	354-21-2
1,1,2-Trichloro-1,2-difluoroethane (HCFC-122a)	354-15-4
1,1,1-Trichloro-2,2-difluoroethane (HCFC-122b)	354-12-1
1,1-Dichloro-2,2,2-trifluoroethane (HCFC-123)	306-83-2
1,2-Dichloro-1,1,2-trifluoroethane (HCFC-123a)	354-23-4
1,1-Dichloro-1,2,2-trifluoroethane (HCFC-123b)	90454-18-5 812-04-4
Chlorotetrafluoroethane (HCFC 124)	63938-10-3
2-chloro-1,1,1,2-tetrafluoroethane (HCFC 124)	2837-89-0
1-chloro-1,1,2,2-tetrafluoroethane (HCFC 124a)	354-25-6
Trichlorofluoroethane (HCFC-131)	27154-33-2 134237-34-6
1,1,2-Trichloro-2-fluoroethane (HCFC-131)	359-28-4
1,1,2-Trichloro-1-fluoroethane (HCFC131a)	811-95-0
1,1,1-Trichloro-2-fluoroethane (HCFC-131b)	2366-36-1
Dichlorodifluoroethane (HCFC-132)	25915-78-0
1,2-Dichloro-1,2-difluoroethane (HCFC-132)	431-06-1
1,1-Dichloro-2,2-difluoroethane (HCFC-132a)	471-43-2
1,2-Dichloro-1,1-difluoroethane (HCFC-132b)	1649-08-7
1,1-Dichloro-1,2-difluoroethane (HFCF-132c)	1842-05-3
Chlorotrifluoroethane (HCFC-133)	1330-45-6 431-07-2
1-Chloro-1,2,2-trifluoroethane (HCFC-133)	1330-45-6
2-Chloro-1,1,1-trifluoroethane (HCFC-133a)	75-88-7
1-Chloro-1,1,2-trifluoroethane (HCFC-133b)	421-04-5
Dichlorofluoroethane(HCFC-141)	1717-00-6 25167-88-8
1,2-Dichloro-1-fluoroethane (HCFC-141)	430-57-9
1,1-Dichloro-2-fluoroethane (HCFC-141a)	430-53-5
1,1-Dichloro-1-fluoroethane (HCFC-141b)	1717-00-6

Chemical/Substance	CAS no.
Chlorodifluoroethane (HCFC-142)	25497-29-4
2-Chloro-1,1-Difluoroethane (HCFC-142)	338-65-8
1-Chloro-1,1-difluoroethane (HCFC-142b)	75-68-3
1-Chloro-1,2-difluoroethane (HCFC-142a)	338-64-7
Chlorofluoroethane (HCFC-151)	110587-14-9
1-Chloro-2-fluoroethane (HCFC-151)	762-50-5
1-Chloro-1-fluoroethane (HCFC-151a)	1615-75-4
Hexachlorofluoropropane (HCFC-221)	134237-35-7 29470-94-8
1,1,1,2,2,3-Hexachloro-3-fluoropropane (HCFC-221ab)	422-26-4
Pentachlorodifluoropropane (HCFC-222)	134237-36-8
1,1,1,3,3-pentachloro-2,2-difluoropropane (HCFC-222ca)	422-49-1
1,2,2,3,3-pentachloro-1,1-difluoropropane (HCFC-222aa)	422-30-0
Tetrachlorotrifluoropropane (HCFC-223)	134237-37-9
1,1,3,3-Tetrachloro-1,2,2-trifluoropropane (HCFC-223ca)	422-52-6
1,1,1,3-Tetrachloro-2,2,3-trifluoropropane (HCFC-223cb)	422-50-4
Trichlorotetrafluoropropane (HCFC-224)	134237-38-0
1,3,3-Trichloro-1,1,2,2-tetrafluoropropane (HCFC-224ca)	422-54-8
1,1,3-Trichloro-1,2,2,3-tetrafluoropropane (HCFC-224cb)	422-53-7
1,1,1-Trichloro-2,2,3,3-tetrafluoropropane (HCFC-224cc)	422-51-7
Dichloropentafluoropropane (HCFC-225)	127564-92-5
2,2-Dichloro-1,1,1,3,3-pentafluoropropane(HCFC-225aa)	128903-21-9
2,3-Dichloro-1,1,1,2,3-pentafluoropropane (HCFC-225ba)	422-48-0
1,2-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC-225bb)	422-44-6
3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca)	422-56-0
1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb)	507-55-1
1,1-Dichloro-1,2,2,3,3-pentafluoropropane(HCFC-225cc)	13474-88-9
1,2-Dichloro-1,1,3,3,3-pentafluoropropane (HCFC-225da)	431-86-7

Appendix E: Ozone depleting substances (ODS) continued

Chemical/Substance	CAS no.
1,3-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC-225ea)	136013-79-1
1,1-Dichloro-1,2,3,3,3-pentafluoropropane(HCFC-225eb)	111512-56-2
Chlorohexafluoropropane (HCFC-226)	134308-72-8
2-Chloro-1,1,1,3,3,3-hexafluoro-propane (HCFC-226da)	431-87-8
Pentachlorofluoropropane (HCFC-231)	134190-48-0
1,1,1,2,3-pentachloro-2-fluoro-propane (HCFC-231bb)	421-94-3
Tetrachlorodifluoropropane (HCFC-232)	134237-39-1
1,1,1,3-Tetrachloro-3,3-difluoropropane (HCFC-232fc)	460-89-9
Trichlorotrifluoropropane (HCFC-233)	134237-40-4
1,1,1-Trichloro-3,3,3-trifluoropropane (HCFC-233fb)	7125-83-9
Dichlorotetrafluoropropane (HCFC-234)	127564-83-4
1,2-Dichloro-1,2,3,3-tetrafluoropropane (HCFC-234db)	425-94-5
Chloropentafluoropropane (HCFC-235)	134237-41-5
1-Chloro-1,1,3,3,3-pentafluoropropane (HCFC-235fa)	460-92-4
Tetrachlorofluoropropane (HCFC-241)	134190-49-1
1,1,2,3-Tetrachloro-1-fluoropropane (HCFC-241db)	666-27-3
Trichlorodifluoropropane (HCFC-242)	134237-42-6
1,3,3,Trichloro-1,1-difluoropropane (HCFC-242fa)	460-63-9
Dichlorotrifluoropropane (HCFC-243)	134237-43-7
1,1-Dichloro-1,2,2-trifluoropropane (HCFC-243cc)	7125-99-7
2,3-Dichloro-1,1,1-trifluoropropane (HCFC-243db)	338-75-0
3,3-Dichloro-1,1,1-trifluoropropane (HCFC-243fa)	460-69-5
Chlorotetrafluoropropane (HCFC-244)	134190-50-4
3-Chloro-1,1,2,2-tetrafluoropropane (HCFC-244ca)	679-85-6
1-Chloro-1,1,2,2-tetrafluoropropane (HCFC-244cc)	421-75-0
Trichlorofluoropropane (HCFC-251)	134190-51-5
1,1,3-Trichloro-1-fluoropropane (HCFC-251fb)	818-99-5
1,1,2-Trichloro-1-fluoropropane (HCFC-251dc)	421-41-0
Dichlorodifluoropropane (HCFC-252)	134190-52-6
1,3-Dicloro-1,1-difluoropropane (HCFC-252fb)	819-00-1
Chlorotrifluoropropane (HCFC-253)	134237-44-8
3-Chloro-1,1,1-trifluoropropane (HCFC-253fb)	460-35-5
Dichlorofluoropropane (HCFC-261)	134237-45-9
1,1-Dichloro-1-fluoropropane (HCFC-261fc)	7799-56-6
1,2-Dichloro-2-fluoro-propane (HCFC-261ba)	420-97-3
Chlorodifluoropropane (HCFC-262)	134190-53-7
1-Chloro-2,2-difluoropropane (HCFC-262ca)	420-99-5
2-Chloro-1,3-difluoropropane (HCFC-262da)	102738-79-4
1-Chloro-1,1-difluoropropane (HCFC-262fc)	421-02-03
Chlorofluoropropane (HCFC-271)	134190-54-8
2-Chloro-2-fluoropropane (HCFC-271ba)	420-44-0
1-Chloro-1-fluoropropane (HCFC-271fb)	430-55-7

Appendix F: Per- and Polyfluoroalkyl Substances (PFAS), including appendix G (PFOA), H (PFOS) & L (LC-PFAC)

Chemical/Substance	CAS no.
Perfluoroalkyl and polyfluoroalkyl substances (PFAS)	Compounds containing at least one perfluoroalkyl moiety, –CnF2n–. Including but not limited to compounds on sheet "overview with CAS" in the reference link.
PFCAs (C9-C14), their salts and related substances	Linear and branched perfluorocarboxylic acids of the formula CnF2n+1-C(= O)OH where n = 8, 9, 10, 11, 12, or 13 (C9-C14 PFCAs), including their salts, and any combinations thereof;
	Any C9-C14 PFCA-related substance having a perfluoro group with the formula CnF2n+1- directly attached to another carbon atom, where n = 8, 9, 10, 11, 12, or 13, including their salts and any combinations thereof;
	Any C9-C14 PFCA-related substance having a perfluoro group with the formula CnF2n+1- that it is not directly attached to another carbon atom, where n = 9, 10, 11, 12, 13 or 14 as one of the structural elements, including their salts and any combinations thereof.
PFCAs (C9-C21), their salts and related substances	Long-chain PFCAs and their salts are organic compounds with a fluorinated carbon chain structure and a molecular formula of CnF2n+1CO2H (where 8 ≤ n ≤ 20). They contain a total of between 9 and 21 carbon atoms (C9-C21)
PFHxA, its salts and related substances	Compounds (including salts and polymers) having a linear or branched perfluoropentyl group with the formula C5F11- directly attached to another carbon atom. Including but not limited to compounds listed in the reference link
PHxS, its salts and related substances	Compounds with the formula C6F13SO3H, their salts and any combinations thereof. This includes any substance having a perfluoroalkyl group (linear or branched) C6F13- directly attached to a sulfur atom. Including but not limited to compounds listed on pages 169-192 in the reference link

Appendix G: Perfluorooctanoic Acid (PFOA) and compounds:

Chemical/Substance	CAS no.
Perfluorooctanoic acid (PFOA)	335-67-1
Ammonium salt of PFOA	3825-26-1
Perfluorooctanoic acid sodium salt; Sodium salt of PFOA	335-95-5
Potassium salt of PFOA	2395-00-8
Silver salt of PFOA	335-93-3
Pentadecafluorooctyl fluoride	335-66-0
Pentadecafluoro-octanoicacimethylester	376-27-2
Pentadecafluoro-octanoicaciethylester	3108-24-5
Compounds with the moiety (C7F15)C, including but not limited to compounds on sheet "overview with CAS" in the reference link.	

Appendix H: Perfluorooctane Sulfonates (PFOS) and compounds

Chemical/Substance	CAS no.
2-Propenoic acid, 2-methyl-, dodecyl ester, polymers with 2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl acrylate and vinylidene chloride	306975-62-2
Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulfonyl]-, potassium salt	2991-51-7
Perfluorooctanoic acid sodium salt	335-95-5
N-Ethyl-N-(2-hydroxyethyl)perfluorooctylsulphonamide	1691-99-2
Perfluorooctane sulfonic acid	1763-23-1
Ammonium perfluorooctanesulfonate	29081-56-9
N-Methylperfluorooctanesulfonamidoethanol	24448-09-07
Lithium Heptadecafluoro-1-octanesulfonate	29457-72-5
eptadecafluorooctanesulphonamide	754-91-6
Potassium perfluorooctanesulfonate	2795-39-3
Perfluorooctane sulfonyl fluoride	307-35-7
Compounds with the formula C8F17SO3H, including but not limited to compounds on sheet "overview with CAS" in the reference link.	

Appendix I: Phthalates

Chemical/Substance	CAS no.
Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7
Dibutylphthalate (DBP)	84-74-2
Diisononyl phthalate (DINP)	28553-12-0
1,2-Benzenedicarboxylic acid diisodecyl ester (DIDP)	26761-40-0
Butyl benzyl phthalate (BBP)	85-68-7
Di-n-octyl phthalate (DNOP)	117-84-0
Diisobutyl phthalate (DIBP)	84-69-5
Di-n-hexyl phthalate (DnHP)	84-75-3
Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8
Di-n-pentyl phthalate (DnPP)	131-18-0

Appendix J: Polycyclic aromatic hydrocarbons (PAHs)

Chemical/Substance	CAS no.
Anthracene	0120-12-7
Benzo[a]anthracene	56-55-3
Benzo[b]fluoranthene	205-99-2
Benzo[j]fluoranthene	205-82-3
Benzo[k]fluoranthene	0207-08-09
Benzo[ghi]perylene	191-24-2
Benzo[a]pyrene	50-32-8
Benzo[e]pyrene	192-97-2
Chrysene	0218-01-09
Dibenz[a,h]anthracene	53-70-3
Fluoranthene	206-44-0
Indeno[1,2,3-cd]pyrene	193-39-5
Naphthalene	91-20-3
Phenanthrene	85-01-8
Pyrene	129-00-0

Appendix K: Organotin Compounds

Chemical/Substance	CAS no.
Dibutyltin (DBT) Compounds	Several
Dioctyltin (DOT) Compounds	Several
Monobutyltin (MBT) Compounds Multiple	Several
Monooctyltin (MOT) Compounds Multiple	Several
Tetrabutyltin (TeBT)	Several
Tetraoctyltin (TeOT)	Several
Tributyltin (TBT) Compounds	Several
Tricyclohexyltin (TCyT) Compounds	Several
Triphenyltin (TPhT) Compounds	Several

Appendix L: LC-PFAC Chemical Substances

Chemical/Substance	CAS no.
Perfluorooctyl iodide	507-63-1
Tetrahydroperfluoro-1-decanol	678-39-7
Perfluoro-1-dodecanol	865-86-1
Perfluorodecyl iodide	2043-53-0
1,1,2,2-Tetrahydroperfluorododecyl iodide	2043-54-1
Perfluorodecylethyl acrylate	7741-60-5
1,1,2,2-Tetrahydroperfluorodecyl acrylate	27905-45-9
1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,1 0,10,11,11,12,12-Pentacosafluoro14-iodotetradecane	30046-31-2
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,1 1,12,12,13,13,14,14,14-Pentacosafluorotetradecan-1-o	39239-77-5
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,16-Nonacosafluorohexadecan-1-ol	60699-51-6
1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,1 0,10,11,11,12,12,13,13,14,14-Nonacosafluoro-16-iodohexadecane	65510-55-6
Sodium;2-methylpropane-1- sulfonate	68187-47-3
1,1,2,2-Tetrahydroperfluoroalkyl (C8- C14) alcohol	68391-08-02
Thiols, C8-20, gamma-omegaperfluoro, telomers with acrylamide	70969-47-0
Silicic acid (H4SiO4), sodium salt (1:2), reaction products with chlorotrimethylsilane and 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-1-decanol	125476-71-3
Thiols, C4-20, gamma-omegaperfluoro, telomers with acrylamide and acrylic acid, sodium salts)	1078712-88-5
1-Propanaminium, 3-amino-N- (carboxymethyl)-N, N-dimethyl-, N-(2-((gamma-omega-perfluoro-C4-20-alkyl)thio)acetyl) derivs., inner salts	1078715-61-3
Polyfluoroalkyl betaine (generic)	CBI
Modified fluoroalkyl urethane (generic)	CBI
Perfluorinated polyamine (generic)	CBI

9. Testing for RoHS Compliance

For mechanical, electromechanical and electronic components, the supplier shall provide a test report of the ten RoHS substances, delivered by certified third party laboratory or by a laboratory previously approved by Logitech.

RoHS test reports must be done by a third-party certified Laboratory or approved by Logitech to demonstrate that it is operating and accredited under ISO 17025.
To be considered as truly valid, a test report shall:

- Be dated. A test report older than 1 year can only be accepted under specific conditions (stable component manufacturing process).
- Have a unique serial number with complete laboratory address, phone number or email and name of laboratory manager.
- Enable full traceability to tested material (by picture, supplier reference, color or tested sample, etc).
- Third-party certified Laboratory test reports for RoHS testing shall be conducted according to European Standard IEC 62321 (2008-12) Ed. 1.0 or more recent update if available. No other test methods are accepted to establish RoHS compliance.
- The test reports shall be traceable to exact component, description of component, date of test, testing standards used for all 10 substances, signature of Laboratory manager.Test shall be done at homogeneous material level.
- Description of preparation & test method is a plus.
- Test report shall indicate MDL (Method Detection Level) and if possible the test accuracy.
- Test report shall properly identify the various substances being tested (with CAS # when necessary)
- As much as possible, be in English, or test results and testing methods be identifiable in English.
- Identify the test equipment being used for the various tests.

10. RoHS Exemptions (Summary)

The RoHS Directive exempts certain applications from the RoHS substance restrictions. The exemptions are temporary and reviewed at least every four years.

The list of RoHS exemptions is given in the Annexes III and IV of the Directive 2011/65/EU (EU RoHS recast) A table providing an overview of Annex III and IV exemptions, including their validity status and submitted exemption requests, is available here.

Suppliers shall communicate to Logitech, all RoHS exemptions that were necessary to declare a specific component as EU RoHS compliant, including the exact location of the homogeneous material concerned by the exemption.

The most common RoHS exemptions applicable to components delivered to Logitech or built in Logitech products are as follow:

Exemption #	Definition exemption
6(a)	Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0.35% lead by weight
6(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 galvanized steel components containing up to 0.2% lead by weight
6(b)	Lead as an alloying element in aluminum containing up to 0.4% lead by weight
6(b)-I	Lead as an alloying element in aluminum containing up to 0.4 % lead by weight, provided it stems from lead-bearing aluminum scrap recycling
6(b)-II	Lead as an alloying element in aluminum for machining purposes with a lead content up to 0.4 % 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)

Exemption #	Definition exemption
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
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)-IV	Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors'