### **Chemical Safety Management Situation**

In 2022, a total of 14 regulations related to hazardous substances were evaluated, primarily including the revisions to Annex III and Annex IV exemption clauses of the European Union Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS); the addition of the 26th and 27th batches of Substances of Very High Concern (SVHC) under the European Union Regulation on Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH); and the addition of two reduction substances under the Stockholm Convention on Persistent Organic Pollutants.

In response to the updates in these regulations, Zhen Ding conducted immediate self-assessments of relevant suppliers, and the investigation results indicated that the materials used by Zhen Ding meet the requirements of these regulations.

The Material Declaration (IEC 62474) standard was developed by the International Electro technical Commission for the Environmental Standardization for Electrical and Electronic Products and Systems (IEC/TC 111). The Material Declaration specifies the conditions that must be met by manufacturers and suppliers for material declarations, the materials to be declared, and a standardized data exchange format to increase the acceptability of material declarations within the global supply chain. Zhen Ding incorporates the IEC 62474 Substance Declaration List into its management of hazardous substances, including both declared substances in products and future restricted substances. The control of hazardous chemicals aligns 100% with the substances listed in the IEC 62474 specification. Zhen Ding requires suppliers to provide a declaration if their products or materials contain any substances specified in the IEC 62474 list. Zhen Ding then shares the information regarding the presence of relevant substances with downstream customers as required, ensuring timely and accurate transmission of information on IEC 62474 declared substances throughout the supply chain. All products or materials provided by suppliers are 100% compliant with the substances specified in the IEC 62474 list.

## **Chemical Safety Management Scope**

As of September

					As of September
Management	Item	Category	Management	ltem	Category
category	quantity	examples	category	quantity	examples
Restricted	114 items	RoHS 2.0	Restricted	31 items	Benzene
substances in		Chlorine and its compounds	substances in	(Some substance	Toluene
products		Bromine and its compounds	manufacturing	restrictions apply	Ethylbenzene
		Arsenic and its compounds		only to cleaning	Xylene
		Beryllium and its compounds		agents,	Ethanolamine
		Antimony and its compounds		degreasing	n-hexane
		Asbestos and its compounds		agents, and	n-heptane
		Appendix XVII of REACH		demolding	Dichloromethane
		Azo dyes, aromatic amines, and aniline		agents)	Carbon tetrachloride
		derivatives			Trichloroethylene
		Short-chain, medium-chain, and long chain			Tetrachloroethylene
		chlorinated paraffins			Cyclohexane
		Organotin compounds			Cyclohexanone
		Perchlorate			Methanol
		PFOA, PFOS, PFCA, and other			N-Methylpyrrolidone (NMP)
		perfluorinated organic compounds			n-Propyl bromide (nPB)
		Polycyclic aromatic hydrocarbons			Ozone-depleting substances
		(PAHs)			(ODCs)
		Radioactive materials			Brominated organic solvents
		Musk compounds			Chlorinated organic solvents
		Persistent organic pollutants (POPs)			Fluorinated greenhouse gases
		Ozone-depleting substances (ODCs)			Phthalates/salts
		Five TSCA substances			
Reported	30 items	Additive phosphorous flame retardant	Reported	19 items	Formaldehyde
substances in		SDPA	substances in		Hydrogen chloride
products		Endocrine disrupting chemicals (EDCs)	manufacturing		
		Skin sensitizers	processes		
		EC62474 Substances Declaration List			
		California Proposition 65Chemicals List			

#### **Hazardous Substances Restriction List**

1) Restricted substances in products: 114 items

As of September

Chemical	Threshold	Scope	References
Antimony Trioxide	900 ppm	All materials	IEC 62474

Arsenic and its compounds	N.D.	All materials	REACH 1907/2006 and amendments
Asbestos and its compounds	Negative	All materials	REACH 1907/2006 and amendments
Azocolourants, Arylamines, Anilines	N.D.	All materials	REACH 1907/2006 and amendments  Bedarfsgegenstande  Verordnung  GB 18401-2003 China  GB 20400-2006 China
Benzenamine, N-phenyl-reaction products with styrene and 2,4,4-trimethylpentene (BNST)	Non-use	All materials	Canadian Environmental Protection Act (1999)
Beryllium and its compounds	N.D.	All materials	Customer Requirement IEEE1680.1-2018 criterion 4.1.4.1
Bisphenol A	N.D.	All materials	Customer Requirement California Proposition 65
Bromine and its compounds	900 ppm · 1500 ppm (Br+Cl)	All materials	Customer Requirement UL110.criterion 9.2.3
Cadmium and Its Compounds	5 ppm	All materials	2011/65/EU GB/T 26572 Taiwan BSMI RoHS
Short and Medium Chained Chlorinated Paraffins (SCCP&MCCP)	N.D.	All materials	REACH 1907/2006 and amendments  EPA,SNUR 2070-AJ73,Dec.2014  IEEE 1680
	900 ppm · 1500 ppm(Br+Cl)	All materials	UL 110
Chlorine and its compounds	Non-use;Must be Elemental Chlorine Free(ECF), Totally Chlorine Free (TCF) or Process Chlorine Free (PCF)	Fiber-based packaging	IEEE 1680.1-2018 critera 4.1.5.1&4.1.5.2  UL 110,criteria 9.2.3&12.7.1  Customer Requirement
Dimethylfumarate (DMFu)	0.1 ppm	All materials	2010/153/EC
Formaldehyde	N.D.	All materials	ChemVerbotsV  GB 18401-2003/2005, China  GB 20400-2006 · China
Halogenated Diphenyl Methanes	N.D.	All materials	REACH 1907/2006 and amendments
Hexabromocyclododecane (HBCDD)	N.D.	All materials	2004/850/EU
Heavy metals (Lead, Mercury, Cadmium, Hexavalent Chromium)	Packaging material:  Cd+Pb+Hg+Cr6+ < 50 ppm and  Cd<5 ppm, Pb<45 ppm, Cr <sup>6+</sup> : N.D.	Packaging material	94/62/EC
Hexavalent chromium and its compounds	N.D.	All materials	2011/65/EU GB/T 26572 Taiwan BSMI RoHS

		All wearable products		
	1 ppm	and	REACH1907/2006 Entry 72	
		accessories		
Lance Astronomy Trades Base Intra	Mara and	All so the dela	US Lacey Act (16 U.S.C. 3371-3378)	
Lacey Act and Timber Regulation	Non-use	All materials	EU Timber Regulation	
		Plastics, inks, surface		
	45 ppm	coatings		
	300 ppm	Solder material	IEEE 1680	
	90 ppm	General metals	CPSIA,2008	
Lead and its compounds		All other materials	2011/65/EU	
	No intentional use	except all exemptions	GB/T 26572	
			TaiwanBSMI RoHS	
	1000 ppm for incidentally present	in 2011/65/EU and its		
		amendments		
			2011/65/EU _	
Mercury and its compounds	N.D.	All materials	GB/T 26572	
			Taiwan BSMI RoHS	
Methyl-phenol compounds	10 ppm total content	All materials	Canadian Environmental Protection Act	
n-Hexane	1000 ppm	All materials	Customer Requirement	
	Frequently contacted or in			
	prolonged contact with, the end		REACH 1907/2006 and amendments	
Nickel and its compounds	user's skin:N.D.	All materials		
	Other: report if contain			
Organic tin compounds	N.D.	All materials	REACH 1907/2006 and amendments	
Perchlorates	N.D.	All materials	Perchlorate Contamination Prrevention	
		Textiles and other		
DEGA and an analysis	≦1 μg/m² coated area		Norway FOR-2004-06-01-922EU 2017/1000	
PFOA and compounds				
	25 ppb	All materials		
	≦1 μg/m² coated area	Textiles and other		
PFOS and compounds		coated materials	2004/850/EU	
Tros una compounas	10 ppm	Preparations	200-1, 030, 20	
	1000 ppm total content	All materials		
	4000	All materials except	REACH 1907/2006 and amendments	
Phthalates	1000 ppm total content	packaging	California Proposition 65	
	100 ppm	Packaging material	2011/65/EU	
Polycyclic Aromatic Hydrocarbons	0.5 ppm individually,			
(PAHs)	10 ppm for sum of total PAHs	All materials	EC/1272/2013	
			2011/65/EU	
Polybrominated Biphenyls (PBBs)	N.D.	All materials	GB/T 26572	
Polybrominated Diphenyl Ethers			2011/65/EU	
(PBDEs)	N.D.	All materials	GB/T 26572	
(ו סטבא)			OD/ 1 203/2	

Polychlorinated Biphenyl (PCBs) Polychlorinated Biphenyl (PCBs) Polychlorinated Biphenyl (PCBs) Polychlorinated Biphenyl (PCD) Polychlorinated Terophenyl (PCD) Polychlorinated Polychand Polychand Polychlorinated Polychand Polychand Polychlorinated Polychand Pol				
Polychrorinated Terphenyi (PCT) N.D. All materials REACH 1907/2006 and amendments REACH 1907/		N.D.	All materials	
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Reductive Substances  No. All materials  ReACH 2007/2006 and amendments  ReACH Annex XVII  Polyphorinated Naphthalene (PCNs)  ReACH Candidate List of SVHCS  REACH 2007/2006 and amendments  R				CRS 001/1983, Brazil
compounds         Negative         All materials         REACH 3007/2006 and amendments           Redioactive Substances         N.D.         All materials         Impanese Laws for the Requisition of Nuclear Source Material, and Reactors, 1986           REACH Annex XVII         By law         All materials         REACH 3007/2006 and amendments           REACH Condidate List of SVHCs <a href="https://doi.org/10.000/pm">https://doi.org/10.000/pm</a> All materials         REACH 3007/2006 and amendments           REACH Condidate List of SVHCs <a href="https://doi.org/10.000/pm">https://doi.org/10.000/pm</a> All materials         Customer Requirement           REACH 2007/2006 and amendments         The Department of PCNS         N.D.         All materials         REACH 3007/2006 and amendments           REACH 3007/2006 and amendments         All materials         REACH 3007/2006 and amendments         All materials         REACH 3007/2006 and amendments           All phy phenol         N.D.         All materials         REACH 3007/2006 and amendments           Cobate dictioned in Strongounds         N.D.         All materials         REACH 3007/2006 and amendments           Chicrophenols         N.D.         All materials         Customer Requirement           Chicrophenols         N.D.         All materials         Customer Requirement           Tric/2-chitoro-1-methylp	Polychlorinated Terphenyl (PCT)	N.D.	All materials	REACH 1907/2006 and amendments
Redicative Substances	Polyvinyl Chloride (PVC) and	Negative	All materials	85/467/EEC
Radioactive Substances REACH Annex XVII  REACH Annex XVII  REACH Candidate List of SVHCs  LOOD ppm All materials REACH 1907/2006 and amendments	compounds			REACH 1907/2006 and amendments
REACH Annex XVII By law All materials All materials and Reactors, 1986  REACH Annex XVII By law All materials REACH 1907/2006 and amendments  REACH Candidate List of SVICS <1000 ppm All materials REACH 1907/2006 and amendments				
REACH Annex XVII by law All materials REACH 1907/2006 and amendments  REACH Condidate List of SVMCS cloop ppm All materials REACH 1907/2006 and amendments  RE	Radioactive Substances	N.D.	All materials	Regulation of Nuclear Source
REACH Annex XVII By law All materials REACH 1907/2006 and amendments  REACH Candidate List of SVHCs <1000 ppm All materials REACH 1907/2006 and amendments  RE				
REACH Candidate List of SYMCs				and Reactors,1986
Tetrabromobisphenyl A (TBBA * 18BA) N.D. All materials Customer Requirement  Polychlorinated Naphthalene (PCNs) N.D. All materials Customer Requirement  Phenol, 2-(2H-benzotrizor)-2-yi)-4,6-bis(1,1-dimethylethyl)-phenol N.D. All materials REACH 1907/2006 and amendments  Alkyl phenol N.D. All materials REACH 1907/2006 and amendments  Antimony and its compounds 100 ppm All materials REACH 1907/2006 and amendments  Chlorophenols N.D. All materials REACH 1907/2006 and amendments  Chlorophenols N.D. All materials REACH 1907/2006 and amendments  Chlorophenols N.D. All materials REACH 1907/2006 and amendments  Tris(2-chloroethyl)phosphate (TCEP) N.D. All materials Customer Requirement  Tris(2-chloroethyl)phosphate (TCEP) N.D. All materials Customer Requirement  Tris(1,3-dichloro-2-propyl)phosphate (TCEP) N.D. All materials Customer Requirement  Tris(1,3-dichloro-2-propyl)phosphate (TCEP) N.D. All materials Customer Requirement  Trix(1,3-dichloro-2-propyl)phosphate (TCEP) N.D. All materials Customer Requirement  Expanded polystyrene (EPS) Non-use All materials Customer Requirement  Methylenediphenyl disocyanate (DOD ppm All materials Customer Requirement  All materials Customer Requirement  Non-use Non-use All materials Customer Requirement  Non-use Non-use All materials Customer Requirement  Non-use Requirement  All materials Customer Requirement  Consumer Products  Consumer Products  Consumer Products  Consumer Products  Consumer Products  Consumer Products  Consumer Requirement  All materials Customer Requirement	REACH Annex XVII	By law	All materials	REACH 1907/2006 and amendments
All materials   Customer Requirement	REACH Candidate List of SVHCs	<1000 ppm	All materials	REACH 1907/2006 and amendments
Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)-phenol  Alkyl phenol  Alkyl phenol  N.D.  All materials  REACH 1907/2006 and amendments  Customer Requirement  Tris(2-chloro-1-methylethyl)phosphate (TCEP)  N.D.  All materials  Customer Requirement  Trisyl,3-dichloro-2-propyl)phosphate  (TCCPP)  N.D.  All materials  Customer Requirement  Customer Requirement  Customer Requirement  All materials  Customer Requirement  All materials  Customer Requirement  REACH 1907/2006 and amendments  Suffactants  Non-use  All materials  Customer Requirement  REACH 1907/2006 and amendments  Non-use  All materials  Customer Requirement  REACH 1907/2006 and amendments  Non-use  All materials  Customer Requirement  REACH 1907/2006 and amendments  Non-use  All materials  Customer Requirement  REACH 1907/2006 and amendments  Non-use  All materials  Customer Requirement  Customer Requirement  REACH 1907/2006 and amendments  Non-use  All materials  Customer Requirement  Consumer Products  Non-use  All materials  Customer Requirement  REACH 1907/2006 and amendments  Non-use  All materials  Customer Requirement  Consumer Products  REACH 1907/2006 and amendments  REACH 1907/2006 and amendments  Non-use  All materials  REACH 1907/2006 and amendments	, , ,	N.D.	All materials	Customer Requirement
All materials REACH 1907/2006 and amendments Alkyl phenol N.D. All materials REACH 1907/2006 and amendments Antimony and its compounds 100 ppm All materials REACH 1907/2006 and amendments Cobalt dichloride Non-use All materials REACH 1907/2006 and amendments Chlorophenols N.D. All materials Customer Requirement Tris(2-chloroethyl)phosphate (TCEP) N.D. All materials Customer Requirement Tris(2-chloro-1- methylethyl)phosphate (TCPP) Tris(1,3-dichloro-2-propyl)phosphate (TCPP) All materials Customer Requirement Trix(2) N.D. All materials Customer Requirement Trix(2) N.D. All materials Customer Requirement Trix(3) Non-use All materials Customer Requirement Trix(4) Phosphate (TXP) Non-use All materials Customer Requirement South Korean KC safety mark  Methylenediphenyl diisocyanate (MDI) All materials South Korean KC safety mark  Methylenediphenyl diisocyanate (MDI) All materials Customer Requirement  Surfactants Non-use All materials Customer Requirement  Surfactants Non-use All materials Customer Requirement  Norway Prohibition on CertainHazardous Substances in Consumer Products  Fragrance substance Non-use All materials Customer Requirement  Dioxins,furans All materials Customer Requirement  Surfactants REACH 1907/2006 and amendments	Polychlorinated Naphthalene (PCNs)	N.D.	All materials	Customer Requirement
Antimony and its compounds 100 ppm All materials REACH 1907/2006 and amendments  Chlorophenols N.D. All materials Customer Requirement  Tris(2-chloroethyl)phosphate (TCEP) N.D. All materials Customer Requirement  Tris(2-chloro-1- methylethyl)phosphate (TCPP) N.D. All materials Customer Requirement  Trix(1,3-dichloro-2-propyl)phosphate (TCPP) N.D. All materials Customer Requirement  Trixylyl phosphate (TXP) N.D. All materials Customer Requirement  Trixylyl phosphate (TXP) N.D. All materials Customer Requirement  Trixylyl phosphate (TXP) N.D. All materials Customer Requirement  Expanded polystyrene (EPS) Non-use All materials South Korean KC safety mark  Methylenediphenyl diisocyanate (MDI) All materials Customer Requirement  Methylenediphenyl diisocyanate (MDI) All materials Customer Requirement  Surfactants Non-use All materials Customer Requirement  Surfactants Non-use All materials Customer Requirement  Trixyl materials Customer Requirement  Non-use All materials Customer Requirement  Non-use REACH 1907/2006 and amendments  Consumer Products  Fragrance substance Non-use All materials Customer Requirement  Dioxins, furans Non-use REACH 1907/2006 and amendments  REACH 1907/2006 and amendments	Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)-phenol	Non-use	All materials	REACH 1907/2006 and amendments
Cobalt dichloride Non-use All materials REACH 1907/2006 and amendments  Chlorophenols N.D. All materials Customer Requirement  Tris(2-chloro-1- methylethyl)phosphate (TCPP) N.D. All materials Customer Requirement  Tris(1,3-dichloro-2-propyl)phosphate (TCPP) N.D. All materials Customer Requirement  Trix(yl) phosphate (TXP) N.D. All materials Customer Requirement  Trix(yl) phosphate (TXP) N.D. All materials Customer Requirement  Expanded polystyrene (EPS) Non-use All materials South Korean KC safety mark  Methylenediphenyl diisocyanate (MDI) All materials Customer Requirement  Surfactants Non-use All materials Customer Requirement  Surfactants Non-use All materials Customer Requirement  Non-use All materials Customer Requirement  Norway Prohibition on CertainHazardous Substances in Consumer Products  Fragrance substance Non-use All materials Customer Requirement  Dioxins, furans Non-use All materials REACH 1907/2006 and amendments	Alkyl phenol	N.D.	All materials	REACH 1907/2006 and amendments
Chlorophenols  N.D.  All materials  Customer Requirement  Tris(2-chloroethyl)phosphate (TCEP)  N.D.  All materials  Customer Requirement  All materials  Customer Requirement  All materials  Customer Requirement  Customer Requirement  All materials  Customer Requirement  All materials  Customer Requirement  Customer Requirement  All materials  Customer Requirement  Customer Requirement  All materials  Customer Requirement  All materials  Customer Requirement  All materials  Customer Requirement  All materials  Customer Requirement  Consumer Products  Customer Requirement  All materials  Customer Requirement  All materials  Customer Requirement  All materials  Customer Requirement  Customer Requir	Antimony and its compounds	100 ppm	All materials	IEC 62474
Tris(2-chloroethyl)phosphate (TCPP)  N.D.  All materials  Customer Requirement  All materials  Customer Requirement  Customer Requirement  Customer Requirement  All materials  Customer Requirement  Customer Requirement  Customer Requirement  All materials  Customer Requirement  Customer Requirement  All materials  Customer Requirement  Customer Requirement  All materials  Customer Requirement  All materials  Customer Requirement  Consumer Products  All materials  Customer Requirement  Consumer Products  All materials  Customer Requirement  Consumer Products  All materials  Customer Requirement  All materials  Customer Requirement  Consumer Products  All materials  Customer Requirement  Consumer Products  All materials  Customer Requirement  Customer Requirement  Consumer Products  Customer Requirement	Cobalt dichloride	Non-use	All materials	REACH 1907/2006 and amendments
Tris(2-chloro-1- methylethyl)phosphate (TCPP)  N.D.  All materials  Customer Requirement  All materials  Customer Requirement  Customer Requirement  All materials  Customer Requirement  Customer Requirement  Customer Requirement  All materials  Customer Requirement  Customer Requirement  All materials  Customer Requirement  All materials  Customer Requirement  All materials  Customer Requirement  All materials  Customer Requirement  Consumer Products  Fragrance substance  Non-use  All materials  Customer Requirement  Consumer Products  REACH 1907/2006 and amendments	Chlorophenols	N.D.	All materials	Customer Requirement
methylethyl)phosphate (TCPP)       N.D.       All materials       Customer Requirement         Tris(1,3-dichloro-2-propyl)phosphate (TDCPP)       N.D.       All materials       Customer Requirement         Trixylyl phosphate (TXP)       N.D.       All materials       Customer Requirement         Expanded polystyrene (EPS)       Non-use       All materials       South Korean KC safety mark         Methylenediphenyl diisocyanate (MDI)       1000 ppm       All materials       REACH 1907/2006 and amendments         2-Butanone oxime       1000 ppm       All materials       Customer Requirement         Surfactants       Non-use       All materials       Norway Prohibition on CertainHazardous Substances in Consumer Products         Fragrance substance       Non-use       All materials       Customer Requirement         Dioxins,furans       Non-use       All materials       REACH 1907/2006 and amendments	Tris(2-chloroethyl)phosphate (TCEP)	N.D.	All materials	Customer Requirement
methylethyl)phosphate (TCPP)     Image: Customer Requirement (TDCPP)       Tris(1,3-dichloro-2-propyl)phosphate (TDCPP)     N.D.     All materials     Customer Requirement       Trixylyl phosphate (TXP)     N.D.     All materials     Customer Requirement       Expanded polystyrene (EPS)     Non-use     All materials     South Korean KC safety mark       Methylenediphenyl diisocyanate (MDI)     1000 ppm     All materials     REACH 1907/2006 and amendments       2-Butanone oxime     1000 ppm     All materials     Customer Requirement       Surfactants     Non-use     All materials     Norway Prohibition on CertainHazardous Substances in Consumer Products       Fragrance substance     Non-use     All materials     Customer Requirement       Dioxins,furans     Non-use     All materials     REACH 1907/2006 and amendments	Tris(2-chloro-1-			
N.D.   All materials   Customer Requirement	methylethyl)phosphate (TCPP)	N.D.	All materials	Customer Requirement
Trixylyl phosphate (TXP)  N.D.  All materials  Customer Requirement  Expanded polystyrene (EPS)  Non-use  All materials  South Korean KC safety mark  Methylenediphenyl diisocyanate (MDI)  2-Butanone oxime  1000 ppm  All materials  Customer Requirement  Customer Requirement  All materials  Customer Requirement  All materials  Customer Requirement  All materials  Consumer Products  Fragrance substance  Non-use  All materials  Customer Requirement  Consumer Products  Customer Requirement  REACH 1907/2006 and amendments  REACH 1907/2006 and amendments  REACH 1907/2006 and amendments	Tris(1,3-dichloro-2-propyl)phosphate			
Expanded polystyrene ( EPS ) Non-use All materials South Korean KC safety mark  Methylenediphenyl diisocyanate (MDI)  2-Butanone oxime 1000 ppm All materials Customer Requirement  Surfactants Non-use All materials Customer Products  Fragrance substance Non-use All materials Customer Requirement  Dioxins,furans Non-use All materials REACH 1907/2006 and amendments  REACH 1907/2006 and amendments  Consumer Products  Customer Requirement  Customer Requirement  REACH 1907/2006 and amendments	(TDCPP)	N.D.	All materials	Customer Requirement
Methylenediphenyl diisocyanate (MDI)  2-Butanone oxime  1000 ppm  All materials  Customer Requirement  Norway Prohibition on CertainHazardous Substances in Consumer Products  Fragrance substance  Non-use  All materials  Customer Requirement  Consumer Products  Customer Requirement  All materials  Customer Requirement  REACH 1907/2006 and amendments	Trixylyl phosphate (TXP)	N.D.	All materials	Customer Requirement
MDI   1000 ppm	Expanded polystyrene ( EPS )	Non-use	All materials	South Korean KC safety mark
Surfactants  Non-use  All materials  Consumer Products  Fragrance substance  Non-use  All materials  Customer Requirement  Dioxins,furans  Non-use  All materials  REACH 1907/2006 and amendments		1000 ppm	All materials	REACH 1907/2006 and amendments
Surfactants  Non-use  All materials  Consumer Products  Fragrance substance  Non-use  All materials  Customer Requirement  Dioxins,furans  Non-use  All materials  REACH 1907/2006 and amendments	2-Butanone oxime	1000 ppm	All materials	Customer Requirement
Dioxins, furans  Non-use  All materials  REACH 1907/2006 and amendments	Surfactants	Non-use	All materials	
	Fragrance substance	Non-use	All materials	Customer Requirement
Natural rubber Non-use All materials Customer Requirement	Dioxins,furans	Non-use	All materials	REACH 1907/2006 and amendments
	Natural rubber	Non-use	All materials	Customer Requirement

Originalwood	Non-use	Packaging material	Customer Requirement
Yelow(White) /Red Phosphorus	Negative	All materials	Japan industry health and safety Act
Selenium and its compounds	100 ppm	All materials	IEC 62474
Halogenated benzenes	N.D.	All materials	Customer Requirement
2-(2-methoxyethoxy)ethanol (DEGME)	1000 ppm	All materials	Customer Requirement
2-Butoxyethanol	1000 ppm	All materials	REACH 1907/2006 and amendments
2-(2-butoxyethoxy)ethanol (DEGBE)	1000 ppm	All materials	Customer Requirement
Benzene	N.D.	All materials	REACH 1907/2006 and amendments
Toluene	N.D.	All materials	Customer Requirement
Cyclohexane	Non-use	All materials	REACH 1907/2006 and amendments
Adhesive monomers Group I & Group	Must pass toxicological review for approval	Adhesives in wearable products  UV-cured adhesives in earphones and headphones Includes oligomers and cross-linkers	Customer Requirement
Chlorinated Organic Solvents	1000 ppm, Cl<900 ppm	All materials	Customer Requirement
2,4,6-Tri-tert-butylphenol	3000 ppm	All materials	USA <toxic act,tsca="" control="" substance=""></toxic>
Deca BDE	N.D.	All materials	USA <toxic act,tsca="" control="" substance=""></toxic>
Phenol, isopropylated, phosphate (3:1)	N.D.	All materials	USA <toxic act,tsca="" control="" substance=""></toxic>
Pentachlorothiophenol (PCTP)	10000 ppm	All materials, Such as the rubber industry	USA <toxic act,tsca="" control="" substance=""></toxic>
Hexachloro-1,3-butadiene	N.D.	All materials	USA <toxic act,tsca="" control="" substance=""></toxic>
Long-chain perfluorocarboxylic acids, their salts and their precursors (LC- PFCAs)	N.D.	All materials	SOR/2012-285
Nitrosodiphenylamine	N.D.	All materials	SOR/2012-285
2-Methoxyethanol and ethylene glycol monomethyl ether	5000 ppm	All materials	SOR/2012-285
PFCAs (C9-C14), their salts and related substances	25 ppb for the sum of C9-C14 PFCAs and their salts260 ppb for the sum of C9-C14 PFCA-related substances	All materials	https://echa.europa.eu/documents/10162/2ec5dfdd-0e63- 0b49-d756-4dc1bae7ec61
PFHxS, its salts and related substances	25 ppb for the sum of PFHxS and its salts 1000 ppb for the sum of PFHxS related substances	All materials	https://echa.europa.eu/documents/10162/a22da803-0749- 81d8-bc6d-ef551fc24e19

			(EC) No 850/2004
Persistent Organic Pollutants (POPs)	N.D.	All materials	(EU) No 519/2012
			Customer Requirement
Endangered Species of Flora and	Non-use	All materials	US Lacey Act
Fauna			EU Timber Regulation
			Montreal Protocol
Ozone Depleting Chemicals (ODCs)	N.D.	All materials	US Clean Air Act
			Customer Requirement
Bismuth (Bi) and its compounds	1000 ppm	All materials	Customer Requirement
Chemical Substance Control Law			
(CSCL) Class I specified chemical	N.D.	All materials	Chemical Substance Control Law (CSCL)
substance			
Nitrogen trifluoride	Non-use	All materials	Customer Requirement
2-(2H-Benzotriazol-2-yl)-4,6-	Nonuco	All motorials	Customer Deguirement
ditertpentylphenol (UV-328)	Non-use	All materials	Customer Requirement
Takasiliyaya akbidaya	Newwes	Paints, Adhesives,	Contamo Description
Tetrafluoroethylene	Non-use	Cleaners	Customer Requirement
Ethylene glycol, and its ethers	No intentional use 1000 ppm	All materials	Customer Requirement
Ethane	Non-use	All materials	Customer Requirement
		Solvents in paints,	
Ethylbenzene	1000 ppm	primers, coatings, inks,	Customer Requirement
		lubricants and adhesives	
		Solvents in paints,	
Acetaldehyde	3.7 μg/m³	primers, coatings, inks,	VOC JEITA
		lubricants and adhesives	
4-Nitrobiphenyl and its salts	Non-use	All materials	Customer Requirement
Tritolyl Phosphate (TCP)	Non-use	All materials	Customer Requirement
Brominated Polystyrene	Non-use	Blister packaging	Customer Requirement
Octylphenol and its ethers (Ops)	Non-use	All materials	Customer Requirement
Hexachloroethane	N.D.	All materials	Customer Requirement
2,4-Dinitrotoluene; 2,4-DNT	1000 ppm	All materials	Customer Requirement
Dichloromethyl ether	N.D.	All materials	Customer Requirement
Triclosan	10 ppm	All materials	Customer Requirement
Isocyanic acid	Non-use	All materials	Customer Requirement
Organophosphorus compounds	N.D.	All materials	Customer Requirement
Phenol and its compounds	N.D.	All materials	Customer Requirement
Per- and Polyfluoroalkyl Substances (PFAS)	Non-use	All materials	http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?doclanguage=en&cote=env/jm/mono(2006)15

N-Nitrosodimethylamine (NDMA)	Non-use	All materials	Customer Requirement
Chlorinated paraffin (C18-28) (LCCPs)	N.D.	All materials	Customer Requirement
DechloranePlus (DCRP)	Non-use	All materials	Customer Requirement
Decabromodiphenyl Ethane (DBDPE)	Non-use	All materials	Customer Requirement
1, 4-Dioxane	Non-use	All materials	Toxic Substances Control Act (TSCA)
Pigment Violet 29	Non-use	All materials	Toxic Substances Control Act (TSCA)
Phosphine	Non-use	All materials	Germany. Chemicals Prohibition Ordinance.  Denmark: Statutory Order No. 289.  United States. Toxic Substances
Ethylenediaminetetraacetic acid (EDTA)	Non-use	All materials	Customer Requirement
2-(2-Aminoethylamino)ethanol (AEEA)	Non-use	All materials	Customer Requirement
Tri-(2,3-dibromo-propyl) phosphate (TDBPP)	N.D.	All materials	Customer Requirement
Gallium	Non-use	All materials	Customer Requirement
Methoxyethanol	Non-use	All materials	Customer Requirement
Tri-(1-aziiridinyl) phosphinoxide	N.D.	All materials	Customer Requirement

2) Reported substances in products: 30 items

Chemical	Threshold	Scope	References
Adhesive monomers Group I	1000 ppm	Adhesives in wearable products UV-cured adhesives in earphones and headphones Includes oligomers and cross-linkers	Customer Requirement
n-Propyl Bromide (nPB)	100 ppm	Cleaning solvent and used as an intermediate in the synthesis of quaternary ammonium compounds. Also used as a solvent in adhesive sprays	Customer Requirement
Parts/Components utilizing RoHS exemptions	Individual substance thresholds as per the RoHS directive	All materials	2011/65/EU
Volatile Organic Compounds (VOCs)	• •	Paints, coatings, inks, adhesives, primers, cleaners, degreasers	Customer Requirement GB 38507-2020 GB 38508-2020 GB 33372-2020
Additive Phosphorous Flame Retardants	1000 ppm	Plastics, printed circuit boards	Sweden Chemical Tax(2016:1067)
Biocides	Detectable levels. Treated articles must use biocides that are approved or under review	Additive in polymers, leather, other coated materials	EU No 528/2012 (BPR)

Cobalt and its compounds	1000 ppm	Moisture indicator, additive in rubber, cobalt alloys	REACH 1907/2006 and amendments
Diphenylamines, Substituted (SDPA)	Detectable levels	Antioxidants used in adhesives, resins, polymer coatings, paper products	Canadian Environmental Protection Act, 1999
Endocrine Disrupting Chemicals (EDCs)	Detectable levels	All materials	Customer Requirement
IEC 62474 Substances	Various, as required by standard	All materials	IEC 62474
Indium Phosphide	Detectable levels	Electronic components	Customer Requirement
Nanomaterials	Detectable levels	Silver nanoparticles, carbon nanotubes and graphene, nano- scale cerium dioxide, nano titanium dioxide, nano-scale iron, nanometer-sized copper particles	France Decree No. 2012-232, Environmental Code Article L. 523-4—Annual declaration of substances in nanoparticle 2011/696/EU
PFBS and related substances	1000 ppm total content	Flame retardant additive for plastic resins	https://www.miljodirektoratet.no/globalassets/publikasjoner/M759/M759.pdf
Toluene	1000 ppm	Paints, coatings, inks, adhesives, primers manufactured by the material supplier and in the finished good	Customer Requirement
Bisphenol chemicals	100 ppm	All materials	Customer Requirement
Brominated Organic Solvents	100 ppm	All materials	Customer Requirement
Formaldehyde-releasing substances	Formaldehyde released from substance exceeds a concentration of 0.124 mg/m³ in the air of a test chamber used under the conditions prescribed in EN 717-1.	All materials	https://echa.europa.eu/documents/10162/13641/ rest formaldehyde axvreport en.pdf/
Skin sensitizing substances	Report if contain	Only applicable to leather, textile, hide, and fur articles. Natural leather is exempt.	https://echa.europa.eu/de/registry-of-restriction- intentions/-/dislist/details/0b0236e182446136
Melamine	1000 ppm	Plastics	Customer Requirement
N-Ethyl-2-pyrrolidone	1000 ppm	Paints, coatings, inks, adhesives, primers manufactured by the material supplier and in the finished good	Customer Requirement
Proposition 65 list of chemicals	Detectable levels	All materials	California Proposition 65
Washington State's List of Chemicals of High Concern to Children (CHCC)	Practical quantification limit (PQL) if added intentionally  100 ppm if present as a contaminant	All materials	Children's Safe Products Act
Chromium(III) compounds	Report if contain	All materials	97/10/EC
Zinc and its compounds	Detectable levels	All materials	Customer Requirement
Palladium and its compounds	Detectable levels	All materials	Customer Requirement
Silver and its compounds	Detectable levels	All materials	Customer Requirement
Manganese and its compounds	1000 ppm	All materials	Customer Requirement
Magnesium and its compounds	1000 ppm	All materials	Customer Requirement
Fluorine and its compounds	Detectable levels	All materials	Customer Requirement
Butyl glycidyl ether	1000 ppm	All materials	Customer Requirement

# 3) Restricted substances in manufacturing: 31 items

Chemical	Threshold	Scope	References
Benzene	Non-use	Cleaning agents, degreasers, demolder solutions in all manufacturing processes	NIOSH
Reryllium Dust and Fumes	Breathing zone <0.0002 mg/m <sup>3</sup>	Connector contacts, EMI finger (beryllium-copper alloys), transceivers (beryllium oxide)	California OSHA PEL (2006); GBZ 2.1 2007
Brominated Organic Solvents	Non-use	Cleaning agents, degreasers, demolder solutions in all manufacturing processes	Customer Requirement
Chlorinated Organic Solvents	Non-use	Cleaning agents, degreasers, demolder solutions in all manufacturing processes	Customer Requirement
n-Hexane	Non-use	Cleaning agents, degreasers, demolder solutions in all manufacturing processes	GBZ 2.1 2007; ACGIH
N-methylpyrrolidone (NMP)	Non-use	Cleaning agents, degreasers, demolder solutions in all manufacturing processes	AIHA TWA; California OSHA

n-Propyl Bromide (nPB)	Non-use	Cleaning agents, degreasers, demolder solutions in all manufacturing processes	Customer Requirement
Ozone Depleting Chemicals (ODC)	No intentional use	All manufacturing processes	Montreal Protocol; EC No. 2037/2000
Toluene	Non-use	Cleaning agents, degreasers, demolder solutions in all manufacturing processes	ACGIH(2015)
Xylene	Non-use	All manufacturing processes	NIOSH
m-xylene	Non-use	All manufacturing processes	NIOSH
p-xylene	Non-use	All manufacturing processes	NIOSH
o-xylene	Non-use	All manufacturing processes	NIOSH
Ethylbenzene	Non-use	All manufacturing processes	NIOSH
Trichloroethylene	Non-use	All manufacturing processes	NIOSH
Tetrachloroethylene	Non-use	All manufacturing processes	NIOSH
Fluorinated greenhouse gases (CFCs, HCFCs, HFCs, PFCs, SF6)	Non-use	All manufacturing processes	(EC) No 842/2006; (EC) No.1005/2009
Ethanolarnine	Non-use	Cleaning agents, degreasers, demolder solutions in all manufacturing processes	ACGIH; GBZ 2.1 2007; Customer Requirement
2-Ethoxyethanol	Non-use	Cleaning agents, degreasers, demolder solutions in all manufacturing processes	ACGIH; GBZ 2.1 2007; Customer Requirement
2-Ethoxyethyl acetate	Non-use	Cleaning agents, degreasers, demolder solutions in all manufacturing processes	ACGIH; GBZ 2.1 2007; Customer Requirement
Cyclohexanone	Non-use	Cleaning agents, degreasers, demolder solutions in all manufacturing processes	ACGIH; GBZ 2.1 2007; Customer Requirement
N, N Dimethylformamide	Non-use	Cleaning agents, degreasers, demolder solutions in all manufacturing processes	ACGIH; GBZ 2.1 2007; Customer Requirement
Methanol	Non-use	Cleaning agents, degreasers, demolder solutions in all manufacturing processes	ACGIH; GBZ 2.1 2007; Customer Requirement
Methylene Chloride	Non-use	Cleaning agents, degreasers, demolder solutions in all manufacturing processes	ACGIH; GBZ 2.1 2007; Customer Requirement
Carbon Tetrachloride	Non-use	Cleaning agents, degreasers, demolder solutions in all manufacturing processes	ACGIH; GBZ 2.1 2007; Customer Requirement
2-Butoxy ethanol	Non-use	Cleaning agents, degreasers, demolder solutions in all manufacturing processes	ACGIH; GBZ 2.1 2007; Customer Requirement
Heptane	Non-use	Cleaning agents, degreasers, demolder solutions in all manufacturing processes	Customer Requirement
Cyclohexanone	Non-use	Cleaning agents, degreasers, demolder solutions in all manufacturing processes	Customer Requirement
Phthalates	1000 ppm total content	The tools, auxiliary materials, packaging materials, work surfaces, equipment surfaces of contact, etc. that are in contact with product production, including but not limited to the objects listed in Appendix T.	California Proposition 65 REACH 1907/2006 and amendments 2011/65/EU Customer Requirement
2-Butoxyethanol	Non-use	Paints, coatings, thinners, etc.	Customer Requirement
Phosphine	Non-use	All manufacturing processes	Customer Requirement

# 4) Reported substances in manufacturing processes: 19 items

4) Reported substances in mandracturing processes. 15 items				
Chemical	Threshold	Scope	References	
Benzene	Detectable levels (Content)	All manufacturing processes (except Cleaning agents, degreasers, demolder solutions)	NIOSH	
Brominated Organic Solvents	Detectable levels (Content)	All manufacturing processes (except Cleaning agents, degreasers, demolder solutions)	Customer Requirement	
Chlorinated Organic Solvents	Detectable levels (Content)	All manufacturing processes (except Cleaning agents, degreasers, demolder solutions)	Customer Requirement	
n-Hexane	Detectable levels (Content)	All manufacturing processes (except Cleaning agents, degreasers, demolder solutions)	ACGIH; GBZ 2.1 2007	
N-methylpyrrolidone (NMP)	Detectable levels (Content)	All manufacturing processes (except Cleaning agents, degreasers, demolder solutions)	AIHA TWA; California OSHA	
n-Propyl Bromide (nPB)	Detectable levels (Content)	All manufacturing processes (except Cleaning agents, degreasers, demolder solutions)	Customer Requirement	
Toluene	Detectable levels (Content)	All manufacturing processes (except Cleaning agents, degreasers, demolder solutions)	NIOSH	
2-Ethoxyethanol	Detectable levels (Content)	All manufacturing processes (except Cleaning agents, degreasers, demolder solutions)	ACGIH; GBZ 2.1 2007; Customer Requirement	
2-Ethoxyethyl acetate	Detectable levels (Content)	All manufacturing processes (except Cleaning agents, degreasers, demolder solutions)	ACGIH; GBZ 2.1 2007; Customer Requirement	
Cyclohexanone	Detectable levels (Content)	All manufacturing processes (except Cleaning agents, degreasers, demolder solutions)	ACGIH; GBZ 2.1 2007; Customer Requirement	
N, N Dimethylformamide	Detectable levels (Content)	All manufacturing processes (except Cleaning agents, degreasers, demolder solutions)	ACGIH; GBZ 2.1 2007; Customer Requirement	

Methanol	II)etectable levels (( ontent)	All manufacturing processes (except Cleaning agents, degreasers, demolder solutions)	ACGIH; GBZ 2.1 2007; Customer Requirement
Methylene Chloride	Detectable levels (Content)	All manufacturing processes (except Cleaning agents, degreasers, demolder solutions)	ACGIH; GBZ 2.1 2007; Customer Requirement
Carbon Tetrachloride	II)etectable levels (( ontent)	All manufacturing processes (except Cleaning agents, degreasers, demolder solutions)	ACGIH; GBZ 2.1 2007; Customer Requirement
2-Butoxy ethanol	Detectable levels (Content)	All manufacturing processes (except Cleaning agents, degreasers, demolder solutions)	ACGIH; GBZ 2.1 2007; Customer Requirement
Ethanolamine	II)etectable levels (( ontent)	All manufacturing processes (except Cleaning agents, degreasers, demolder solutions)	ACGIH; GBZ 2.1 2007; Customer Requirement
Xylenes	Detectable levels (Content)	All manufacturing processes (except Cleaning agents, degreasers, demolder solutions)	ACGIH; GBZ 2.1 2007; Customer Requirement
Formaldehyde	Detectable levels (Content)	All manufacturing processes	Customer Requirement
Hydrogen Fluoride (HF)	Detectable levels (Content)	All manufacturing processes	Customer Requirement