



4 Evaluated Substances of the 16th Batch are Officially Added into SVHCs List

Until 13 Jan. 2017 SVHCs Updated to 173 Items

The European Chemicals Agency has added 4 substances to the Candidate List, which now contains 173 substances.

Helsinki, 12 Jan. 2017 —4,4'-isopropylidenediphenol (bisphenol A; BPA); Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts are added for Toxic for reproduction reasons. p-(1,1-dimethylpropyl)phenol; 4-heptylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof] are added for Equivalent level of concern having probable serious effects to environment reasons.

The legal obligations that companies may have resulting from the inclusion of substances in the Candidate List may apply to the listed substances on their own, in mixtures or in articles. Producers and importers of articles containing any of the 173 substances included in the Candidate List on 13 Jan. 2017 have six months to notify ECHA if the SVHC is present in articles in amounts that total more than one tonne per producer or importer per year and above a concentration of 0.1% weight by weight. There are exemptions from the notification obligation if the substance is already registered for the use or when exposure can be excluded.



About REACH

REACH REGULATION concerning the Registration, Evaluation, Authorization and Restriction of Chemicals, shorten as REACH, is chemical regulatory system founded by EU, which was officially executive from June 1st, 2007.

REACH is a regulation that should ensure a high level of protection of human health and the environment as well as the free movement of substances, on their own, in preparations and in articles, while enhancing competitiveness and innovation.

Contact us:

Shenzhen Hongcai testing technology co., LTD. (HCT)
Web: <http://www.hct-test.com/>
Hotline: 400-0066-989 T: (86) 755 8416666
Email: service@hct-test.com
Add: 3rd floor, Block D, Peng Litai Industrial Estate, Long Ping West Road, Longgang District, Shenzhen City.

Statement: This publication is only educational and does not replace any legal requirements or applicable rules. Information included in the publication will not be revised. HCT does not guarantee that the content contained in the publication without any errors or will meet any particular performance or quality standards. If there is no consent of HCT in advance, please do not quote or refer any information contained in this publication.

Substances included in the Candidate List for authorisation until 12 Jan. 2017 and their SVHC properties:

Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 16th batch	4,4'-isopropylidenediphenol (bisphenol A; BPA)	201-245-8	80-05-7	Toxic for reproduction (Article 57c)	Manufacture of polycarbonate, epoxy resins and chemicals; hardener in epoxy resins
	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	206-400-3 - 221-470-5	335-76-2 3830-45-3 3108-42-7	Toxic for reproduction (Article 57c) PBT (Article 57d)	Lubricant, wetting agent, plasticiser and corrosion inhibitor
	p-(1,1-dimethylpropyl)phenol	201-280-9	80-46-6	Equivalent level of concern having probable serious effects to environment (Article 57f)	Manufacture of chemicals and plastic products
	4-heptylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]	-	-	Equivalent level of concern having probable serious effects to environment (Article 57f)	Manufacture of polymers; formulation into lubricants

Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 15th batch	Benzo[def]chrysene	200-028-5	50-32-8	Carcinogenic (Article 57a) Mutagenic (Article 57b) Toxic for reproduction (Article 57c) PBT (Article 57 d) vPvB (Article 57 e)	Mainly used in the flue gas of coal tar, carbon black, and various types of coal and oil burning, cigarette smoke, automobile exhaust, as well as coking, oil refining, asphalt, plastics and other industrial sewage.



Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 14th batch	Nitrobenzene	202-716-0	98-95-3	Toxic for reproduction (Article 57 c)	Manufacture of other substances
	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-1-2-yl)phenol (UV-327)	223-383-8	3864-99-1	vPvB (Article 57 e)	UV-protection agents in coatings, plastics, rubber and cosmetics
	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	253-037-1	36437-37-3	vPvB (Article 57 e)	UV-protection agents in coatings, plastics, rubber and cosmetics
	1,3-propanesultone	214-317-9	1120-71-4	Carcinogenic (Article 57 a)	Electrolyte fluid of lithium ion batteries
	Perfluorononan-1-oiic-acid and its sodium and ammonium salts	206-801-3	375-95-1 21049-39-8 4149-60-4	Toxic for reproduction (Article 57 c) PBT (Article 57 d)	Processing aid for fluoropolymer manufacture/lubricating oil additive/surfactant for fire extinguishers/cleaning agent/textile antifouling finishing agent/polishing surfactant/waterproofing agents and in liquid crystal display panels

Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 13th batch	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters;	271-094-0	68515-51-5	Toxic for reproduction (Article 57 c)	Mainly used as plasticizer and lubricant, used in the adhesive, paint, building material, PVC and art material (Such as modeling clay and finger paints etc.
	1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)	272-013-1	68648-93-1		
	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual stereoisomers of [1] and [2] or any combination thereof]	/	/	vPvB (Article 57e)	Used as fragrance, widely used in perfume, soap, detergent and other daily necessities; meanwhile, it is also widely used in shampoo and textile softener.



Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 12th batch	Cadmium fluoride	232-222-0	7790-79-6	Carcinogenic (Article 57 a); Mutagenic (Article 57 b); Toxic for reproduction (Article 57 c); Equivalent level of concern having probable serious effects to human health (Article 57 f)	Used in phosphors, glass, and nuclear reactor controls
	Cadmium sulphate	233-331-6	10124-36-4; 31119-53-6	Carcinogenic (Article 57 a); Mutagenic (Article 57 b); Toxic for reproduction (Article 57 c); Equivalent level of concern having probable serious effects to human health (Article 57 f)	Used as a pigment, also used in the production of solar cells
	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	223-346-6	3846-71-7	PBT (Article 57 d); vPvB (Article 57 e)	Used as plastic additive, ultraviolet light absorber and light stabilizer
	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	247-384-8	25973-55-1	PBT (Article 57 d); vPvB (Article 57 e)	Used as plastic additive, ultraviolet light absorber and light stabilizer
	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	239-622-4	15571-58-1	Toxic for reproduction (Article 57 c)	Used as a stabiliser for PVC processing
	reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)	-	-	Toxic for reproduction (Article 57 c)	Used as a stabiliser for PVC processing



Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 11th batch	Cadmium chloride	233-296-7	10108-64-2	Carcinogenic (Article 57a); Mutagenic (Article 57b); Toxic for reproduction (Article 57c); Equivalent level of concern having probable serious effects to human health (Article 57 f)	used for photocopying, dyeing and electroplating.
	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	271-093-5	68515-50-4	Toxic for reproduction (Article 57 c)	Used as lubricant in steering fluid, and as plasticizers, also used in auto transmission lubricants .
	Sodium peroxometaborate	231-556-4	7632-4-4	Toxic for reproduction (Article 57 c)	Used as oxidant, disinfectants, fungicide, salt, deodorization agent, plating solution additives
	Sodium perborate; perboric acid, sodium salt	239-172-9;	-	Toxic for reproduction (Article 57 c)	Used as oxidant, decolorizer

Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 10th batch	Cadmium sulphide	215-147-8	1306-23-6	Carcinogenic (Article 57a); Equivalent level of concern having probable serious effects to human health (Article 57 f)	Used as pigment, also used in manufacturing of photoresistors (light dependent resistors) sensitive to visible and near infrared light.
	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diyl bis(azo)] bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	209-358-4	573-58-0	Carcinogenic(Article 57a)	used to stain microscopic prepares, especially as a cytoplasm and erythrocyte stain;
	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo]-5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38)	217-710-3	1937-37-7	Carcinogenic (Article 57a)	used to: dye cellulose; dye leather, plastics, used as a resin filler; and produce aqueous inks.
	Dihexyl phthalate	201-559-5	84-75-3	Toxic for reproduction (Article 57 c)	Used as plasticizer for cellulose & vinyl plastics.
	Imidazolidine-2-thione (2-imidazoline-2-thiol)	202-506-9	96-45-7	Toxic for reproduction (Article 57 c)	Used primarily as an accelerator for vulcanizing polychloroprene (neoprene) and polyacrylate rubbers, also used in electroplating baths, as an intermediate in antioxidant production, and in dyes, pharmaceuticals, and synthetic resins.
	Lead di(acetate)	206-104-4	301-04-2	Toxic for reproduction (Article 57 c)	Used as sweetener, also used in cosmetics
	Trixylyl phosphate	246-677-8	25155-23-1	Toxic for reproduction (Article 57 c)	Used as flame-retardants and plasticizers



Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 9th batch	Cadmium	231-152-8	7440-43-9	Carcinogenic (Article 57a); Equivalent level of concern having probable serious effects to human health (Article 57 f)	Used as cadmium electrode, pigment, paint, plastics, metal plating, alloy etc.
	Cadmium oxide	215-146-2	1306-19-0	Carcinogenic (Article 57a); Equivalent level of concern having probable serious effects to human health (effects on kidney and bone) (Article 57 f)	Used as cadmium electrode, pigment, paint, plastics, metal plating, alloy etc.
	Ammonium pentadecafluorooctanoate (APFO)	223-320-4	3825-26-1	Toxic for reproduction (Article 57 c); PBT (Article 57 d)	Used as PVC dispersant by emulsion polymerization
	Pentadecafluorooctanoic acid (PFOA)	206-397-9	335-67-1	Toxic for reproduction (Article 57 c); PBT (Article 57 d)	Pharmaceutical and material Intermediates
	Dipentyl phthalate (DPP)	205-017-9	131-18-0	Toxic for reproduction (Article 57 c)	The substance can be used as plasticizer of cellulose resin, polystyrene, and chlorinated rubber to characterize film products with well elasticity, weather ability and tensile strength
	4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]	—	—	Equivalent level of concern having probable serious effects to the environment (due to the endocrine disrupting properties of the degradation products) (Article 57 f)	Mainly used in production of surfactant, and also used in fields of antioxygen, textile auxiliaries, lubricating oil additives, pesticide emulsifier, resin modifier, and resin and rubber stabilizer.



Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 8th batch	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	214-604-9	1163-19-5	PBT (Article 57 d); vPvB (Article 57 e)	It is an efficient additive flame retardant, which is used in nylon fiber and polyester textiles.
	Pentacosafluorotridecanoic acid	276-745-2	72629-94-8	vPvB (Article 57 e)	Pharmaceutical and material Intermediates
	Tricosafluorododecanoic acid	206-203-2	307-55-1	vPvB (Article 57 e)	Pharmaceutical and material Intermediates
	Henicosfluoroundecanoic acid	218-165-4	2058-94-8	vPvB (Article 57 e)	Pharmaceutical and material Intermediates
	Heptacosfluorotetradecanoic acid	206-803-4	376-06-7	vPvB (Article 57 e)	Pharmaceutical and material Intermediates
	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	204-650-8	123-77-3	Equivalent level of concern having probable serious effects to human health (Article 57 f)	Used as various vesicant of foamed plastic, which is applied to PVC, EVA, PP etc.
	Cyclohexane-1,2-dicarboxylic anhydride Cyclohexane-1,2-dicarboxylic anhydride [1] cis-cyclohexane-1,2-dicarboxylic anhydride [2] trans-cyclohexane-1,2-dicarboxylic anhydride [3] The individual cis- [2] and trans- [3]	201-604-9, 236-086-3, 238-009-9	85-42-7, 13149-00-3, 14166-21-3	Equivalent level of concern having probable serious effects to human health (Article 57 f)	Used as epoxy curing agent
	Hexahydromethylphthalic anhydride[1], Hexahydro-4-methylphthalic anhydride[2], Hexahydro-1-methylphthalic anhydride[3], Hexahydro-3-methylphthalic anhydride [4] [The individual isomers [2], [3] and [4] (including their cis- and trans-stereo isomeric forms) and all possible combinations of the isomers [1] are covered by this entry]	247-094-1, 243-072-0, 256-356-4, 260-566-1	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	Equivalent level of concern having probable serious effects to human health (Article 57 f)	Mainly used for the epoxy curing agent. Impregnation of coil of electrical equipments; casting of electrical components; and sealing of semiconductors, such as outdoor insulators, capacitors, light emitting diode, digital tube



Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 8th batch	4-Nonylphenol, branched and linear[substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]	-	-	Equivalent level of concern having probable serious effects to the environment (Article 57 f)	Mainly used in production of surfactant, and also used in fields of antioxygen, textile auxiliaries, lubricating oil additives, pesticide emulsifier, resin modifier, and resin and rubber stabilizer.
	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-	-	Equivalent level of concern having probable serious effects to the environment (Article 57 f)	Mainly used in production of surfactant, and also used in fields of antioxygen, textile auxiliaries, lubricating oil additives, pesticide emulsifier, resin modifier, and resin and rubber stabilizer.
	Methoxyacetic acid	210-894-6	625-45-6	Toxic for reproduction (Article 57 c)	Organic chemical materials
	N,N-dimethylformamide	200-679-5	68-12-2	Toxic for reproduction (Article 57 c)	Mainly used for a polyacrylonitrile fiber spinning solvent; a gas absorber in the petrochemical industry ; and the selectivity for acetylene absorption and separation and purification of butadiene, the solvent used in leather production, used for synthetic chlordimeform medicine in pesticides; used to synthesis sulfadiazine, doxycycline, cortisone, vitamin B6
	Dibutyltin dichloride (DBTC)	211-670-0	683-18-1	Toxic for reproduction (Article 57 c)	Pesticides, fungicides in paint
	Lead monoxide (Lead oxide)	215-267-0	1317-36-8	Toxic for reproduction (Article 57 c)	Used as white lead pigment, the manufacture of lead soaps, metallurgical cosolvents, paint driers, ceramic materials, rubber vulcanization accelerator, pesticides, lead salt stabilizer in plastics materials, raw materials of lead glass industry, and intermediate raw material of lead salt industry



Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 8th batch	Orange lead (Lead tetroxide)	215-235-6	1314-41-6	Toxic for reproduction (Article 57 c)	Used in production of battery, glass, pottery, ceramic, and used as a protective surface layer of the anti-rust pigment and iron, as well as dyes and other synthetic organic oxidant
	Lead bis(tetrafluoroborate)	237-486-0	13814-96-5	Toxic for reproduction (Article 57 c)	Used for plating of ternary metal in printed circuit and lead low-temperature welding. Also used as an analytical reagent; can be used as the circuit boards, tin lead alloy plating in electroplating
	Trilead bis(carbonate)dihydroxide	215-290-6	1319-46-6	Toxic for reproduction (Article 57 c)	Mainly used in paint, especially suitable for manufacturing antirust paint and outdoor paint
	Lead titanium trioxide	235-038-9	12060-00-3	Toxic for reproduction (Article 57 c)	Used for manufacturing complex electronic ceramics such as the BaTiO ₃ -PbTiO ₃ and PbZrO ₃ -PbTiO ₃ , to improve the electrical properties of ceramics. Also used as a pigment for paint.
	Lead titanium zirconium oxide	235-727-4	12626-81-2	Toxic for reproduction (Article 57 c)	Used for manufacturing complex electronic ceramics to improve the electrical properties of ceramics. Also used as a pigment for paint
	Silicic acid, lead salt	234-363-3	11120-22-2	Toxic for reproduction (Article 57 c)	Mainly used in the manufacture of optical glass, CRT, optical fiber, household utensils and low melting point solder
	Silicic acid (H ₂ SiO ₅), barium salt (1:1), lead-doped [with lead (Pb) content above the applicable generic concentration limit for 'toxicity for reproduction' Repr. 1A (CLP) or category 1 (DSD); the substance is a member of the group entry of lead compounds, with index number 082-001-00-6 in Regulation (EC) No 1272/2008]	272-271-5	68784-75-8	Toxic for reproduction (Article 57 c)	Used for manufacturing complex electronic ceramics to improve the electrical properties of ceramics.
	1-bromopropane (n-propyl bromide)	203-445-0	106-94-5	Toxic for reproduction (Article 57 c)	Used for the synthesis of pharmaceuticals, pesticides, dyes, spices, etc

Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 8th batch	Methyloxirane (Propylene oxide)	200-879-2	75-56-9	Carcinogenic (Article 57a); Mutagenic (Article 57b)	Used as important basic organic chemical synthesis of raw materials, mainly used for the production of polyether, propylene glycol. Propylene oxide derivatives are widely used in the automotive, construction, food, tobacco, pharmaceutical and cosmetics industries
	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	284-032-2	84777-06-0	Toxic for reproduction (Article 57 c)	The substance can be used as plasticizer of cellulose resin, polystyrene, and chlorinated rubber to characterize film products with well elasticity, weather ability and tensile strength
	Diisopentylphthalate (DIPP)	210-088-4	605-50-5	Toxic for reproduction (Article 57 c)	The substance can be used as plasticizer of cellulose resin, polystyrene, and chlorinated rubber to characterize film products with well elasticity, weather ability and tensile strength
	N-pentyl-isopentylphthalate	-	776297-69-9	Toxic for reproduction (Article 57 c)	The substance can be used as plasticizer of cellulose resin, polystyrene, and chlorinated rubber to characterize film products with well elasticity, weather ability and tensile strength
	1,2-diethoxyethane	211-076-1	629-14-1	Toxic for reproduction (Article 57 c)	Used as acrylic resin, methacrylic resin, epoxy resin and a nitro group, and a solvent such as ethyl cellulose, but also as extraction agents in pharmaceutical industry; lubricating oil additives; paint remover; paint coatings; solvents, etc.
	Acetic acid, lead salt, basic	257-175-3	51404-69-4	Toxic for reproduction (Article 57 c)	As analytical reagent, also used in the pharmaceutical industry
	Lead oxide sulfate	234-853-7	12036-76-9	Toxic for reproduction (Article 57 c)	Use as white pigment and heat stabilizer in plastics.
	[Phthalato(2-)]dioxotrilead	273-688-5	69011-06-9	Toxic for reproduction (Article 57 c)	Used as high-temperature electrical insulation materials, foam products and rolled products
	Dioxobis(stearato)trilead	235-702-8	12578-12-0	Toxic for reproduction (Article 57 c)	Used for manufacturing complex electronic ceramics to improve the electrical properties of ceramics.
	Fatty acids, C16-18, lead salts	292-966-7	91031-62-8	Toxic for reproduction (Article 57 c)	Used in manufacture of paint, printing ink
Lead cyanamidate	244-073-9	20837-86-9	Toxic for reproduction (Article 57 c)	Mainly used in plating (both electrolytic and electroless) processes for electronic components (such as printed circuit boards).	

Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 8th batch	Lead dinitrate	233-245-9	10099-74-8	Toxic for reproduction (Article 57 c)	Milk yellow pigment. Used as coal agent In printing and dyeing industry. Used in production of other lead salts, lead dioxide and convergence agent. Tanning agent; Sensitizer. Used as flotation agents in mining industry. Oxidant, as well as the analytical chemistry of chemical reagents
	Pentalead tetraoxide sulphate	235-067-7	12065-90-6	Toxic for reproduction (Article 57 c)	Used for manufacturing complex electronic ceramics to improve the electrical properties of ceramics.
	Pyrochlore, antimony lead yellow	232-382-1	8012-00-8	Toxic for reproduction (Article 57 c)	Used in manufacture of coloration of paint, printing ink, rubbers and plastic products.
	Sulfurous acid, lead salt, dibasic	263-467-1	62229-08-7	Toxic for reproduction (Article 57 c)	Used in manufacture of storage batteries, glasses, potteries and ceramic, also used as protective surface of rust resisting pigments and iron, and a oxidant of dyes and other organic compounds.
	Tetraethyllead	201-075-4	78-00-2	Toxic for reproduction (Article 57 c)	Used for gasoline seismic additives to improve the octane number, and for organic synthesis
	Tetralead trioxide sulphate	235-380-9	12202-17-4	Toxic for reproduction (Article 57 c)	Used as a PVC stabilizer; having harmonized effects used with dibasic lead phosphate.
	Trilead dioxide phosphonate	235-252-2	12141-20-7	Toxic for reproduction (Article 57 c)	Used for manufacturing complex electronic ceramics to improve the electrical properties of ceramics.
	Furan	203-727-3	110-00-9	Carcinogenic (Article 57a)	For organic synthesis or as a solvent. Used in the production of nitrofurazone. Furan is a nice rich electrophilic aromatic heterocyclic
	Diethyl sulphate	200-589-6	64-67-5	Carcinogenic (Article 57a); Mutagenic (Article 57b)	Used as food flavor, perfume fragrance and soap flavor; for phenols Ethoxylation; It is a very important plant mutagen used to cultivate new varieties, fast and efficient; used as an excellent organic solvent and extractant; also intermediates used to synthetic pharmaceuticals, paints, dyes, etc



atch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 8th batch	Dimethyl sulphate	201-058-1	77-78-1	Carcinogenic (Article 57a)	Used in the manufacture of dyes and methylating agents of amines and alcohols; Analytical reagent. Organic synthesis; Methylation reagent; Solvents. Its vapor is highly toxic, was used as a poison gas of war. For the determination of the reagent of the coal tars; used in organic synthesis as a methyl substituted agent
	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	421-150-7	143860-04-2	Toxic for reproduction (Article 57 c)	Used as a styrene polymerization inhibitors and pesticide intermediates
	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	201-861-7	88-85-7	Toxic for reproduction (Article 57 c)	Used as a styrene polymerization inhibitors and pesticide intermediates
	4,4'-methylenedi-o-toluidine	212-658-8	838-88-0	Carcinogenic (Article 57a)	used for the high-temperature varnish, capacitor films, printed circuit board and aviation parts
	4,4'-oxydianiline and its salts	202-977-0	101-80-4	Carcinogenic (Article 57a); Mutagenic (Article 57b)	Used in production of heat stability plastics and as cross-linking agent.
	4-aminoazobenzene	200-453-6	60-09-3	Carcinogenic (Article 57a)	Used as dye intermediates. Used in the synthesis of azo dyes, disperse dyes, oxazine dyes; also used in making paints and pigments, as well as alcohol-soluble yellow and pH indicator
	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	202-453-1	95-80-7	Carcinogenic (Article 57a)	TDI, sulfur dyes, basic dyes, disperse dyes, pharmaceutical intermediates and other organic synthesis
	6-methoxy-m-toluidine (p-cresidine)	204-419-1	120-71-8	Carcinogenic (Article 57a)	Suitable for direct, disperse, reactive dyes Synthesis
	Biphenyl-4-ylamine	202-177-1	92-67-1	Carcinogenic (Article 57a)	Dye and pesticide intermediates; also used for manufacturing scintillator paraterphenyl; manufacturing dyes; Cancer Research; organic synthesis;
	o-aminoazotoluene [(4-o-tolyazo-o-toluidine)]	202-591-2	97-56-3	Carcinogenic (Article 57a)	Used to make dyes and drugs, and used as a maroon base GBC (Fast Gamet GBC base, formerly known as purple caramel base G or GC)
	o-toluidine	202-429-0	95-53-4	Carcinogenic (Article 57a)	Use as dye intermediates, organic synthesis and synthesis of saccharin
N-methylacetamide	201-182-6	79-16-3	Toxic for reproduction (Article 57 c)	pharmaceutical industry, catalyst, deacidifying agent	



Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 7th batch	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	203-977-3	112-49-2	Toxic for reproduction (Article 57c)	Mainly used as a solvent or as a processing aid in the manufacture and formulation of industrial chemicals. Minor use in brake fluids and repair of motor vehicles.
	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	203-794-9	110-71-4	Toxic for reproduction (Article 57c)	Mainly used as a solvent or as a processing aid in the manufacture and formulation of industrial chemicals, including use as an electrolyte solvent in lithium batteries.
	Diboron trioxide	215-125-8	1303-86-2	Toxic for reproduction (Article 57c)	Used in a multitude of applications, e.g., in glass and glass fibres, frits, ceramics, flame retardants, catalysts, industrial fluids, metallurgy, adhesives, inks/paints, film developers solutions, detergents and cleaners, biocides and insecticides.
	Formamide	200-842-0	75-12-7	Toxic for reproduction (Article 57c)	Mainly used as an intermediate. Minor uses as solvent, as reagent chemical (in the pharmaceutical industry) and as laboratory chemical. The substance seems further to be used in the agrochemical industry and as a plasticiser.
	Lead(II) bis(methanesulfonate)	401-750-5	17570-76-2	Toxic for reproduction (Article 57c)	Mainly used in plating (both electrolytic and electroless) processes for electronic components (such as printed circuit boards).
	TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione)	219-514-3	2451-62-9	Mutagenic (Article 57b)	Mainly used as a hardener in resins and coatings; also used in inks for the printed circuit board industry, electrical insulation material, resin moulding systems, laminated sheeting, silk screen printing coatings, tools, adhesives, lining materials and stabilisers for plastics.
	β -TGIC (1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione)	423-400-0	59653-74-6	Mutagenic (Article 57b)	Mainly used as a hardener in resins and coatings; also used in inks for the printed circuit board industry, electrical insulation material, resin moulding systems, laminated sheeting, silk screen printing coatings, tools, adhesives, lining materials and stabilisers for plastics.
	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	202-027-5	90-94-8	Art. 57 (a), carcinogenic	Intermediate in the manufacture of triphenylmethane dyes and other substances. Further potential uses include as additive (photosensitiser) in dyes and pigments, in dry film products, as a process chemical in the production of electronic circuit boards, in research and development applications.



Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 7th batch	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	202-959-2	101-61-1	Art. 57 (a), carcinogenic	Intermediate in the manufacture of dyes and other substances. Used also as chemical reagent in research and development.
	[4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3)	208-953-6	548-62-9	Art. 57 (a), carcinogenic	Used mainly for paper colouring and inks supplied in printer cartridges and ball pens. Further uses include staining of dried plants, marker for increasing the visibility of liquids, staining in microbial and clinical laboratories.
	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26)	219-943-6	2580-56-5	Art. 57 (a), carcinogenic	Used in the production of inks, cleaners, and coatings, as well as for dyeing of paper, packaging, textiles, plastic products, and other types of articles. It is also used in diagnostic and analytical applications.
	α,α -Bis[4-(dimethylamino)phenyl]-4-(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)	229-851-8	6786-83-0	Art. 57 (a), carcinogenic	Mainly used in the production of printing and writing inks, for dyeing of paper and in mixtures such as windscreen washing agents.
	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	209-218-2	561-41-1	Art. 57 (a), carcinogenic	Used in the production of writing inks and potentially in the production of other inks, as well as for dyeing of a variety of materials.



Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 6th batch	Dichromium tris(chromate)	246-356-2	24613-89-6	Art. 57 (a), carcinogenic	used in mixtures to treat metal surfaces in the aeronautic/aerospace, steel and aluminium coating sectors
	Potassium hydroxyoctaoxodizincatedichromate	234-329-8	11103-86-9	Art. 57 (a), carcinogenic	used in the aeronautic/aerospace, steel, aluminium coil and vehicle coating sectors
	Pentazinc chromate octahydroxide	256-418-0	49663-84-5	Art. 57 (a), carcinogenic	used in the vehicle coating and aeronautic/aerospace sectors
	Zirconia Aluminosilicate Refractory Ceramic Fibres	-	-	Art. 57 (a), carcinogenic	used for high-temperature insulation in industrial applications and in fire protection
	Aluminosilicate Refractory Ceramic Fibres	-	-	Art. 57 (a), carcinogenic	used for high-temperature insulation in industrial applications and in fire protection
	Formaldehyde, oligomeric reaction products with aniline	500-036-1	25214-70-4	Art. 57 (a), carcinogenic	used to manufacture other substances
	Bis(2-methoxyethyl) phthalate	204-212-6	117-82-8	Toxic for reproduction (Article 57c)	little presumed use as ECHA has not received any registration for the substance
	2-Methoxyaniline; o-Anisidine	201-963-1	90-04-0	Art. 57 (a), carcinogenic	used in the vehicle coating and aeronautic/aerospace sectors
	4-(1,1,3,3-tetramethylbutyl)phenol	205-426-2	140-66-9	Equivalent level of concern having probable serious effects to the environment (article 57 f)	mainly used to manufacture polymer preparations and ethoxylates
	1,2-dichloroethane	203-458-1	107-06-2	Art. 57 (a), carcinogenic	used to manufacture other substances
Bis(2-methoxyethyl) ether	203-924-4	111-96-6	Toxic for reproduction (Article 57c)	used to manufacture dyes for tattooing and colouring paper, polymers and aluminium foil	

Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 6th batch	Arsenic acid	231-901-9	7778-39-4	Art. 57 (a), carcinogenic	Arsenic acid is mainly used to remove gas bubbles from ceramic glass melt (fining agent) and in the production of laminated printed circuit boards. To lesser extent the substance is also used in the manufacture of semiconductors and as laboratory agent.
	Calcium arsenate	231-904-5	7778-44-1	Art. 57 (a), carcinogenic	present in complex raw materials imported to manufacture copper, lead and a range of precious metals.
	Trilead diarsenate	222-979-5	3687-31-8	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)	present in complex raw materials imported to manufacture copper, lead and a range of precious metals
	N,N-dimethylacetamide (DMAC)	204-826-4	127-19-5	Carcinogenic (article 57 a)	used as solvent and in industrial coatings, polyimide films, paint strippers and ink removers
	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	202-918-9	101-14-4	Art. 57 (a), carcinogenic	mainly used as curing agent in resins and to produce polymer articles
	Phenolphthalein	201-004-7	77-09-8	Art. 57 (a), carcinogenic	used as laboratory agent (in pH indicator solutions), to produce pH-indicator paper and in medicinal products
	Lead diazide, Lead azide	236-542-1	13424-46-9	Toxic for reproduction (Article 57c)	Lead diazide is mainly used as initiator or booster in detonators for both civilian and military uses and as initiator in pyrotechnic devices.
	Lead styphnate	239-290-0	15245-44-0	Toxic for reproduction (Article 57c)	Lead styphnate is mainly used as a primer for small calibre and rifle ammunition. Other common uses are in ammunition pyrotechnics, powder actuated devices and detonators for civilian use.
	Lead dipicrate	229-335-2	6477-64-1	Art. 57 (c), toxic for reproduction	No registration for lead dipicrate has been submitted to ECHA. The substance is an explosive like lead diazide and lead styphnate. It may be used in low amounts in detonator mixtures together with the two other mentioned lead compounds.



Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 5th batch	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	203-839-2	111-15-9	Art. 57 (c), toxic for reproduction	Main uses in the past were as solvent in coatings and in the chemical industry, but also as intermediate in the manufacture of cyanoacrylate adhesives.
	Strontium chromate	232-142-6	7789-06-2	Art. 57 (a), carcinogenic	Strontium chromate is mainly used as corrosion inhibitor in coating mixtures used in the aeronautic/aerospace sector, in the coil coating sector of steel and aluminium and in the vehicle coating sector.
	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	271-084-6	68515-42-4	Art. 57 (c), toxic for reproduction	Main uses in the past were as plasticizer in PVC, foam, adhesives and coatings.
	Hydrazine	206-114-9	7803-57-8 302-01-2	Art. 57 (a), carcinogenic	Hydrazine is mainly used as intermediate in the manufacture of hydrazine derivatives, as a monomer in polymerisations, as a corrosion inhibitor in water treatment and for metal reduction and refining of chemicals. It is also used as a propellant for aerospace vehicles and as fuel in military (emergency) power units.
	1-methyl-2-pyrrolidone	212-828-1	872-50-4	Art. 57 (c), toxic for reproduction	1-methyl-2-pyrrolidone is mainly used as solvent in coatings, cleaning products, for electronic equipment manufacture, as well as in semiconductor industry, petrochemical processing, pharmaceuticals and agrochemicals.
	1,2,3-trichloropropane	202-486-1	96-18-4	Art. 57 (a) & (c), carcinogenic & toxic for reproduction	1,2,3-trichloropropane is mainly used as intermediate in the manufacture of chlorinated solvents and agricultural products. It is also used as monomer. In the past 1,2,3-trichloropropane was used as solvent, paint and varnish remover and as degreasing agent.
	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	276-158-1	71888-89-6	Art. 57 (c), toxic for reproduction	Main uses in the past were as plasticiser in PVC and in sealants, coatings and potentially printing inks.



Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 4th batch	Cobalt(II) sulphate	233-334-2	10124-43-3	Art. 57 (a) & (c), carcinogenic & toxic for reproduction	Mainly used in the production of other chemicals. Further applications may include manufacture of catalysts and driers, surface treatments (such as electroplating), corrosion prevention, production of pigments, decolourising (in glass, pottery), batteries, animal food supplement, soil fertilizer, and others.
	Cobalt(II) dinitrate	233-402-1	10141-05-6	Art. 57 (a) & (c), carcinogenic & toxic for reproduction	Mainly used in the production of other chemicals and the manufacture of catalysts. Further applications may include surface treatment and batteries.
	Cobalt(II) carbonate	208-169-4	513-79-1	Art. 57 (a) & (c), carcinogenic & toxic for reproduction	Mainly used in the manufacture of catalysts. Minor uses may include feed additive, production of other chemicals, production of pigments, and adhesion (in ground coat frit).
	Cobalt(II) diacetate	200-755-8	71-48-7	Art. 57 (a) & (c), carcinogenic & toxic for reproduction	Mainly used in the manufacture of catalysts. Minor uses may include production of other chemicals, surface treatment, alloys, and production of pigments, dyes, rubber adhesion, and feed additive.
	2-Methoxyethanol	203-713-7	109-86-4	Toxic for reproduction (article 57c)	Mainly used as solvent, chemical intermediate and additive for fuels.
	2-Ethoxyethanol	203-804-1	110-80-5	Toxic for reproduction (article 57c)	Mainly used as solvent and chemical intermediate.
	Chromium trioxide	215-607-8	1333-82-0	Carcinogenic and mutagenic (articles 57 a and 57 b)	Used for metal finishing and as fixing agent in waterborne wood preservatives.
	Acids generated from chromium trioxide and their oligomers	231-801-5 236-881-5	7738-94-5 13530-68-2	Carcinogenic (article 57a)	These acids and their oligomers are generated when chromium trioxide is dissolved in water. Chromium trioxide is mainly used in form of aqueous solutions. Consequently, the uses of these substances are the same as indicated for chromium trioxide.



Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 3rd batch	Trichloroethylene	201-167-4	1979-1-6	Carcinogenic category 2	<ul style="list-style-type: none"> · Cleaning and degreasing of metal parts · Solvent in adhesives · Intermediate in the manufacture of chlorinated and fluorinated organic compounds
	Boric acid	233-139-2 234-343-4	10043-35-3 11113-50-1	Toxic for reproduction category 2	<ul style="list-style-type: none"> · Uses include a multitude of applications, e.g, in biocides and preservatives, personal care products, food additives, glass, ceramics, rubber, fertilisers, flame retardants, paints, industrial fluids, brake fluids, soldering products, film developers.
	Disodium tetraborate, anhydrous	215-540-4	1330-43-4 12179-04-3 1303-96-4	Toxic for reproduction category 2	<ul style="list-style-type: none"> Uses include a multitude of applications, e;g; in glass and glass fibres, ceramics, detergents and cleaners, personal care products, industrial fluids, metallurgy, adhesives, flame retardants, biocides, fertilizers.
	Tetraboron disodium heptaoxide, hydrate	235-541-3	12267-73-1	toxic for reproduction category 2	<ul style="list-style-type: none"> Uses include a multitude of applications, e;g; in glass and glass fibres, ceramics, detergents and cleaners, personal care products, industrial fluids, metallurgy, adhesives, flame retardants, biocides, fertilizers.



Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 3rd batch	Sodium chromate	231-889-5	7775-11-3	Carcinogenic category 2; mutagenic category 2; toxic for reproduction category 2	<ul style="list-style-type: none"> · Laboratory (analytical agent) · Manufacture of other chromium compounds
	Potassium chromate	232-140-5	7789-00-6	Carcinogenic category 2; mutagenic category 2	<ul style="list-style-type: none"> · Treatment and coating of metals · Manufacture of reagents and chemicals <ul style="list-style-type: none"> · Manufacture of textiles · Colouring agent in ceramics · Tanning and dressing of leather · Manufacture of pigments/inks · Laboratory (analytical reagent) · Pyrotechnics
	Ammonium dichromate	232-143-1	7789-9-5	Carcinogenic category 2; mutagenic category 2; toxic for reproduction category 2	<ul style="list-style-type: none"> · Oxidising agent · Laboratory (analytical agent) · Tanning of leather · Manufacture of textiles · Manufacture of photosensitive screens (cathode ray tubes) · Metal treatment
	Potassium dichromate	231-906-6	7778-50-9	Carcinogenic category 2; mutagenic category 2; toxic for reproduction category 2	<ul style="list-style-type: none"> · Chrome metal manufacturing · Treatment and coating of metals · Manufacture of reagents and chemicals · Laboratory (analytical agent) · Cleaning of laboratory glassware <ul style="list-style-type: none"> · Tanning of leather · Manufacture of textiles · Photolithography · Wood treatment · Corrosion inhibitor in cooling systems



Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 2nd batch	Anthracene oil	292-602-7	90640-80-5	Art. 57 (c), toxic for reproduction	Seal coating, anti-corrosion oil, pesticides, materials of anthraquinone
	Anthracene oil, anthracene paste, distin.lights	295-278-5	91995-17-4	Art. 57 (c), toxic for reproduction	Seal coating, anti-corrosion oil, pesticides, materials of anthraquinone
	Anthracene oil, anthracene paste, anthracene fraction	295-275-9	91995-15-2	Art. 57 (c), toxic for reproduction	Seal coating, anti-corrosion oil, pesticides, materials of anthraquinone
	Anthracene oil, anthracene-low	292-604-8	90640-82-7	Art. 57 (c), toxic for reproduction	Seal coating, anti-corrosion oil, pesticides, materials of anthraquinone
	Anthracene oil,anthracene paste	292-603-2	90640-81-6	Art. 57 (c), toxic for reproduction	Seal coating, anti-corrosion oil, pesticides, materials of anthraquinone
	Diisobutyl phthalate (DIBP)	201-553-2	84-69-5	Art. 57 (a), carcinogenic	Plasticizer
	2,4-Dinitrotoluene	204-450-0	121-14-2	Art. 57 (a), carcinogenic	Material of explosives, poluurethane plastics, organic synthesis and dyes
	Lead chromate	266-028-2	65996-93-2	Art. 57 (c), toxic for reproduction	Paint,moisture,adhesives
	Tris(2-chloroethyl)phosphate	204-118-5	115-96-8	Art. 57 (a), carcinogenic	Flame retardants,flame retardant plasticizer
	Lead sulfochromate yellow(C.I.Pigment Yellow 34)	215-693-7	1344-37-2	Art. 57 (a), carcinogenic	Additives in coatings,paints and plastics
	Lead chromate molybdate sulphate red (C.I.Pigment Red 104)	235-759-9	12656-85-8	Art. 57 (a), carcinogenic	Additives in coatings,paints and plastics
	Lead chromate	231-846-0	7758-97-6	Art. 57 (a), carcinogenic	Colorant in coatings,paints,rubber and plastic
Acrylamide	201-173-7	79-06-1	Art. 57 (a), carcinogenic	Preparation of acrylamide	



Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 1st batch	Anthracene	204-371-1	120-12-7	PBT (article 57d)	Material of dyes and anthraquinone
	4,4'- Diaminodiphenylmethane (MDA)	202-974-4	101-77-9	Carcinogenic category 2	Curing agent of PCB, Preparation of PU and azo dyes
	Dibutyl phthalate (DBP)	201-557-4	84-74-2	toxic for reproduction category 2	sticizer in PVC and other plastic products
	Benzyl butyl phthalate (BBP)	201-622-7	85-68-7	toxic for reproduction category 2	Plasticizer in PVC and acrylic resin
	Cobalt dichloride	231-589-4	7646-79-9	Art. 57 (c), toxic for reproduction	Cobalt dichloride is mainly used as intermediate in the manufacture of other cobalt compounds, in tyre adhesion additives, organic textile dyes, and drying agents for paints. Furthermore it is used in surface treatment processes, as water treatment / corrosion inhibition chemical, as colourant or for discolouring in the production of inorganic pigments & frits, glass, and ceramic ware, in varistors and magnets, as well as in humidity indicators.
	Diarsenic pentaoxide	215-116-9	1303-28-2	Carcinogenic category 1	Pesticides, herbicides, wood preservatives
	Diarsenic trioxide	215-481-4	1327-53-3	Carcinogenic category 1	Pesticides, herbicides, wood preservatives
	Potassium chromate	234-190-3	7789-12-0, 10588-01-9	Carcinogenic, mutagenic and toxic for reproduction (articles 57a, 57b and 57c)	Mordant in the textile dye industry



Batch	Substance name	EC.NO	CAS.NO	SVHC property	Potential uses
The 1st batch	Musk xylene	201-329-4	81-15-2	vPvB (article 57e)	Cosmetics and soap spices
	Bis(2-ethylhexyl)phthalate (DEHP)	204-211-0	117-81-7	toxic for reproduction category 2	Plasticizer in PVC and so on
	Hexabromocyclododecane(HBC DD)and all major diastereoisomers identified:Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane	247-148-4 221-695-9	25637-99-4, 3194-55-6, 134237-50-6 134237-51-7 134237-52-8	PBT (article 57d)	Flame retardant in textiles and plastics
	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	287-476-5	85535-84-8	PBT and vPvB (articles 57 d and 57 e)	Fire retardant, plasticizer
	Bis(tributyltin)oxide(TBTO)	200-268-0	56-35-9	PBT (article 57d)	Pesticides, fungicides in paint
	Lead hydrogen arsenate	232-064-2	7784-40-9	Carcinogenic category 1 ; toxic for reproduction category 1	Insect repellent
	Triethyl arsenate	427-700-2	15606-95-8	Carcinogenic category 1	Intermediate semiconductor

Solutions

HCT reminds enterprises , especially manufactures, importers and suppliers of these substances should understand and master new information requirements timely, Meanwhile, to reduce unnecessary trade losses, we should make sure products safety by enhancing quality control of original materials and seeking for safer alternative substances. HCT, possessing wide testing fields and convenient service channels, can help enterprises assess regulated specific chemical substances in products. Thus enterprises can successfully import products to designed target countries.

Details please click official link:

<http://echa.europa.eu/web/guest/candidate-list-table>

Contact us:

Shenzhen Hongcai testing technology co., LTD. (HCT)
 Web: <http://www.hct-test.com/>
 Hotline: 400-0066-989 T: (86) 755 8416666
 Email: service@hct-test.com
 Add: 3rd floor, Block D, Peng Litai Industrial Estate, Long Ping West Road, Longgang District, Shenzhen City.

Statement: This publication is only educational and does not replace any legal requirements or applicable rules. Information included in the publication will not be revised. HCT does not guarantee that the content contained in the publication without any errors or will meet any particular performance or quality standards. If there is no consent of HCT in advance, please do not quote or refer any information contained in this publication.