AQC ASSOCIATION POUR L'ASSURANCE QUALITÉ DES FABRICANTS DE BRACELETS CUIR	**DOC n°**	LIS006_08
	Replace	LIS006_07

RESTRICTED SUBSTANCES LIST FOR EDGE TINCTURES

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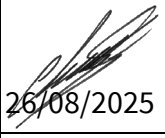
Written by	Quality review (signature/date)	Process owner (signature/date)
	 26/08/2025	 26/08/2025
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Change log

Version	Date	Modification

08	26Aug25	Revision – Validation TWG 22Aug25
		• Addition of PRO051 as Level 2 document
		• Anti-UV : change of limit for UV-328 as per EU POP
		• Bisphenol :
		  ○ Withdrawal of 4,4'-(1-methylpropylidene)bisphenol (bisphenol B)
		  ○ Precision of CAS numbers to cover all isomers of BPS and BPF and addition of note 1
		• PFAS: addition of total fluorine
		• PFOS: change of limit
		  ○ PFOS and its salts 0.025 mg/kg (sum)
		  ○ PFOS related substances 1 mg/kg (sum)
		• PFHxS & PFHxA & C9-C14 : addition of compound & its salts and compounds related substances
		• C4-C7 : simplification and addition of note 2
		• Metal: reduction of cadmium limit to 75 mg7kg as per Minnesota 325E.3892 applicable to lead too
		• SVHC: addition of triphenyl phosphate (TPP, 115-86-6)
		• Miscellaneous typo correction:
		  ○ C4-C7 : correction of carbon number
		  ○ Split of PFAS compound & its salts and compounds related substance (PFOS, PFOA)
		  ○ Correction of note numbering

Associated document (level 1)

Document	Title
MAQ016	Chemical Compliance Process

Associated document (level 2)

Document	Title
PRO008	Management of AQC Quality Control for edge tinctures
PRO051	Veille réglementaire et normative

Associated document (level 3)*

Document	Title
-	-

* Internal documents – not disclosed.

Scope of the document

This document defines the list of restricted chemical substances and testing requirements for edge tinctures in the context of leather bracelet as specified by AQC.

To define the limits present in this Restricted Substances list (RSL), AQC takes into consideration all the current international regulations for dangerous substances available and select the strictest limit. The list of chemicals present in this document has been selected on the basis of a risk-based approach completed by AQC experience and knowledge.

International regulations mentioned in this document are

Abbreviation	Regulation	Country	Comment
16CFR1303	Ban of lead-containing paint and certain consumer products bearing lead-containing paint	USA	-
EU POP	Regulation (EU) 2019/1021 of the European Parliament and of the Council on persistent organic pollutants	European Union	
GB 20400-2006	Leather and fur—Limit of harmful matter	China	-
JP 112	Law on Control of Household Products Containing Harmful Substances	Japan	-
OChim	Ordinance on Protection against Dangerous Substances and Preparations	Switzerland	-
ORRChim	Ordinance on the Reduction of Risks relating to the Use of Certain Particularly Dangerous Substances, Preparations and Articles	Switzerland	-
Proposition 65	Safe Drinking Water and Toxic Enforcement Act	USA (California)	-
REACH XIV	Regulation (EC) no 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)	European Union	Annex XIV Substances subject to authorisation
REACH XVII			Annex XVII Substances subject to restriction
REACH SVHC			Substances of Very High Concern

Specific AQC consideration

In the column for regulation, “AQC” stands for extra-regulatory requirement set by AQC in a pro-active way:

- “AQC” alone is applied for substances without known regulation.
  For some substances, AQC performs testing without limit (for information) or with a limit concentration.

- (AQC) after a regulation indicate that the scope has been enlarged to glues by AQC or that the limit applied by AQC is lower than requested by the more stringent regulation.

AQC limit for REACH SVHCs

Article 33(1) of REACH requires that a supplier of articles containing a SVHC included in the Candidate List for authorization in a concentration above 0.1% (w/w) has to provide relevant safety information to the recipients of these articles (Watch Brands). Upon request of a consumer, Watch Brands have to provide relevant safety information about the SVHC to this consumer (Article 33(2) of REACH).
This requirement is also present in Swiss ordinance OChim, article 71.

There is no regulatory requirement to limit SVHC content in articles to 1'000 mg/kg. Nevertheless, AQC Bracelet manufacturers limit all SVHC listed substances to 1'000 mg/kg in leather bracelet and in all components before manufacturing.

AQC limit for Proposition 65

For substances listed in the Proposition 65 California, AQC limits take into account the limit in articles present in the case law of Proposition 65 and more precisely the limits indicated in the reformulation injunctions of settlements and judgements.
AQC considers in case law: leather articles and related articles to the watch bracelet but also any other article with a related exposure scenario (skin contact).

For substances without any indication of a limit in articles, AQC performs testing of a risk-based selection of substances potentially used for leather production and keeps available for Watch Brands all the data as a support for labelling decision.

AQC limit for EU POP

AQC limits for substances present in EU POP regulation are in full accordance with the terms detailed for each substance.

General requirements for laboratory testing

- Sample picture

Picture of tincture samples received by the laboratory must be taken **without** plastic bag.

- Sample preparation

Edge tincture samples are packaged in airtight tubes provided by AQC.
Edge tincture samples are shipped unpolymerized.

For dye/pigment related substances testing, pools of 6 tinctures are prepared by AQC.
In case of substance detection considered as critical by AQC or in case of non-compliance, AQC manages the individual samples constituent of the pool of 6 tinctures.

Polymerization of edge tinctures is performed by the laboratory.
Safety data Sheets and Technical sheets are available upon request at AQC.

TESTING PACK FOR NATIVE TINCTURE

Substance family	Substance Name	Abbr.	CAS Number	AQC limit	Strictest Regulation	Test Method
Aldehyde	Formaldehyde	-	50-00-0	75 mg/kg	GB 20400-2006	ISO 17226-1 adapted
Anti-UV	2-benzotriazol-2-yl-4,6-di-tert-butylphenol	UV-320	3846-71-7	not detected	REACH XIV	Solvent extraction GC-MS detection
	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol	UV-327	3864-99-1			
	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol	UV-350	36437-37-3			
	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol	UV-328	25973-55-1	100 mg/kg	EU POP	
Bisphenols	4,4'-isopropylidenediphenol (bisphenol A)	BPA	80-05-7	1'000 mg/kg (each)	REACH SVHC	internal method
	4,4'-sulphonyldiphenol (bisphenol S)	BPS	80-09-1 (4,4') 5397-34-2 (2,4')			
	2,2'-methylenediphenol (bisphenol F)	BPF	1333-16-0 [1]	for information	REACH restriction intention	
	4,4'-[2,2,2-trifluoro-1 (trifluoromethyl)ethylidene]diphenol (bisphenol AF)	BPAF	1478-61-1			
Chlorine compounds	Alkanes, C10-13, chloro	SCCP	85535-84-8	1'000 mg/kg	REACH SVHC ORRChim EU POP. Annex A	Solvent extraction GC-MS detection
	Alkanes, C14-17, chloro	MCCP	85535-85-9 198840-65-2 1372804-76-6	1'000 mg/kg	AQC	
Halogenated compounds	Bromine (for brominated flame retardants)	Br	7726-95-6	not detected [Br]	Various regulations	EDX
	Fluorine (for poly- and per-fluorinated substances)	F	7782-41-4	not detected [F]		
Phenols	Octylphenols	OP	-	100 mg/kg (sum OP+OPEO)	REACH SVHC OChim Annex XIV (AQC)	ISO 18218 adapted
	- 4-(1,1,3,3-tetramethylbutyl)phenol	PTOP	140-66-9			
	Octylphenol ethoxylates	OPEO	-			
	- 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated	-	9002-93-1 2497-59-8 2315-67-5 2315-61-9			
	Nonylphenols	NP	25154-52-3	100 mg/kg (sum NP+NPEO)	REACH SVHC Annex XIV (AQC)	
	- 4-Nonylphenol, branched and linear	4-NP	several CAS			
	- Isononylphenol	-	11066-49-2			
	Nonylphenol Ethoxylates	NPEO	-			
	- 4-Nonylphenol, branched and linear, ethoxylated Incl. isononylphenol ethoxylated	(4-NPEO) -	several CAS 37205-87-2			
	p-(1,1-dimethylpropyl)phenol	PTPP PTAP	80-46-6	1'000 mg/kg (each)	REACH SVHC	internal method
	4-heptylphenol, branched and linear	4-HP	1987-50-4 72624-02-3			
	para-tert-butylphenol	PTBP	98-54-4			

[Br] In case of detection of Bromine, please perform complementary testing of Brominated flame retardants
[F] In case of detection of Fluorine, please perform complementary testing of poly- and per-fluorinated substances

Substance family	Substance Name	Abbr.	CAS Number	AQC limit	Strictest Regulation	Testing Method
Phthalates	Diisobutyl phthalate	DIBP	84-69-5	1'000 mg/kg (sum)	REACH XVII entry 51	ISO 16181
	Dibutyl phthalate	DBP	84-74-2			
	Benzyl butyl phthalate	BBP	85-68-7			
	Bis(2-ethylhexyl) phthalate	DEHP	117-81-7			
	Bis(2-methoxyethyl) phthalate	DMEP	117-82-8	1'000 mg/kg (each)	REACH SVHC	
	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	DHNUP (L&R)	68515-42-4			
	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	-	71888-89-6			
	Di-isopentyl phthalate	DIPP	605-50-5			
	Di-n-pentyl phthalate	DnPP	131-18-0			
	N-pentyl-isopentylphthalate	nPIPP	776297-69-9			
	1,2-Benzenedicarboxylic acid, dipentyl ester, branched and linear	DNiPP (L&R)	84777-06-0			
	Di-n-hexyl phthalate	DnHP	84-75-3			
	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	DIHxP (L&R)	68515-50-4			
	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters	-	68648-93-1 68515-51-5			
	Dicyclohexyl phthalate	DHCP	84-61-7			
	Diisohexyl phthalate	DIHP	71850-09-4			
	Di-n-octyl phthalate	DNOP	117-84-0		REACH XVII entry 52 (AQC)	
	Di-"isononyl" phthalate	DINP	28553-12-0 68515-48-0			
	Di-"iso-decyl" phthalate	DIDP	26761-40-0 68515-49-1			
Polycyclic Aromatic Hydrocarbons (PAHs)	Benzo(a)pyrene	BaP	50-32-8	1 mg/kg (each)	REACH XVII entry 50 ORRChim	AfPS-GS-2019-01-PAK
	Benzo(a)anthracene	BaA	56-55-3			
	Benzo(b)fluoranthene	BbF	205-99-2			
	Benzo(e)pyrene	BeP	192-97-2			
	Benzo(j)fluoranthene	BjF	205-82-3			
	Benzo(k)fluoranthene	BkF	207-08-9			
	Chrysene	CHR	218-01-9			
	Dibenzo(a,h)anthracene	DBA	53-70-3			
SVHC	Triphenyl phosphate	TPP	115-86-6	1'000 mg/kg	REACH SVHC Ochim	Internal method
Volatile Organic Compounds (VOCs)	Hexachlorobuta-1,3-diene	-	87-68-3	not detected	EU POP Annex A	EPA 5021A EPA 8260C or internal Headspace GC-MS
	1,1,1-Tricholoroethane	-	71-55-6	not detected	ORRChim	
	1,1,2-Tricholoroethane	-	79-00-5	not detected		
	Trichloroethylene		79-01-6	not detected	REACH XIV	
	N,N-dimethylformamide	DMFo	68-12-2	1'000 mg/kg (each)	REACH SVHC Ochim	
	Formamide	-	75-12-7			
	N,N-Dimethylacetamide	DMAC	127-19-5			
	2-(2-butoxyethoxy)ethanol	DEGBE	112-34-5	for information	REACH XVII entries 54 & 55 ORRChim (AQC)	
	2-(2-methoxyethoxy)ethanol	DEGME	111-77-3			
	n-hexane	-	110-54-3		Prop65	
	Tetrachloroethylene	-	127-18-4			
	Benzene	BTEX	71-43-2			
	Toluene		108-88-3			
	Ethylbenzene		100-41-4			
	Meta-Xylene		108-38-3		AQC	
	Ortho-Xylene		95-47-6			
	Para-Xylene		106-42-3			

^{Br} Brominated flame retardants

In case of Bromine detection by EDX, the following testing is performed

Substance family	Substance Name	Abbr.	CAS Number	AQC limit	Strictest Regulation	Testing Method
Flame retardant	Polybromobiphenyls	PBB	59536-65-1	not detected	REACH XVII entry 8 (AQC)	ISO 17881
	Diphenyl ether, pentabromo derivative	PentaBDE	32534-81-9	not detected	EU POP annex A	
	Diphenyl ether, octabromo derivative	OctaBDE	32536-52-0	not detected	EU POP annex A	
	Diphenyl ether, decabromo derivative	DecaBDE	1163-19-5	not detected	EU POP Annex A	
	Diphenyl ether, tetrabromo derivative	TetraBDE	40088-47-9	not detected	EU POP Annex A	
	Diphenyl ether, heptabromo derivative	HeptaBDE	68928-80-3	not detected	EU POP annex A	
	Diphenyl ether, hexabromo derivative	HexaBDE	36483-60-0	not detected	EU POP annex A	
	Diphenyl ether, nonabromo derivative	NonaBDE	63936-56-1	not detected	AQC	
	Hexabromocyclododecane and isomers	HBCDD	Several CAS	25 mg/kg	Prop 65	
	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol (Tetrabromobisphenol A)	TBBPA	79-94-7	1'000 mg/kg	REACH SVHC	internal method
	Bis(2-ethylhexyl) tetrabromophthalate	-	26040-51-7	1'000 mg/kg		
	1,1'-[ethane-1,2-diylbisoxy]bis[2,4,6-tribromobenzene]	-	37853-59-1	1'000 mg/kg		

F Poly- and per-fluorinated substances

In case of Fluorine detection by EDX, the following testing is performed

Substance family	Substance Name	Abbr.	CAS Number	AQC limit	Strictest Regulation	Test Method
PFAS	Total Fluorine	TF	7782-41-4	100 mg/kg	Bill 1817 California	ASTM D7359
PFOS and its salts	Perfluorooctanesulfonic acid	PFOS	1763-23-1	0.025 mg/kg (sum)	ORRChim EU POP	ISO 23702-1
	Perfluorooctanesulfonic acid, potassium salt	PFOS-K	2795-39-3			
	Perfluorooctanesulfonic acid, lithium salt	PFOS-Li	29457-72-5			
	Perfluorooctanesulfonic acid, ammonium salt	PFOS-NH_4	29081-56-9			
	Perfluorooctane sulfonate diethanolamine salt	PFOS-$NH(OH)_2$	70225-14-8			
	Perfluorooctanesulfonic acid, tetraethylammonium salt	PFOS-$N(C_2H_5)_4$	56773-42-3			
PFOS related substances	N-Ethylperfluoro-1-octanesulfonamide	N-Et-FOSA	4151-50-2	1 mg/kg (sum)		
	N-Methylperfluoro-1-octanesulfonamide	N-Me-FOSA	31506-32-8			
	2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol	N-Et-FOSE	1691-99-2			
	2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol	N-Me-FOSE	24448-09-7			
	Perfluoro-1-octanesulfonyl fluoride	POSF	307-35-7			
	Perfluorooctane sulfonamide	PFOSA	754-91-6			
	1-Decanaminium, N-decyl-N,N-dimethyl-, salt with heptadecafluorooctane-1-sulfonic acid (1:1)	-	251099-16-8			
PFOA and its salts	Perfluorooctanoic acid	PFOA	335-67-1	0.025 mg/kg (sum)	EU POP	
	Sodium perfluorooctanoate	PFOA-Na	335-95-5			
	Potassium perfluorooctanoate	PFOA-K	2395-00-8			
	Silver perfluorooctanoate	PFOA-Ag	335-93-3			
	Perfluorooctanoyl fluoride	PFOA-F	335-66-0			
	Ammonium pentadecafluorooctanoate	APFO	3825-26-1			
	Chromium(3+) perfluorooctanoate	-	68141-02-6			
	Ethanaminium, N,N,N-triethyl-, salt with pentadecafluorooctanoic acid (1:1)	-	98241-25-9			
PFOA related substances	1H,1H,2H,2H-Perfluorodecanesulfonic acid	8:2 FTS	39108-34-4	1 mg/kg (sum)		
	Methyl perfluorooctanoate (Me-PFOA)	Me-PFOA	376-27-2			
	Ethyl perfluorooctanoate (Et-PFOA)	Et-PFOA	3108-24-5			
	2-Perfluorooctylethanol (8:2 FTOH)	8:2 FTOH	678-39-7			
	1H,1H,2H,2H-Perfluorodecyl acrylate	8:2 FTA	27905-45-9			
	1H,1H,2H,2H-Perfluorodecyl methacrylate	8:2 FTMA	1996-88-9			
	2H,2H,3H,3H-Perfluoroundecanoic acid	4HPFUnA	34598-33-9			
	Perfluoro-3,7-dimethyloctanoic acid	PF3,7 DMOA	172155-07-6			
	1H,1H,2H,2H-Perfluorododecyl acrylate	10:2 FTA	17741-60-5			
	1H,1H,2H,2H-Perfluorododecan-1-ol	10:2 FTOH	865-86-1			
PFHxS and its salts	Perfluorohexane-1-sulphonic acid	PFHxS	355-46-4	0.025 mg/kg (sum)	EU POP ORRChim	
	Perfluorohexane-1-sulphonic acid, potassium salt	PFHxS-K	3871-99-6			
	Perfluorohexane-1-sulphonic acid, lithium salt	PFHxS-Li	55120-77-9			
	Perfluorohexane-1-sulphonic acid, ammonium salt	PFHxS-NH4	68259-08-5			
	Perfluorohexane-1-sulphonic acid, sodium salt	PFHxS-Na	82382-12-5			
	Perfluorohexane sulfonyl fluoride	PFHxSF	423-50-7			
PFHxS related substances	Potassium N-ethyl-N-[(tridecafluorohexyl)sulphonyl]glycinate	-	67584-53-6	1 mg/kg (sum)		
	Tridecafluoro-N-methylhexanesulphonamide	-	68259-15-4			
	Perfluorohexanesulfonamide	-	41997-13-1			
PFHxA and its salts	Undecafluorohexanoic acid	PFHxA	307-24-4	0.025 mg/kg (sum)	REACH XVII Entry 79	
	Undecafluorohexanoic acid, ammonium salt	APFHx	21615-47-4			
	Undecafluorohexanoic acid, sodium salt	-	2923-26-4			

Substance family	Substance Name	Abbr.	CAS Number	AQC limit	Strictest Regulation	Test Method
PFHxA related substances	1 H,1H,2H,2H-Perfluorooctane sulfonic acid	6:2 FTS	27619-97-2	1 mg/kg (sum)		
	1H,1H,2H,2H-Perfluoro-1-octanol	6:2 FTOH	647-42-7			
	1H,1H,2H,2H-Perfluorooctyl methacrylate	6:2 FTMA	2144-53-8			
	1H,1H,2H,2H-Perfluorooctyl acrylate	6 :2 FTA	17527-29-6			
C9-C14 PFCAs a and their salts	Perfluorononanoic Acid	PFNA	375-95-1	0.025 mg(kg (sum)	REACH XVII Entry 68 (AQC)	
	Perfluorononanoic Acid, sodium salt	PFNA-Na	21049-39-8			
	Perfluorononanoic Acid, ammonium salt	PFNA-NH4	4149-60-4			
	Perfluorodecanoic Acid	PFDA	335-76-2			
	Perfluorodecanoic Acid, sodium salt	PFDA-Na	3830-45-3			
	Perfluorodecanoic Acid, ammonium salt	PFDA-NH4	3108-42-7			
	Perfluoroundecanoic Acid	PFUnA	2058-94-8			
	Perfluorododecanoic Acid	PFDoA	307-55-1			
	Perfluorotridecanoic Acid	PFTrDA	72629-94-8			
	Perfluorotetradecanoic Acid	PFTeDA	376-06-7			
C9-C14 PFCAs related substances	Perfluoro-3-7-dimethyloctanecarboxylate	PF-3,7-DMOA	172155-07-6	0.260 mg/kg (sum)		
	1H,1H,2H,2H-Perfluorododecyl acrylate	10:2 FTA	17741-60-5			
	1H,1H,2H,2H-Perfluorododecyl methacrylate	10:2 FTMA	2144-54-9			
	1H,1H,2H,2H-Perfluorododecanol	10:2 FTOH	865-86-1			
	2H,2H,3H,3H-Perufloroundecanoic acid	H4PFUnA	34598-33-9			
	1H,1H,2H,2H-perfluorotetradecan-1-ol	12:2 FTOH	39239-77-5			
	1H,1H,2H,2H-Perfluorododecanesulphonic acid	10:2 FTS	120226-60-0			
	1H,1H,2H,2H-Perfluorododecyl iodide	10:2 FTI	2043-54-1			
	1H,1H,2H,2H-Perfluorotetradecyl iodide	12:2 FTI	30046-31-2			
C4-C7 PFAS	Perfluorobutane sulfonic acid [2]	PFBS	375-73-5	1'000 mg/kg	Perfluorobutane sulfonic acid [4]	
	Perfluoroheptanoic acid [2]	PFHpA	375-85-9	1'000 mg/kg	Perfluoroheptanoic acid [4]	

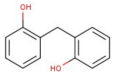
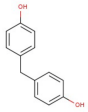
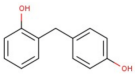
TESTING PLAN FOR DYES/PIGMENTS RELATED SUBSTANCES (POOL OF 6 TINCTURES)

Substance family	Substance Name	Abbr.	CAS Number	AQC limit	Strictest Regulation	Test Method
Carcinogenic and allergenic dyes	Navy blue 018112	-	118685-33-9	1000 mg/kg	REACH XVII Entry 43 (appx 9)	DIN 54231
	C.I. Pigment Red 104 [3]	-	12656-85-8	500 mg/kg each	REACH XVII entry 63	
	C.I. Pigment Yellow 34 [3]	-	1344-37-2			
	C.I. Solvent Violet 8	-	561-41-1	1000 mg/kg each	REACH SVHC	
	C.I. Solvent Blue 4	Victoria blue B base	6786-83-0			
	C.I. Direct Red 28 [4]	Congo Red	573-58-0			
	C.I. Direct Black 38 [4]	Chlorazole Black E	1937-37-7			
	C.I. Basic Blue 26	Victoria Blue B	2580-56-5			
	C.I. Basic Red 9	Basic Fuschin	569-61-9	50 mg/kg each	REACH XVII entry 72	
	C.I. Basic Violet 3 with ≥ 0,1 % of Michler's ketone	Crystal Violet Gentian Violet	548-62-9			
	C.I. Disperse Blue 1	-	2475-45-8			
	C.I Disperse Blue 3	-	2475-46-9	for information	REACH XVII Proposal for allergens (AQC)	
	C.I Disperse Blue 7	-	3179-90-6			
	C.I Disperse Blue 26	-	3860-63-7			
	C.I Disperse Blue 35	-	12222-75-2			
	C.I Disperse Blue 102	-	12222-97-8			
	C.I Disperse Blue 106	-	68516-81-4			
	C.I Disperse Blue 124	-	15141-18-1			
	C.I Disperse Blue 291	-	56548-64-2			
	C.I Disperse Brown 1	-	23355-64-8			
	C.I Disperse Orange 1	-	2581-69-3			
	C.I Disperse Orange 3	-	730-40-5			
	C.I Disperse Orange 37/59/76	-	13301-61-6 12223-33-5 51811-42-8			
	C.I Disperse Red 1	-	2872-52-8			
	C.I Disperse Red 11	-	2872-48-2			
	C.I Disperse Red 17	-	3179-89-3			
	C.I Disperse Yellow 1	-	119-15-3			
	C.I Disperse Yellow 9	-	6373-73-5			
	C.I Disperse Yellow 23	-	6250-23-3			
	C.I Disperse Yellow 39	-	12236-29-2			
	C.I Disperse Yellow 49	-	54824-37-2			
	C.I Disperse Yellow 64	-	10319-14-9			
	C.I Disperse Orange 149	-	85136-74-9			
	C.I Disperse Violet 1	-	128-95-0			
	C.I Disperse Violet 93	-	122463-28-9			
	C.I Disperse Yellow 3	-	2832-40-8	for information	Prop65	
	C.I Disperse Orange 11	-	82-28-00			
	C.I. Acid Red 26	Ponceau Red	3761-53-3			
	C.I. Acid Red 114	-	6459-94-5			
	C.I. Acid Violet 49	Benzyl violet 4B	1694-09-3			
	C.I. Direct blue 6 [2]	-	2602-46-2			
	C.I. Direct Blue 15	-	2429-74-5			
	C.I. Direct Blue 218	-	28407-37-6			
	C.I. Direct Brown 95 [4]	-	16071-86-6			
	C.I. Pigment Red 53	D&C Red No.8	2092-56-0			
	C.I. Pigment Red 53:1	D&C Red No.9	5160-02-1			
	C.I. Pigment Violet 1(or Basic violet 10)	D&C Red No.19	81-88-9			
	C.I. Solvent Yellow 14	-	842-07-9			
	C.I. Solvent Yellow 34	-	492-80-8			

Substance family	Substance Name	Abbr.	CAS Number	AQC limit	Strictest Regulation	Test Method
Aromatic amines	Biphenyl-4-ylamine	-	92-67-1	30 mg/kg each	REACH XVII entry 43	ISO 17234 adapted
	Benzidine	-	92-87-5			
	4-chloro-o-toluidine [5]	-	95-69-2			
	2-naphthylamine [5]	-	91-59-8			
	4-o-tolylazo-o-toluidine	-	97-56-3			
	5-nitro-o-toluidine	-	99-55-8			
	4-chloroaniline	-	106-47-8			
	4-methoxy-m-phenylenediamine [5]	-	615-05-4			
	4,4'-methylenedianiline	MDA	101-77-9			
	3,3'-dichlorobenzidine	-	91-94-1			
	3,3'-dimethoxybenzidine	-	119-90-4			
	4,4'-bi-o-toluidine	-	119-93-7			
	4,4'-methylenedi-o-toluidine	-	838-88-0			
	6-methoxy-m-toluidine	-	120-71-8			
	4,4'-methylenebis[2-chloroaniline]	MOCA	101-14-4			
	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 [5]	-	137-17-7			
	o-anisidine	-	90-04-0			
	4-aminoazobenzene	-	60-09-3			
	2,6-xylidine	-	87-62-7			
	2,4-xylidine	-	95-68-1			
	p-phenylenediamine	PPD	106-50-3	for information	AQC	
	Aniline	-	62-53-3		Prop 65	
Metals	Chromium (VI) and its related substances [6]	Cr(VI)	18540-29-9	3 mg/kg of dry matter	REACH XVII entry 47 (AQC)	ISO 17075-2 adapted
	Chromium	Cr	7440-47-3	for information	AQC	ISO 17072-2 adapted
	Cadmium	Cd	7440-43-9	75 mg/kg	Minnesota 325E.3892	
	Lead	Pb	7439-92-1	90 mg/kg		
	Mercury	Hg	7439-97-6	1 mg/kg	JP 112	
	Barium [7]	Ba	7440-39-3	for information	REACH SVHC	
	Boron [7]	B	7440-42-8			
	Arsenic [8]	As	7440-38-2			
	Strontium [9]	Sr	7440-24-6			
	Cobalt [10]	Co	7440-48-4			
	Nickel [11]	Ni	7440-02-0	for information	AQC	
	Tin [12]	Sn	7740-31-5	1000 mg/kg	REACH XVII entry 20	

Notes

[1] CAS 1333-16-0 includes the 3 isomers of bisphenol F :

- 2,2'-methylenediphenol (CAS 2467-02-9) 
- 4,4'-methylenediphenol (620-92-8) 
- 2,4'-methylenediphenol (CAS 2467-03-0) 

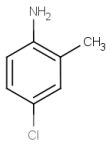
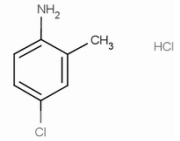
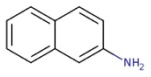
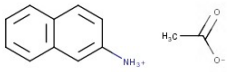
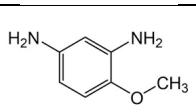
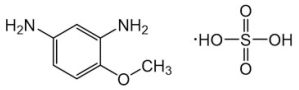
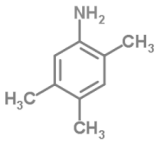
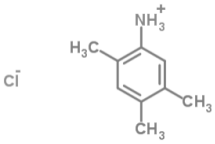
From T. Takeichi, N. Furukawa, in Polymer Science: A Comprehensive Reference, 2012, the isomer 2,4' is predominant, followed by 4,4' isomer and 2,2' isomer the lowest.

[2] for the PFAS and their salts only present in the SVHC list, only the acid radical testing result is reported.

[3] Limit expressed as Lead metal content (entry 63) - Compliance ensured by total Lead testing with the limit of 90 mg/kg.

[4] Compliance ensured by aromatic amines testing with the limit of 30 mg/kg (REACH annex XVII entry 43)

[5] Analytical equivalence between aromatic amines listed in entry 43 and entry 72 of REACH Annex XVII

Entry 43			Entry 72		
Substance name	**CAS number**	**Formula**	**Substance name**	**CAS number**	**Formula**
4-chloro-o-toluidine	95-69-2		4-chloro-o-toluidinium chloride	3165-93-3	
2-naphthylamine	91-59-8		2-naphtylamoniumacetate	553-00-4	
4-methoxy-m-phenylenediamine	615-05-4		4-methoxy-m-phenylenediammonium sulphate	39146-41-7	
2,4,5-trimethylaniline	137-17-7		2,4,5-trimethylaniline hydrochloride	21436-97-5	

[6] Chromium (VI) is not tested if total Chromium is not detected (LOD should be below or equal to 3 mg/kg)
Chromium (VI) related substances stands for the following substances:

- Sodium chromate (CAS 7775-11-3)
- Sodium dichromate (CAS 7789-12-0, CAS 10588-01-9)
- Potassium chromate (CAS 7789-00-6)
- Potassium dichromate (CAS 7778-50-9)
- Ammonium dichromate (CAS 7789-09-5)
- Chromium trioxide (CAS 1333-82-0)
- Chromic acid (CAS 7738-94-5)
- Oligomers of chromic acid and dichromic acid and strontium chromate (CAS 7789-06-2)
- Potassium hydroxyoctaoxodizincatedichromate (1-) (CAS 11103-86-9)
- Pentazinc chromate octahydroxide (CAS 49663-84-5)
- Dichromium tris(chromate) (CAS 24613-89-6)

[7] Screening for Barium diboron tetraoxide (CAS 13701-59-2). In case of result > LOQ for barium or boron, a stoichiometric calculation is performed by AQC based on the molar mass of the SVHC and barium and boron elements.

[8] Screening for diarsenic pentaoxide (CAS 1303-28-2) and diarsenic trioxide (CAS 1327-53-3). In case of result > LOQ, a stoichiometric calculation is done by AQC based on the molar mass of the 2 SVHCs and arsenic element.

[9] Screening for Strontium chromate (CAS 7789-06-2). In case of result > LOQ, a stoichiometric calculation is done by AQC based on the molar mass of the SVHC and strontium element.

[10] Screening for Cobalt dichloride (CAS 7646-79-9), Cobalt(II) sulphate (CAS 10124-43-3), Cobalt(II) dinitrate (CAS 10141-05-6), Cobalt(II) carbonate (CAS 513-79-1), Cobalt(II) diacetate (CAS 71-48-7). In case of result > LOQ, a stoichiometric calculation is done by AQC based on the molar mass of the 4 SVHCs and cobalt element.

[11] In case of Nickel detection > 5 mg/kg, Nickel release is performed per EN ISO 1811+A1 and limited to 0.5 µg/cm^2/week (in a separate report)

[12] upon request only, AQC could go further in the characterization of Tin related substances by the specific testing of organo-tins below

Substance family	Substance Name	Abbr.	CAS Number	AQC limit	Strictest Regulation	Test Method
Organotins	Tributyltin and related compounds Incl. TBT metacrylate	TBT	several CAS incl. 2155-70-6	1'000 mg/kg each	REACH XVII entry 20 & REACH SVHC	ISO 16179 adapted
	Triphenyltin and related compounds Incl. TPT hydroxide	TPT	several CAS incl. 76-87-9			
	All other tri-substituted tin compounds	-	Several CAS			
	Dibutyltin and related compounds	DBT	several CAS incl. 683-18-1			
	Dioctyltin and related compounds	DOT	several CAS			
	di-µ-oxo-di-n-butylstanniohydroxyborane	DBB	75113-37-0		ORRChim REACH XVII entry 21	

LIS006_08 AQC RSL for edge tinctures

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