

YKK
**Rules for Control of Chemical
Substances Contained in Products**

《 **Ver. 1.2** 》

Revised April, 2016

Supply Chain Management Center
Quality and Environment Management Center
Fastening Products Group
YKK Corporation

Version	Date	History
1.0	Oct. 2014	Preparation
1.1	Jan. 2015	Change of Exhibit contents in accordance with revision of
1.2	Apr. 2016	Change of Exhibit contents in accordance with revision of

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Introduction

The market currently faces very strong demand from laws and regulations of relevant countries and customers that products not contain restricted chemical substances, either at all or above certain specified limitations.

YKK Fastening Products Group will comply with legal regulations and wishes to be responsive to customer requirements relating to chemical substances in its products.

For this reason, we require you, as our supplier, to ensure that NO chemical substance whose use in products is prohibited or restricted by law or by these Rules will be CONTAINED, in any amount or above the permitted level, as applicable, in procured parts and materials provided to YKK or any of its

We appreciate your understanding and cooperation in our product chemical substance control activities.

1. Purpose

The purpose of these Rules is to define restricted chemical substances that may not be contained at all or above specified limits in raw materials, parts, and products composing YKK products, and communicate them to YKK's suppliers/business partners for raw materials, parts, and products, to ensure compliance regarding respective products.

2. Scope of Application

These Rules apply to any and all products, partial products, parts, and raw materials composing products designed, manufactured, or sold by YKK and to each supplier (Supplier) providing any such items to YKK or its affiliates.

* Please refer to the separate Exhibit for examples of relevant products, etc.

3. Definition of Terms

Legal Regulations

Laws, regulations, and other requirements adopted by national, state or local governments and competent government agencies.

Delivered Products

Products, partial products, parts, and raw materials delivered by Supplier to YKK CORPORATION or any of its affiliates.

Contain(ed)

To add (or added), fill (or filled), incorporate (or incorporated), adhere (or adhered) a certain substance to products, partial products, parts, or raw materials. Any such substance found will be treated as "being Contained" regardless of whether it is intentionally used or not.

Restricted Substance

Substance groups designated in the Oeko-tex Standard 100.

Control Value

Contained value limit and conditional contained value limit set forth in the Oeko-tex Standard 100. (with some exceptions)

4. Rules for Control of Chemical Substances Contained in Products

4.1 Compliance with Restricted Chemical Substance Control

- 1) Supplier hereby commits to comply with the Legal Regulations of all relevant countries and regions regarding prohibited and restricted Contained chemical substances, and ensure that the Delivered Products will not Contain any Restricted Chemical Substance over the Control Value limit. Further, Supplier will follow any other direction given by YKK. (refer to Exhibit Restricted Substance List /Individual
- 2) In the event Supplier determines that compliance with any provision in this Article is difficult, Supplier agrees to notify YKK thereof immediately and discuss the response.

4.2 Confirmation of Substance Control

- 1) Supplier will submit to YKK such reports and other documents, samples of Delivered Products, and measured data as directed by YKK for control of chemical substances contained in products.
- 2) Supplier will promote, as required by these Rules, thorough control of chemical substances contained in products at its suppliers and implement through audit or investigations, etc. on a regular basis.
- 3) In case any substance Contained in Delivered Products may be changed as a result of a change in the manufacturing process and materials, etc. related to Delivered Products, Supplier agrees to notify YKK's contact person of such change in advance in writing after fully confirming the Rules for Control of Chemical Substances Contained in YKK Products.

4.3 Notice of Nonconformity

- 1) In the event that any Delivered Products does or may Contain restricted chemical substances over the Control Value allowed in products as defined by YKK, Supplier will notify YKK immediately and take corrective measures immediately.

4. 4 Compensation for Damage

- 1) In the event that Supplier is in breach of any provision of these Rules and causes damage to YKK, Supplier agrees to compensate YKK for such damage upon consultation with YKK.

4. 5 Revision of Rules

- 1) Supplier will comply with any revised Rules for Control of Chemical Substances Contained in YKK Products communicated by YKK and approved by Supplier, such approval to be deemed given upon the sale of raw materials, components, or other parts or products to YKK or any of its affiliates after the date of such communication.
- 2) In case Supplier cannot approve the revised Rules for Control of Chemical Substances Contained in YKK Products communicated by YKK, Supplier will notify YKK thereof no later than the effective date of such revised Rules, and discuss the response in good faith.

4. 6 Consultation

- 1) Any matter not set forth or any questions will be discussed with YKK in good faith.

Agreement on YKK Rules for Control of Chemical Substances Contained in Products

We, the undersigned Supplier, hereby promise and agree to comply with the provisions of the YKK Rules for Control of Chemical Substances Contained in Products Ver.1.2, including but not limited to the YKK Restricted Substances List.

Date of Agreement:

Company Address:

Company Name:

Representative Name:

Signature:

Tel:

Fax:

Contact Person:

Contact Tel:

E-mail:

* We will not use any information you include in this document except for business related to YKK Rules for Control of Chemical Substances Contained in Products.

Exhibit

**Restricted Substance List
Individual Substance List**

《 Ver. 1.2 》

Revised April, 2016

Supply Chain Management Center
Quality and Environment Management Center
Fastening Products Group
YKK Corporation

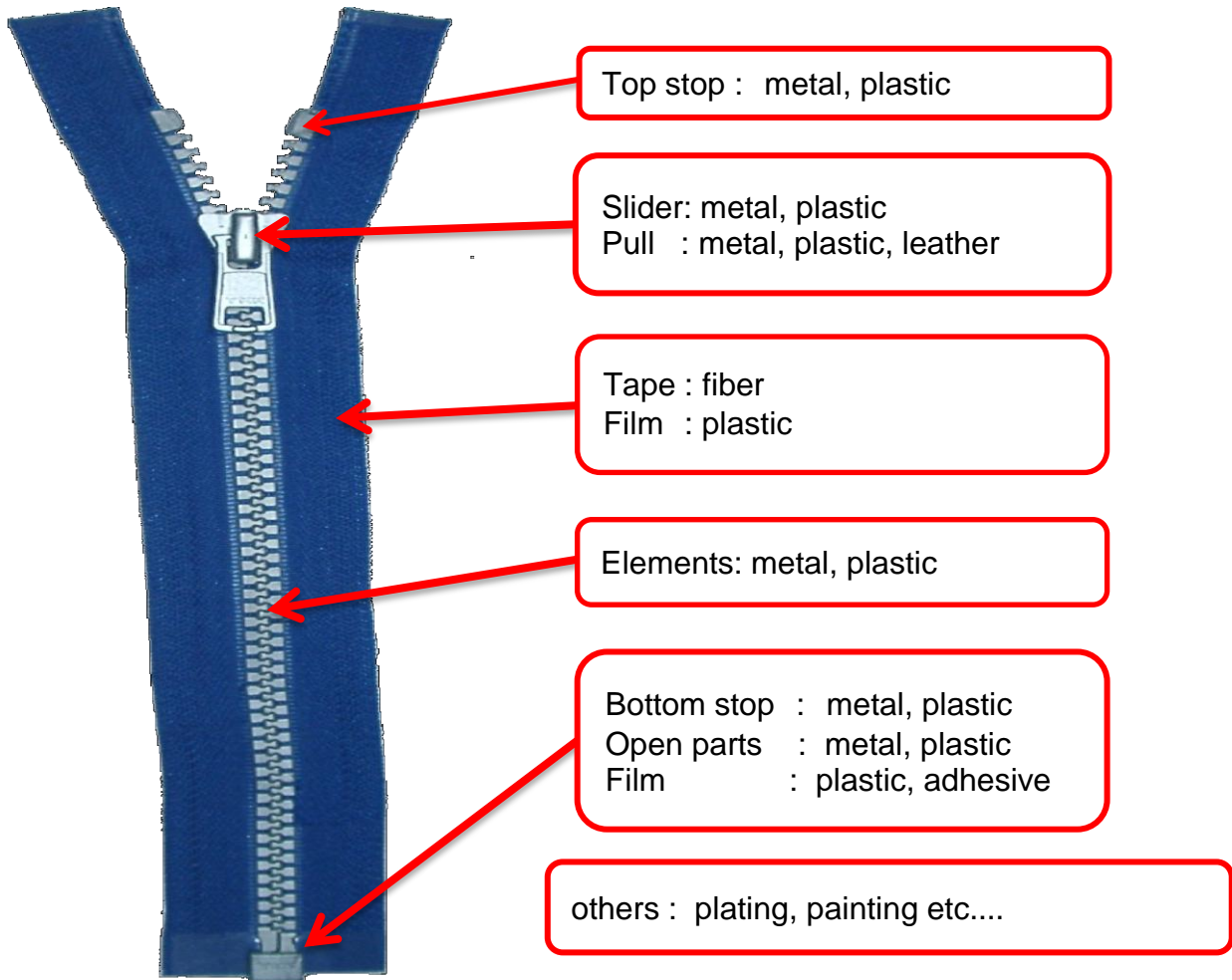
Verision	Date	History
1.0	Oct. 2014	Preparation
1.1	Jan. 2015	<p>1. Chromium (VI): Change limit 0.5→3.0ppm with leather</p> <p>2. Phthalates: 2 substances added</p> <ul style="list-style-type: none"> ▪ Dihexyl phthalate: streight and branched chain (CAS No.68515-50-4) ▪ Diisohexyl phthalate (CAS No. no description) <p>3. Solvent residues: 1 substance added</p> <ul style="list-style-type: none"> ▪ Formamide (CAS No.75-12-7) Limit :0.02 [%] <p>4. Surfactant residues Change limit 250→100 [ppm]</p> <p>5. Unify PFOA and PFOS (unit, linmit)</p> <p>6. Carcinogenic Dyestuffs: 2 pigments added</p> <ul style="list-style-type: none"> ▪ C.I. Pigment Yellow 34 (CAS No.1344-37-2) ▪ C.I. Pigment Red 104 (CAS No.12656-85-8)
1.2	Apr. 2016	<p>1. Pesticides: 8 substances added</p> <ul style="list-style-type: none"> ▪ Acetamiprid (CAS NO.135410-20-7,160430-64-8) ▪ Clothianidin (CAS No.210880-92-5) ▪ Dinotefuran (CAS No.165252-70-0) ▪ Imidacloprid (CAS No.105827-78-9,138261-41-3) ▪ Nitenpyram (CAS No.150824-47-8,120738-89-8) ▪ Thiacloprid (CAS No.111988-49-9) ▪ Thiamethoxam (CAS No.153719-23-4) ▪ Aldicarb (CAS No.116-06-3) <p>2. Chlorinated phenols: 2 substances added</p> <ul style="list-style-type: none"> ▪ MCP Monochlorophenols, DCP Dichlorophenols <p>3. Phthalates: 1 substances added</p> <ul style="list-style-type: none"> ▪ Di-cyclohexylphthalate (CAS No.84-61-7) <p>4. Organic tin compounds: 10 substances added</p> <ul style="list-style-type: none"> ▪ MMT Monomethyltin, MBT Monobutyltin, MOT Monoctyltin DMT Dimethyltin, DPhT Diphenyltin TCyHT Tricyclohexyltin, TMT Trimethyltin, TOT Trioctyltin, TPT Tripropyltin TeBT Tetrabutyltin <p>5. Carcinogenic Dyestuffs: 3 substances added</p> <ul style="list-style-type: none"> ▪ C.I. Basic Blue 26 (CAS No.2580-56-5) ▪ C.I. Basic Violet 3 (CAS No.548-62-9) ▪ C.I. Basic Green 4 <p>6. Cholorinated benzenes and toluenes: 1 substances added</p> <ul style="list-style-type: none"> ▪ Chlorobenzene <p>7. Perfluorinated Compounds: 3 substances added</p> <ul style="list-style-type: none"> ▪ Perfluoroheptanoic acids (C7) ▪ Perfluorononanoic acids (C9) ▪ Perfluorodecanoic acids (C10) <p>8. New restricted substance UV stabilizers: 4 substances added</p> <ul style="list-style-type: none"> ▪ UV 320, UV 327, UV 328, UV 350

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1. List of YKK Product's Materials

◆Fastener



◆Hook and Loop



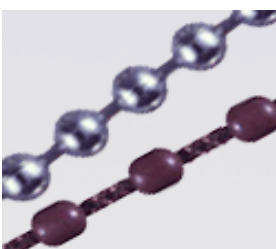
◆Plastic hard ware



◆Snap and Button



◆Ballchain



◆Railfastener



metal, plastic, fiber etc.....

※ There are exemptions depending on the production method or usage.
Please contact Japan's QC for special cases.
(ex: Lead in the chip's color → meets the limit value when diluted in the production process)

2. Restricted Contained Substance List

Category	Sub-Category	unit	YKK standard	Material					Testing Method
				Plastic (including rubber)	Metal (including plating)	Fiber	Leather	Surface coating	
Heavy metals (total content)	Pb (Lead)	ppm	90	●	●	●	●	●	ICP AAS
	Cd (Cadmium)	ppm	40 *2	●	●	※	●	●	
Pesticides *1	Sum	ppm	0.5	●	-	●	●	-	GC-MS
Chlorinated phenols *1	Penta / tetra chlorophenol (PCP),(TeCP) Sum	ppm	0.05	●	-	●	●	●	ISO 17070 GC-ECD GC-MS
	Trichlorophenols (TrCP) Sum	ppm	0.2	●	-	●	●	●	
	Di / Mono chlorophenols (DCP),(MCP) Sum	ppm	0.5	●	-	●	●	●	
	Orthophenylphenol (OPP)	ppm	50	●	-	●	●	●	
PVC plasticizers (phthalates) *1	Sum	%	0.1	●	-	-	●	●	EN15777 GC-MS
Organic tin compounds *1	TBT , TPhT	ppm	0.5	●	-	●	●	●	extraction with ethanol ISO 17353 GC-MS
	12 substances (except above)	ppm	1	●	-	●	●	●	
Perfluorinated compounds *1	PFOS,PFOA	µg/ml	1	●	-	●	●	●	CEN/TS 15968
	7 substances (except above)	ppm	0.05	●	-	●	●	●	
UV stabilizers *1	UV320 , UV327 , UV328 , UV350	%	no usage	●	-	●	●	●	soxhlet extraction GC-MS
Colorants	Cleavable arylamines *1	*3	no usage	●	-	●	●	●	ISO 14362-1 ISO 17234-1
	Carcinogens *1	*4	no usage	●	-	●	●	●	DIN 54231
	Allergens *1			●	-	●	●	●	
	Other banned dyestuffs *1			●	-	●	●	●	
Chloro organic carriers *1	Sum	ppm	1	●	-	●	●	DIN 54232	
Polycyclic aromatic hydrocarbons(PAH) *1	Benzo(a)pyrene、 Benzo(e)pyrene、 Benzo(a)anthracene、 Chrysene、 Benzo(b)fluoranthene、 Benzo(j)fluoranthene、 Benzo(k)fluoranthene、 Dibenzo(a,h)anthracene	ppm	0.5	●	-	-	-	●	ZEK 01.4-08/ GC-MS or LC-MS
	Sum	ppm	5	●	-	-	-	●	
Treatment with biological active substances	DMFu	ppm	0.1	●	●	●	●	●	ISO/TS 16186 GC-MS

Category	Sub-Category	unit	YKK standard	Material					Testing Method
				Plastic (including rubber)	Metal (including plating)	Fiber	Leather	Surface coating	
Treatment with flame retardant substances *1	General	*5	no usage	●	-	●	●	●	GC-MS LC-MS
	short Chain chloroparaffines C10 to C13 (SCCP)	%	0.1	●	-	●	●	●	GC-ECD (GC-MS or LC-MS)
	Tris(2-chloroethyl)phosphate (TCEP)	%	0.1	●	-	●	●	●	
Solvent residues *1	NMP	%	0.1	●	-	●	●	●	GC-MS
	DMAc	%	0.1	●	-	●	●	●	
	DMF	%	0.1	●	-	●	●	●	
	Formamide	%	0.02	●	-	●	●	●	
Surfactant, wetting agent residues *1	OP, NP Sum	ppm	10	●	-	●	●	●	extraction with ethanol LC-MS
	NP, OP, NPEO, OPEO Sum	ppm	100	●	-	●	●	●	
Banned fibers	Asbestos		no usage	●	-	●	●	●	declaration of no usage

*1 [Refer to Exhibit 4 for the list of individual substances](#)

*2 ※For Fiber, YKK standard will be 1ppm.

*3 Determination Limit: 20ppm for arylamines

*4 Determination Limit: 50ppm for dyestuffs

*5 Except for flame retardant substances approved by Oeko-Tex Association

3. Conditional Restricted Contained Substance List

Category	Sub-Category	unit	YKK standard	Material					Testing Method	
				Plastic (including rubber)	Metal (including plating)	Fiber	Leather	Surface coating		
pH			4.0-7.5	●	-	●	●	-	ISO 3071 ISO 4045	
Formaldehyde	Act on Control of Household Products Containing Harmful Substances Act No. 112	ppm	Undetectable *6	●	-	●	●	●	ISO 14184-1 ISO 14184-2	
Extractable heavy metals	Sb (Antimony)	ppm	30	●	-	●	●	●	EN1811 (ISO 105-E04 inacid solution)	
	As (Arsenic)	ppm	0.2	●	-	●	●	●		
	Pb (Lead)	ppm	0.2	●	●	●	●	●		
	Cd (Cadmium)	ppm	0.1	●	●	●	●	●		
	Cr (Chromium)	ppm	1	●	-	●	●	●		
	Cr (Chromium (VI))	ppm	Undetectable *7	●	●	●	●	●		Cr(VI) : ISO 17075
	Co (Cobalt)	ppm	1	●	-	●	●	●		
	Cu (Copper)	ppm	25	●	-	●	●	●		
	Ni (Nickel)	ppm	1	●	*8	●	●	●		
	Hg (Mercury)	ppm	0.02	●	-	●	●	●		

*6 Undetectable: Compliant <16ppm when absorbance difference is <0.05ppm, which is based on the test method in the Japanese law Act No. 112. 20ppm for Leather.

*7 Detection Limit: 0.5ppm *3.0ppm for Leather

*8 For metallic accessories and metallized surfaces:0.5mg/kg

4. Individual Substance List

Pesticides

Name	CAS-Nr.	Name	CAS-Nr.
2,4,5-T	93-76-5	Fenvalerate	51630-58-1
2,4-D	94-75-7	Heptachlor	76-44-8
Acetamiprid	13410-20-7,160430-64-8	Heptachloroepoxide	1024-57-3
Aldicarb	116-06-3	Hexachlorobenzene	118-74-1
Aldrine	309-00-2	Hexachlorocyclohexane, α -	319-84-6
Azinophosmethyl	86-50-0	Hexachlorocyclohexane, β -	319-85-7
Azinophosethyl	2642-71-9	Hexachlorocyclohexane, δ -	319-86-8
Bromophos-ethyl	4824-78-6	Imidacloprid	105827-78-9,138261-41-3
Captafol	2425-06-1	Isodrine	465-73-6
Carbaryl	63-25-2	Kelevane	4234-79-1
Chlordane	57-74-9	Kepone	143-50-0
Chlordimeform	6164-98-3	Lindane	58-89-9
Chlorfenvinphos	470-90-6	Malathion	121-75-5
Clothianidin	210880-92-5	MCPA	94-74-6
Coumaphos	56-72-4	MCPB	94-81-5
Cyfluthrin	68359-37-5	Mecoprop	93-65-2
Cyhalothrin	91465-08-6	Metamidophos	10265-92-6
Cypermethrin	52315-07-8	Methoxychlor	72-43-5
DEF	78-48-8	Mirex	2385-85-5
Deltamethrin	52918-63-5	Monocrotophos	6923-22-4
DDD	53-19-0, 72-54-8	Nitenpyram	150824-47-8,120738-89-8
DDE	3424-82-6, 72-55-9	Parathion	56-38-2
DDT	50-29-3, 789-02-6	Parathion-methyl	298-00-0
Diazinon	333-41-5	Perthane	72-56-0
Dichlorprop	120-36-2	Phosdrin/Mevinphos	7786-34-7
Dicrotophos	141-66-2	Propethamphos	31218-83-4
Dieldrine	60-57-1	Profenophos	41198-08-7
Dimethoate	60-51-5	Quinalphos	13593-03-8
Dinoseb, its salts and acetate	88-85-7 et al	Strobane	8001-50-1
Dinotefuran	165252-70-0	Telodrine	297-78-9
Endosulfan, α -	959-98-8	Thiacloprid	111988-49-9
Endosulfan, β -	33213-65-9	Thiamethoxam	153719-23-4
Endrine	72-20-8	Toxaphene	8001-35-2
Esfenvalerate	66230-04-4	Trifluralin	1582-09-8

Chlorinated phenols

Name	CAS-Nr.	Name	CAS-Nr.
Pentachlorophenol	87-86-5	2,3-Dichlorophenol	576-24-9
2,3,5,6-Tetrachlorophenol	935-95-5	2,4-Dichlorophenol	120-83-2
2,3,4,6-Tetrachlorophenol	58-90-2	2,5-Dichlorophenol	583-78-8
2,3,4,5-Tetrachlorophenol	4901-51-3	2,6-Dichlorophenol	87-65-0
2,3,4-Trichlorophenol	15950-66-0	3,4-Dichlorophenol	95-77-2
2,3,5-Trichlorophenol	933-78-8	3,5-Dichlorophenol	591-35-5
2,3,6-Trichlorophenol	933-75-5	2-Chlorophenol	95-57-8
2,4,5-Trichlorophenol	95-95-4	3-Chlorophenol	108-43-0
2,4,6-Trichlorophenol	88-06-2	4-Chlorophenol	106-48-9
3,4,5-Trichlorophenol	609-19-8		

PVC plasticizers (phthalates)

Name	CAS-Nr.	Acronym
Di-iso-nonylphthalate	28553-12-0, 68515-48-0	DINP
Di-n-octylphthalate	117-84-0	DNOP
Di-(2-ethylhexyl)-phthalate	117-81-7	DEHP
Di-isodecylphthalate	26761-40-0, 68515-49-1	DIDP
Butylbenzylphthalate	85-68-7	BBP
Dibutylphthalate	84-74-2	DBP
Di-iso-butylphthalate	84-69-5	DIBP
Di-C6-8-branched alkylphthalates	71888-89-6	DIHP
Di-C7-11-branched alkylphthalates	68515-42-4	DHNUF
Di-n-hexylphthalate	84-75-3	DHP
Di-(2-methoxyethyl)-phthalate	117-82-8	DMEP
Di-pentylphthalate (n-, iso-, or mixed)	131-18-0, 605-50-5, 776297-69-9, 84777-06-0	DPP
Dihexyl phthalate	68515-50-4	DHxP
Diisohexyl phthalate		DIHxP

Organic tin compounds

Name	Acronym	Name	Acronym
Dibutyltin	DBT	Tetrabutyltin	TeBT
Dimethyltin	DMT	Tributyltin	TBT
Dioctyltin	DOT	Tricyclohexyltin	TCyHT
Diphenyltin	DPhT	Trimethyltin	TMT
Monomethyltin	MMT	Trioctyltin	TOT
Monobutyltin	MBT	Triphenyltin	TPhT
Monooctyltin	MOT	Tripropyltin	TPT

Arylamines having carcinogenic properties

Name	CAS-Nr.	Name	CAS-Nr.
MAK III, category 1			
4-Aminobiphenyl	92-67-1	4-Chloro-o-toluidine	95-69-2
Benzidine	92-87-5	2-Naphthylamine	91-59-8
MAK III, category 2			
o-Aminoazotoluene	97-56-3	4,4'-Methylene-bis- (2-chloroaniline)	101-14-4
2-Amino-4-nitrotoluene	99-55-8	4,4'-Oxydianiline	101-80-4
p-Chloroaniline	106-47-8	4,4'-Thiodianiline	139-65-1
2,4-Diaminoanisole	615-05-4	o-Toluidine	95-53-4
4,4'-Diaminobiphenylmethane	101-77-9	2,4-Toluyldiamine	95-80-7
3,3'-Dichlorobenzidine	91-94-1	2,4,5-Trimethylaniline	137-17-7
3,3'-Dimethoxybenzidine	119-90-4	o-Anisidine (2-Methoxyanilin)	90-04-0
3,3'-Dimethylbenzidine	119-93-7	2,4-Xylidine	95-68-1
3,3'-Dimethyl-4,4'- diaminobiphenylmethane	838-88-0	2,6-Xylidine	87-62-7
p-Cresidine	120-71-8	4-Aminoazobenzene	60-09-3

Dyestuffs classified as carcinogenic

C.I. Generic Name	C.I. Structure number	CAS-Nr.	C.I. Generic Name	C.I. Structure number	CAS-Nr.
C.I. Acid Red 26	C.I. 16 150	3761-53-3	C.I. Direct Red 28	C.I. 22 120	573-58-0
C.I. Basic Red 9	C.I. 42 500	569-61-9	C.I. Disperse Blue 1	C.I. 64 500	2475-45-8
C.I. Basic Violet 14	C.I. 42 510	632-99-5	C.I. Disperse Orange 11	C.I. 60 700	82-28-0
C.I. Direct Black 38	C.I. 30 235	1937-37-7	C.I. Disperse Yellow 3	C.I. 11 855	2832-40-8
C.I. Direct Blue 6	C.I. 22 610	2602-46-2	C.I. Pigment Yellow 34	C.I. 77 603	1344-37-2
C.I. Pigment Red 104	C.I. 77 605	12656-85-8			
C.I. Basic Blue 26 (with ≥ 0.1 % Michler's ketone or base)					2580-56-5
C.I. Basic Violet 3 (with ≥ 0.1 % Michler's ketone or base)					548-62-9

Dyestuffs classified as allergenic

C.I. Generic Name	C.I. Structure number	CAS-Nr.	C.I. Generic Name	C.I. Structure number	CAS-Nr.
C.I. Disperse Blue 1	C.I. 64 500	2475-45-8	C.I. Disperse Orange 37	C.I. 11 132	
C.I. Disperse Blue 3	C.I. 61 505	2475-46-9	C.I. Disperse Orange 76	C.I. 11 132	
C.I. Disperse Blue 7	C.I. 62 500	3179-90-6	C.I. Disperse Red 1	C.I. 11 110	2872-52-8
C.I. Disperse Blue 26	C.I. 63 305		C.I. Disperse Red 11	C.I. 62 015	2872-48-2
C.I. Disperse Blue 35		12222-75-2	C.I. Disperse Red 17	C.I. 11 210	3179-89-3
C.I. Disperse Blue 102		12222-97-8	C.I. Disperse Yellow 1	C.I. 10 345	119-15-3
C.I. Disperse Blue 106		12223-01-7	C.I. Disperse Yellow 3	C.I. 11 855	2832-40-8
C.I. Disperse Blue 124		61951-51-7	C.I. Disperse Yellow 9	C.I. 10 375	6373-73-5
C.I. Disperse Brown 1		23355-64-8	C.I. Disperse Yellow 39		
C.I. Disperse Orange 1	C.I. 11 080	2581-69-3	C.I. Disperse Yellow 49		
C.I. Disperse Orange 3	C.I. 11 005	730-40-5			

Other banned dyestuffs

C.I. Generic Name	CAS-Nr.	C.I. Generic Name	C.I. Structure	CAS-Nr.
C.I. Disperse Orange 149	85136-74-9	C.I. Disperse Yellow 23	C.I. 26 070	6250-23-3
C.I. Basic Green 4 (chloride)	569-64-2			
C.I. Basic Green 4 (free)	10309-95-2			
C.I. Basic Green 4 (oxolate)	2437-29-8 , 18015-76-4			

Chlorinated benzenes and toluenes

Chlorobenzene	Chlorotoluenes
Dichlorobenzenes	Dichlorotoluenes
Trichlorobenzenes	Trichlorotoluenes
Tetrachlorobenzenes	Tetrachlorotoluenes
Pentachlorobenzenes	Pentachlorotoluene
Hexachlorobenzene	

Polycyclic aromatic hydrocarbons (PAH)

Name	CAS-Nr.	Name	CAS-Nr.
Acenaphthene	83-32-9	Dibenzo[a,h]anthracene	53-70-3
Acenaphthylene	208-96-8	Dibenzo[a,e]pyrene	192-65-4
Anthracene	120-12-7	Dibenzo[a,h]pyrene	189-64-0
Benzo[a]anthracene	56-55-3	Dibenzo[a,i]pyrene	189-55-9
Benzo[a]pyrene	50-32-8	Dibenzo[a,l]pyrene	191-30-0
Benzo[b]fluoranthene	205-99-2	Fluoranthene	206-44-0
Benzo[e]pyrene	192-97-2	Fluorene	86-73-7
Benzo[ghi]perylene	191-24-2	Indeno[1,2,3-cd]pyrene	193-39-5
Benzo[j]fluoranthene	205-82-3	1-Methylpyrene	2381-21-7
Benzo[k]fluoranthene	207-08-9	Naphthalene	91-20-3
Chrysene	218-01-9	Phenanthrene	85-01-8
Cyclopenta[c,d]pyrene	27208-37-3	Pyrene	129-00-0

Forbidden flame retardant substances

Name	CAS-Nr.	Acronym
Polybrominated biphenyles	59536-65-1	PBB
Tri-(2,3-dibromopropyl)-phosphate	126-72-7	TRIS
Tris-(aziridinyl)-phosphin oxide)	545-55-1	TEPA
Pentabromodiphenylether	32534-81-9	penta BDE
Octabromodiphenylether	32536-52-0	octaBDE
Decabromodiphenylether	1163-19-5	decaBDE
Hexabromocyclododecane	25637-99-4	HBCDD
Short chain chlorinated paraffins (C10 - C13)	85535-84-8	SCCP
Tris(2-chloroethyl)phosphate	115-96-8	TCEP

Solvent residues

Name	CAS-Nr.	Acronym	Name	CAS-Nr.	Acronym
1-Methyl-2-pyrrolidone	872-50-4	NMP	Dimethylformamide	68-12-2	DMF
N,N-Dimethylacetamide	127-19-5	DMAc			

Surfactant, wetting agent residues

Name	CAS-Nr.	Acronym	Name	CAS-Nr.	Acronym
Nonylphenol	Various	NP	Nonylphenoethoxylates	Various	NP(EO)
Octylphenol	Various	OP	Octylphenoethoxylates	Various	OP(EO)

Other chemical residues

Name	CAS-Nr.	Acronym
o-Phenylphenol	90-43-7	OPP
Short chained chlorinated paraffines (C10 - C13)	85535-84-8	SCCP
Tris(2-chloroethyl)phosphate	115-96-8	TCEP
Dimethylfumarate	624-49-7	DMFu

PFC's, Perfluorinated compounds

Name	CAS-Nr.	Acronym	Name	CAS-Nr.	Acronym
Perfluorooctane sulfonates	Various	PFOS	Henicosafleuroundecanoic acid	2058-94-8	PFUdA
Perfluoroheptanoic acids	Various	PFHpA	Tricosafleurododecanoic acid	307-55-1	PFDoA
Perfluorooctanoic acid	Various	PFOA	Pentacosafleurotridecanoic acid	72629-94-8	PFTrDA
Perfluorononanoic acids	Various	PFNA	Heptacosafleurotetradecanoic acid	376-06-7	PFTeDA
Perfluorodecanoic acids	Various	PFDA			

UV stabilizers

Name	CAS-Nr.	Acronym
2-(2H-Benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol	36437-37-3	UV 350
2-(2H-Benzotriazol-2-yl)-4,6-di-tert-pentylphenol	25973-55-1	UV 328
2,4-Di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol	3864-99-1	UV 327
2-Benzotriazol-2-yl-4,6-di-tert-butylphenol	3846-71-7	UV 320