Benetton Group srl

Restricted Substances List

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Introduction

Benetton Group is a globally responsible company committed to maintaining proper and sustainable business practices. It is committed to continually search for processes and products that meet the highest security standards to minimize the impact, both on humans and environment, of all its productive activities. The knowledge of the entire supply chain is an important component to achieve high quality production processes and efficient prevention of possible non-compliance. According to this, Benetton Group requires all its business partners, including suppliers and sub-suppliers, to sign and implement the *Benetton Group Code of Conduct*, which includes sections referring to:

- Internationally recognized work standards and safe workplaces
- Environmental protection
- Transparency
- Supply chain and compliance.

The present document translates some of the *Benetton Group Code of Conduct*'s principles and it is signed by all suppliers that must disclose the information on internal and external processing plants and on all sources of materials and components used to produce Benetton garments.
Suppliers are also required to adopt a *Clean Factory Approach*: all plants and productions, not only those intended for Benetton, should work and be carried out in accordance with the requirements and the safeguard "best practices". Therefore, suppliers have to disclose these practices to all their supply chains.

Benetton Group RSL (Restricted Substances List)

In response to the increasing consumers and stakeholders demand, Benetton decided to publish a list of restricted and/or prohibited substances in the production of its garments. This list, named Restricted Substances List (RSL), consists of two parts, one related to processes and one related to products.

Processes

As member of ZDHC, regarding production processes and the acceptable concentration for the chemicals present in the formulations they used, Benetton decided to adopt the limits defined in the ZDHC MRSL (https://mrsl.roadmaptozero.com/MRSL2_0).

Moreover, for further verification of the MRSL compliance, Benetton requires its supply chain (wet-process) to perform the DETOX PROGRAMME, according to the guideline available at: http://assets.benettongroup.com/wp-content/uploads/2020/03/2020-Benetton-Detox-Programme-Guideline_new.pdf.

Products

The Product Restricted Substances List (PRSL) refers to products, whether they are raw material rather than semi-finished or finished products, and it defines substances and limits to ensure their compliance with the company's requirements.

The Benetton's PRSL is regularly updated with information about dangerous substances, by using a precautionary principle and including any substance that is considered dangerous by the most authoritative sources of chemical risk assessment. The inclusion process of a substance in the Benetton's PRSL is described in the document titled "*Benetton's Screening Methodology",* http://www.benettongroup.com/sustainability/detox/rsl/.

Benetton Group performs a considerable number of chemical tests in order to eliminate or minimize any possible risk and to ensure that parameters are met: in this way, only safe products will be placed on the market. The product safety tests, performed only by accredited laboratories and in accordance with the PRSL, are based on: technical knowledge, processes and highly problematic substances, risk assessment, materials and quantities used and reliability of suppliers and sub-suppliers.

By applying this procedure and wanted to achieve zero use of hazardous substances by 2020, Benetton Group has decided to voluntarily adopt more restrictive limits than those established by the laws in force in the countries producing, distributing and selling garments, and by some globally recognized standards (e.g. OEKO-TEX).

PRSL (detail)

Categories (substances listed in chapter 1.2)	Detail (substances listed in chapter 1.2)	Limit Value		Limit Value Recycled Materials		Methods	Detect. Limit [mg/Kg]
		0-14 years [mg/Kg]	> 14 years [mg/Kg]	0-14 years [mg/Kg]	> 14 years [mg/Kg]		
Alkylphenols	BP	1000*[at]		1000*[at]		EN ISO 21084; EN ISO 18218 - 2 (leather)	100
	PP, HP	SUM ≤ 10*[at]		SUM ≤ 10*[at]		EN ISO 21084; EN ISO 18218 - 2 (leather)	3
	NP, OP	n.d.*		10*[at]		EN ISO 21084; EN ISO 18218 - 2 (leather)	3
Alkylphenols Ethoxylates	NPEs, OPEs	50*[at]		SUM ≤ 100*[at]		EN ISO 18254; EN ISO 18218 - 2 (leather)	3
Asbestos	Asbestos and its compounds	n.d.*		n.d.*		Microscopic examination (SEM)	N/A
Biocides	Regulation (EU) No 528/2012	n.d.*		n.d.*		Solvent extraction and analysis by GC-MS	N/A
Chlorobenzenes and Chlorotoluenes	Chlorinated Toluenes, Monochlorobenzene, Dichlorobenzenes	SUM ≤ 1*[at]		SUM ≤ 1*[at]		EN 17137	0.1
	Trichlorobenzenes, Tetrachlorobenzenes, Pentachlorobenzene, Hexachlorobenzene	n.d.*		n.d.*			0.1
Phenols	PCP	n.d.*		n.d.*		KOH extraction + BVL B 82.02.8; KOH extraction + ISO 17070 (leather)	0.05
	TeCP						
	TriCP			10*[at]			
	DCPs	SUM < 0.5	SUM < 3	SUM < 0.5	SUM < 3		
	MCPs	SUM < 0.5	SUM < 3	SUM < 0.5	SUM < 3		
	Fenolo	20	50	20	50	GC-MS/LC-MS	1
	OPP	10	25	10	25	EN 17134; ISO 13365 (leather)	1
	Triclosan	n.d.		n.d.			1
Bisphenol A/Bisphenol S	BPA / BPS	n.d.		n.d.		LC MS-MS	0.05
Quinoline	Quinoline	50		50		LC MS-MS	5
Colorants	Cleavable Arylamines/Arylamines (Azo)	20*[at]		20*[at]	30*[at]	EN ISO 14362-1 e 3; EN ISO 17234-1 e 2 (leather)	5
	Carcinogenic	n.d.		30[at]	50[at]	DIN 54231	10
	Allergenic	n.d.		30[at]	50[at]		
	Others	n.d.		30[at]	50[at]		
Dimethyl Fumarate	DMFu	0.1		0.1		ISO/ TS 16186	0.05
Formaldehyde	Formaldehyde	16	75 (300 no skin contact)	16	75 (300 no skin contact)	Japan Law 112: JIS L 1041; ISO 17226-1 or -2 (leather); EN 717-3 (wood)	5
Isocyanates/ADCA	Isocyanates/ADCA (on foam)	n.d.		n.d.		LC MS-MS	3
Heavy Metals	Pb (Total Substrate and Coatings)	90*[at]		90*[at]		CPSC-CH-E1003-09.1 (coatings); CPSC-CH-E1001-08.3; CPSC-CH-E1002-08.3	0.5
	Hg	n.d.*		n.d.*			
	As	n.d.		n.d.			
	Cd (Total Substrate and Coatings)	40*[at]		100*[at]			
Heavy Metals (Extractable)	Cr(VI)	n.d.*		1.0*[at]		EN 16711-2; EN ISO 17075 (leather) with ageing A2 ISO 10195	0.5
	Cr	1.0[g]	2.0[g]	1.0[g]	2.0[g]	EN 16711-2; ISO 17072-1 (leather)	0.1
	As	0.2	1.0	0.2	1.0		0.05
	Pb	0.2*[at]; 0.8*[at] (leather)	1.0*[at]	0.2*[at]; 0.8*[at] (leather)	1.0*[at]		0.1
	Cd	0.1*[at]		0.1*[at]			0.02
	Sb	30		30			5
	Co	1.0	4.0	1.0	4.0		0.1
	Cu	25[a]	50[a]	25[a]	50[a]		5
	Ni	1.0	4.0	1.0	4.0		0.2
	Hg	0.02*[at c]; 0.05*[at] (leather)		0.02*[at c]; 0.05*[at] (leather)			0.01
	Ba	1000		1000			100
	Se	100		100			10
Nickel	Ni Release	0.5 µg/cm²/week		0.5 µg/cm²/week		EN 12472:2005+A1:2009 & EN 1811:2011+ A1:2015	0.05 µg/cm²/week
	Ni Release (piercing)	0.2 µg/cm²/week		0.2 µg/cm²/week			
N-Nitrosamine[f]	N-Nitrosamine	n.d.		n.d.		GB/T 24153-2009 with LC-MS confirmation	0.5
Oils	Oils (wood)	n.d.		n.d.		EN 13991	N/A

Categories (substances listed in chapter 1.2)	Detail (substances listed in chapter 1.2)	Limit Value		Limit Value Recycled Materials		Methods	Detect. Limit [mg/Kg]
		0-14 years [mg/Kg]	> 14 years [mg/Kg]	0-14 years [mg/Kg]	> 14 years [mg/Kg]		
Organotin Compounds	TBT, TPhT	n.d.*		n.d.*		ISO 17353; ISO/TS 16179 (leather)	0.025
	DBT, MMT, DMT, TMT, TeET, DPT, TPT, MBT, DBTC, TeBT, MOT, DOT, TOT, MPhT, DPhT, TCyHT	1*[at]		1*[at]			
Perfluorocarbons	PFCs	25ppb – 1*[at] µg/m² [e]		25ppb – 1*[at] µg/m² [e]		CEN/TS 15968	0.5 µg/m²
Pesticides	Sum	0.5		0.5		EPA 8081 - 8141 e 8151	0.05
Glyphosate	Natural fibres	5		5		EPA 8081 - 8141 e 8151	0.1
	Organic cotton	0.5		0.5		EPA 8081 - 8141 e 8151	0.1
pH	pH	4.0 - 7.5[b]	4.0 - 9.0[b]	4.0 - 7.5[b]	4.0 - 9.0[b]	ISO 3071; ISO 4045 (leather)	N/A
		3.5 - 7.5 (leather)		3.5 - 7.5 (leather)			
Phthalates	DEHP, DBP, DIBP, BBP DNOP, DINP, DIDP, DIHP, DMEP, DPP, DHxP, DMP, DEP, DPrP, DCHP, DIOP, DNP, DHNUP, Di-C6-10 alkylphthalates, Di-decyl/hexyl/octyl (mixed) phthalates	SUM ≤ 500*[at]		SUM ≤ 500*[at]		CPSC-CH-C1001-09.4; EN ISO 14389	50
Polycyclic Aromatic Hydrocarbons	BaA; BaP; BbFA; BeP; BjFA; BkFA; CHR; DBAhA	0.5	1	0.5	1	EN 17132	0.1
	Others PAH	1		1			
Flame Retardants (Substances mainly used as flame retardants but not exclusively)	PBB(mono/di/tri/tetra/ penta/hexa/hepta/octa/ nona/deca),PBDE(tetra/ penta/hexa/hepta/ octa/deca), TBBPA, BDDP, TBPH, TBB, HBCD, BIS-BP, TRIS, BBMP, HB, BTO, DTB, TBHO, TEPA, o-TCP, TXP, TCEP, TDCPP, TCPP, PCB 209	n.d.*		n.d.*		GB/T 24279 or solvent extraction and analysis by GC-MS or LC-MS; TEPA: KOH or NaOH digestion + GC-MS headspace analysis for ethylenediamine; EN ISO 17881-1 and 2; EN ISO 18219 (leather)	5
	Short Chain Chlorinated Paraffins (SCCP)	SCCP ≤ 30*[at]; MCCP ≤ 30*[at] ; SOMMA ≤ 50*[at]		SCCP ≤ 30*[at]; MCCP ≤ 30*[at] ; SOMMA ≤ 50*[at]			30
	Medium Chain Chlorinated Paraffins (MCCP)						30
Restrictions for Packaging	Cd , Pb, Hg	SUM ≤ 100*[at]		SUM ≤ 100*[at]		CPSC-CH-E1003-09.1 (coatings); CPSC-CH-E1001-08.3; CPSC-CH-E1002-08.3	1
	Cr (VI)	n.d.*		3*[at]		EN 16711-2	0.5
	Formaldehyde	75		75		JIS L 1041	5
	Phthalates	1000*[at]		1000*[at]		CPSC-CH-C1001-09.3	50
	Odor	odorless (< 4)		odorless (< 4)		SNV 195651	N/A
Solvents	Others	SUM ≤ 0.1		SUM ≤ 0.1		Solvent extraction and analysis by GC-MS	0.05
	Chlorinated Solvents	SUM ≤ 0.1*[at]		SUM ≤ 0.1*[at]			0.05
UV Stabilizers	UV 320, UV 327, UV 328, UV 350	1000		1000		Solvent extraction with hexane/dichloroethane and analysis by GC-MS	100
GMO	GMO	n.d.		n.d.		IWA 32	N/A
Microbiological activity[d]	Oxygen index number	< 20		< 20		EN 12935 & EN 1162	0.1
	Mesophil aerobic bacteria count	< 10^6 CFU/g		< 10^6 CFU/g		EN 12935 & EN 1884 Selective medium and count plate method	< 100 CFU/g
	Faecal streptococci count	< 10^2 CFU/g		< 10^2 CFU/g			< 100 CFU/g
	Sulphite reducing clostridium count	< 10^2 CFU/g		< 10^2 CFU/g			< 100 CFU/g
	Presence of salmonella	absent in 20 g		absent in 20 g			N/A

Legend

ID	Description
a	No requirements for accessories made from inorganic materials.
b	The Products that must be wet treated during the further processing can have a pH value within 4.0 and 10.5
c	n.d. for ink and dyes.
d	The following points must be respected for feather/down: - D.P.R.(Decree by the President of the Republic) 23.01.1975 n.845 establishing that feather and down filled products and products filled with any other kind of material of animal origin must carry an irremovable and inerasable label containing the following information: 1. Name and location of the producer and of the selling company 2. Declaration certifying that the material has been sanitized and hygienically treated as set out in the existing regulations. - D.M. (Minister's Decree) 10.11.1976 n.315 establishing that feather and down and other filling materials must be sanitized as follows: 1. Sorting 2. De-dusting 3. Washing 4. Centrifuging 5. Steam-drying (drying temperature: 120-140°C, steaming pressure: 2-3 atmospheres for no less than 60 minutes). - It is mandatory to use and/or purchase RDS (Responsible Down Standards) certificated feathers and down jackets.
e	Both of these requirements have to be respected.
f	It applies to all components from vulcanized rubber.
g	Not applicable to leather.
at	Allowable Trace: the trace amount represents the permitted unavoidable trace presence of a substance that is allowed to be found on the garment when the substance has been prohibited from use.
*	**USAGE BAN**: A prohibition of intentional use of a substance during any and all stages of product manufacturing. However, the RSL identifies an allowable trace amount of some substances due to unavoidable contamination.

Substances List

Alkylphenols and Alkylphenols Ethoxylates

Name	CAS-Nr.	Abbreviation
4-tert-butylphenol	98-54-4	BP
Pentylphenol	80-46-6	PP
Heptylphenol	Various	HP
Octylphenol	Various	OP
Octylphenol ethoxylates	Various	OPEs [1 - 20]
Nonylphenol	Various	NP
Nonylphenol ethoxylates	Various	NPEs [1 - 20]

Asbestos and its Compounds

Name	CAS-Nr.
Actinolite	77536-66-4
Amosite	12172-73-5
Anthophyllite	77536-67-5
Chrysotile	12001-29-5; 132207-32-0
Crocidolite	12001-28-4
Tremolite	77536-68-6

Chlorobenzenes and Chlorotoluenes

Name	CAS-Nr.
Monochlorobenzene	108-90-7
Dichlorobenzenes	541-73-1; 106-46-7; 95-50-1
Trichlorobenzenes	108-70-3; 120-82-1; 87-61-6
Tetrachlorobenzenes	95-94-3; 634-66-2; 634-90-2
Pentachlorobenzene	608-93-5
Hexachlorobenzene	118-74-1
α-chlorotoluene	100-44-7
Monochlorotoluenes	95-49-8; 108-41-8; 106-43-4
Dichlorotoluenes	95-73-8; 19398-61-9; 118-69-4; 32768-54-0; 95-75-0; 25186-47-4
Trichlorotoluenes	98-07-7; 2077-46-5; 7359-72-0; 6639-30-1; 23749-65-7; 21472-86-6
Tetrachlorotoluenes	5216-25-1; 2136-89-2; 81-19-6; 76057-12-0; 29733-70-8; 875-40-1
Pentachlorotoluene	877-11-2

Colorants

Cleavable Arylamines/Arylamines (Azo)

Name	CAS-Nr.
4-Aminobiphenyl	92-67-1
Benzidine	92-87-5
4-Chloro-o-toluidine	95-69-2
2-Naphthylamine	91-59-8
o-Aminoazotoluene	97-56-3
5-Nitro-o-toluidine	99-55-8
p-Chloroaniline	106-47-8
2,4-Diaminoanisole	615-05-4
4,4’-Diaminodiphenylmethane	101-77-9
3,3’-Dichlorobenzidine	91-94-1
3,3’-Dimethoxybenzidine	119-90-4
3,3’-Dimethylbenzidine	119-93-7
4,4'-Methylenedi-o-toluidine	838-88-0
p-Cresidine	120-71-8
4,4’-Methylenebis(2-chloroaniline)	101-14-4
4,4’-Oxydianiline	101-80-4
4,4’-Thiodianiline	139-65-1
o-Toluidine	95-53-4
2,4-Toluenediamine	95-80-7
2,4,5-Trimethylaniline	137-17-7
o-Anisidine	90-04-0
2,4-Xylidine	95-68-1
2,6-Xylidine	87-62-7
4-Aminoazobenzene	60-09-3
Aniline	62-53-3
4-Chloro-o-tolidinium chloride	3165-93-3
2,4,5-Trimethylaniline hydrochloride	21436-97-5
2-Naphthylammoniumacetate	553-00-4
2,4-Diaminoanisole sulphate	39156-41-7

Carcinogenic Dyestuffs

Name	Structure Number	CAS-Nr.
Acid Orange 24	C.I. 20 170	1320-07-6
Acid Red 26	C.I. 16 150	3761-53-3
Acid Red 114	-	6459-94-5
Acid Violet 49	-	1694-09-3
Basic Blue 26	-	2580-56-5
Basic Green 4	-	2437-29-8; 10309-95-2; 569-64-2; 18015-76-4
Basic Red 9	C.I. 42 500	569-61-9
Basic Violet 1	-	8004-87-3
Basic Violet 3	-	548-62-9; 603-48-5; 14426-25-6
Basic Violet 14	C.I. 42 510	632-99-5
Basic Yellow 2	-	2465-27-2

Direct Black 38	C.I. 30 235	1937-37-7
Direct Black 91	C.I. 30 400	6739-62-4
Direct Blue 6	C.I. 22 610	2602-46-2
Direct Blue 15	-	2429-74-5
Direct Blue 76	C.I. 24 411	16143-79-6
Direct Blue 218	C.I. 24401	28407-37-6
Direct Brown 95	C.I. 30 145	16071-86-6
Direct Red 28	C.I. 22 120	573-58-0
Direct Yellow 1	C.I.22250	6472-91-9
Disperse Blue 1	C.I. 64 500	2475-45-8
Disperse Orange 11	C.I. 60 700	82-28-0
Disperse Yellow 3	C.I. 11 855	2832-40-8
Pigment Red 104	C.I. 77 605	12656-85-8
Pigment Yellow 34	C.I. 77 603	1344-37-2
Solvent Blue 4	C.I. 44 045:1	6786-83-0
Solvent Yellow 1	C.I. 11 000	60-09-3
Solvent Yellow 2	-	60-11-7
Solvent Yellow 3	-	97-56-3
Solvent Violet 8	-	561-41-1

Allergenic Dyestuffs

Name	Structure Number	CAS-Nr.
Disperse Blue 1	C.I. 64 500	2475-45-8
Disperse Blue 3	C.I. 61 505	2475-46-9
Disperse Blue 7	C.I. 62 500	3179-90-6
Disperse Blue 26	C.I 63 305	3860-63-7
Disperse Blue 35	-	12222-75-2
Disperse Blue 102	-	12222-97-8
Disperse Blue 106	-	12223-01-7
Disperse Blue 124	-	61951-51-7
Disperse Brown 1	-	23355-64-8
Disperse Orange 1	C.I. 11 080	2581-69-3
Disperse Orange 3	C.I. 11 005	730-40-5
Disperse Orange 37/76/59	C.I. 11 132	13301-61-6; 12223-33-5; 51811-42-8
Disperse Red 1	C.I. 11 110	2872-52-8
Disperse Red 11	C.I 62 015	2872-48-2
Disperse Red 17	C.I. 11 210	3179-89-3
Disperse Yellow 1	C.I. 10 345	119-15-3
Disperse Yellow 3	C.I. 11 855	2832-40-8
Disperse Yellow 9	C.I. 10 375	6373-73-5
Disperse Yellow 39	-	12236-29-2
Disperse Yellow 49	-	54824-37-2
Solvent Yellow 14	C.I. 12055	842-07-9

Other Banned Dyestuffs

Name	Structure Number	CAS-Nr.
Disperse Orange 149	-	85136-74-9
Disperse Yellow 23	C.I. 26 070	6250-23-3
Navy Blue (Blue colorant)	Index number	Component 1:
Component 1: $C_{39}H_{23}ClCrN_7O_{12}S.2Na$	611-070-00-2	118685-33-9
Component 2: $C_{46}H_{30}CrN_{10}O_{20}S_2.3Na$		

Flame Retardants

Name	CAS-Nr.	Abbreviation
Polybrominated biphenyls	various	PBBs
Monobromobiphenyl	2052-07-5	MonoBB
Dibromobiphenyl	57422-77-2	DiBB
Tribromobiphenyl	59080-34-1	TriBB
Tetrabromobiphenyl	60044-24-8	TetraBB
Pentabromo-1,1'-biphenyl	59080-39-6	PentaBB
Hexabromobiphenyl	60044-26-0	HexaBB
Heptabromo-1,1'-biphenyl	88700-06-5	HeptaBB
Octabromobiphenyl	67889-00-3	OctaBB
Nonabromobiphenyl	69278-62-2	NonaBB
Decabromobiphenyl	13654-09-6	DecaBB
Tetrabromodiphenyl ether	40088-47-9; 5436-43-1	tetraBDE
Pentabromodiphenyl ether	32534-81-9	pentaBDE
Hexabromodiphenyl ether	36483-60-0; 68631-49-2; 207122-15-4	hexaDBE
Heptabromodiphenyl ether	446255-22-7; 207122-16-5; 68928-80-3	heptaDBE
Octabromodiphenyl ether	32536-52-0; 337513-72-1	octaBDE
Decabromodiphenyl ether	1163-19-5	decaBDE
Tetrabromobisphenol A	79-94-7	TBBPA
Tetrabromobisphenol A bis(dibromopropyl ether)	21850-44-2	BDDP
Tetrabromophthalate	26040-51-7	TBPH
Tetrabromobenzoate	183658-27-7	TBB
Hexabromocyclododecane	25637-99-4; 3194-55-6	HBCDD
Bis (2,3-dibromopropyl) phosphate	5412-25-9	BIS-BP
Tri-(2,3-dibromopropyl)-phosphate	126-72-7	TRIS
2,2-Bis(bromomethyl)-1,3-propanediol	3296-90-0	BBMP
Boric Acid	10043-35-3; 11113-50-1	HB
Diboron trioxide	1303-86-2	BTO
Disodium tetraborate	1303-96-4; 1330-43-4; 12179-04-3	DTB
Tetraboron disodium heptaoxide, hydrate	12267-73-1	TBHO
Tris(aziridinyl)phosphineoxide	5455-55-1	TEPA
Tri-o-cresyl phosphate	78-30-8	o-TCP
Trixylyl phosphate	25155-23-1	TXP
Tris(2-chloroethyl) phosphate	115-96-8	TCEP
Tris(1,3-dichloro-2-propyl) phosphate	13674-87-8	TDCPP
Tris(2-chloro-1-methylethyl) phosphate	13674-84-5	TCPP
Decachlorobiphenyl	2051-24-3	PCB 209
Short Chain Chlorinated Paraffins C10 to C13	85535-84-8	SCCP
Medium Chain Chlorinated Paraffins C14 to C17	85535-85-9	MCCP

N-Nitrosamine

Name	CAS-Nr.
N-nitrosodimethylamine	62-75-9
N-nitrosodiethylamine	55-18-5
N-nitrosodipropylamine	621-64-7
N-nitrosodibutylamine	924-16-3
N-nitrosomorpholine	59-89-2
N-nitrosopyrrolidine	930-55-2
N-nitrosopiperidine	100-75-4
N-nitroso-N-methylaniline	614-00-6
N-nitroso-N-ethylaniline	612-64-6

Oils

Name
Acenaphthene fractions
Alkaline extracts
Creosote (wash oil)
Creosote (wood)
Creosote oil (wash oil)
Distillates (coal tar)
Distillates (coal tar) upper,
Extract residues (coal)
Heavy anthracene oil
Low temperature coal tar alkaline oil
Naphthalene oils
Tar acids, coal, crude, crude phenols

Organotin Compounds

Name	CAS-Nr.	Abbreviation
Monomethyltin	83221-98-1	MMT
Dimethyltin	23120-99-2	DMT
Trimethyltin	17272-57-0	TMT
Tetraethyltin	597-64-8	TeET
Dipropyltin	2406-60-2	DPT
Tripropyltin	761-44-4	TPT
Monobutyltin	78763-54-9	MBT
Dibutyltin	14488-53-0	DBT
Dibutyltin dichloride	683-18-1	DBTC
Tributyltin	36643-28-4	TBT
Tetrabutyltin	1461-25-2	TeBT
Monooctyltin	15231-57-9	MOT
Dioctyltin	15231-44-4	DOT
Trioctyltin	250252-89-2	TOT
Monophenyltin	2406-68-0	MPhT
Diphenyltin	1011-95-6	DPhT
Triphenyltin	668-34-8	TPhT
Tricyclohexyltin	6056-50-4	TCyHT

Pesticides

Name	CAS-Nr.
2,4,5-T	93-76-5
2,4-D	94-75-7
Acetamiprid	135410-20-7; 160430-64-8
Aldicarb	116-06-3
Aldrin	309-00-2
Azinphos-ethyl	2642-71-9
Azinphos-methyl	86-50-0
Bromophos-ethyl	4824-78-6
Captafol	2425-06-1
Carbaryl	63-25-2
Carbendazim	10605-21-7
Chlorbenzilate	510-15-6
Chlordane	57-74-9
Chlordimeform	6164-98-3
Chlorfenvinphos	470-90-6
Chlorothalonil	1897-45-6
Clothianidin	210880-92-5
Coumaphos	56-72-4
Cyfluthrin	68359-37-5
Cyhalothrin	91465-08-6
Cypermethrin	52315-07-8
DDD	53-19-0, 72-54-8
DDE	3424-82-6, 72-55-9
DDT	789-02-6; 50-29-3
DEF	78-48-8
DTTB	63405-99-2
Deltamethrin	52918-63-5
Diazinon	333-41-5
Dichlorprop	120-36-5
Dichlorophene	97-23-4
Dicofol	115-32-2
Dicrotophos	141-66-2
Dieldrin	60-57-1
Dimethoate	60-51-5
Dinoseb and salts	88-85-7; various
Dinotefuran	165252-70-0
Endosulfan	115-29-7
α- Endosulfan	959-98-8
β- Endosulfan	33213-65-9
Endrin	72-20-8
Esfenvalerate	66230-04-4
Fenvalerate	51630-58-1
Heptachlor	76-44-8

Name	CAS-Nr.
Heptachlorepoxide	1024-57-3; 28044-83-9
Hexachlorobenzene	118-74-1
α– Hexachlorocyclohexane	319-84-6
β– Hexachlorocyclohexane	319-85-7
δ– Hexachlorocyclohexane	319-86-8
Kelevan	4234-79-1
Kepone	143-50-0
Imidacloprid	105827-78-9; 138261-41-3;
Isodrin	465-73-6
Lindane	58-89-9
Malathion	121-75-5
MCPA	94-74-6
MCPB	94-81-5
Mecoprop	93-65-2
Metam-sodium	137-42-8
Methamidophos	10265-92-6
Methoxychlor	72-43-5
Mevinphos	7786-34-7
Mirex	2385-85-5
Monocrotophos	6923-22-4
Nitenpyram	150824-47-8; 120738-89-8
Parathion	56-38-2
Parathion-methyl	298-00-0
Perthan	72-56-0
Phosphamidone	13171-21-6
Profenofos	41198-08-7
Propetamphos	31218-83-4
Quinalphos	13593-03-8
Quintozene	82-68-8
Silafluofen	105024-66-6
Strobane	8001-50-1
Telodrin	297-78-9
Thiacloprid	111988-49-9
Thiamethoxam	153719-23-4
Tolyfluanide	731-27-1
Toxaphene	8001-35-2
Trifluralin	1582-09-8

PFCs

Name	CAS-Nr.	Abbreviation
Perfluorooctane sulfonate and related substances	Various	PFOS
Perfluorooctanesulfonic acid	1763-23-1	PFOS
Perfluorooctane sulfonate K-salt	2795-39-3	PFOS-X
Perfluorooctane sulfonate Li-salt	29457-72-5	PFOS-X
Perfluorooctane sulfonate ammonium salt	29081-56-9	PFOS-X
Bis(2-hydroxyethyl)ammonium perfluorooctane sulfonate	70225-14-8	PFOS-X
Tetraethyl ammonium perfluoroctane sulfonate	56773-42-3	PFOS-X
Didecyldimethyl ammonium perfluorooctane sulfonate	251099-16-8	PFOS-X
Perfluorooctanesulfonamide	754-91-6	PFOSA
N-Methyl-Perfluorooctanesulfonamide	31506-32-8	N-Me-FOSA
N-Ethyl-Perfluorooctanesulfonamide	4151-50-2	N-Et-FOSA
N-Methyl-Perfluorooctanesulfonamidoethanol	24448-09-7	N-Me-FOSE
N-Ethyl-Perfluorooctanesulfonamidoethanol	1691-99-2	N-Et-FOSE
Perfluorooctanesulfonylfluoride	307-35-7	PFOSF
1H,1H,2H,2H-Perfluorohexanesulfonic acid	757124-72-4	4:2 FTS
1H,1H,2H,2H-Perfluorooctanesulfonic acid	27619-97-2	6:2 FTS
1H,1H,2H,2H-Perfluorodecanesulfonic acid	39108-34-4	8:2 FTS
1H,1H,2H,2H-Perfluorododecanesulfonic acid	120226-60-0	10:2 FTS
2,3,3,3-tetrafluoro-2-(heptafluoro propoxy)propionic acid	13252-13-6	HFPO-DA
Perfluoropentanoic acid	2706-90-3	PFPeA
Perfluorohexanoic acid	307-24-4	PFHxA
Perfluoroheptanoic acid	375-85-9	PFHpA
7H-Dodecafluoroheptanoic acid	1546-95-8	7HPFHpA
Perfluorooctanoic acid	335-67-1	PFOA
Perfluoro-3,7-dimethyloctanoic acid	172155-07-6	PF-3,7-DMOA
Perfluorooctanoate ammonium salt	3825-26-1	APFO
Perfluorooctanoate Na-salt	335-95-5	Na-PFOA
Perfluorooctanoate K-salt	2395-00-8	K-PFOA
Perfluorooctanoate Ag-salt	335-93-3	Ag-PFOA
Perfluorooctanoyl fluoride	335-66-0	F-PFO
Methyl perfluorooctanoate	376-27-2	Me-PFOA
Ethyl perfluorooctanoate	3108-24-5	Et-PFOA
Perfluorononanoic acid	375-95-1	PFNA
Perfluorononanoate Na-salt	21049-39-8	PFN
Perfluorononanoate ammonium salt	4149-60-4	APFN
Perfluorodecanoic acid	335-76-2	PFDA
2H,2H-Perfluorodecanoic acid	882489-14-7	H2PFDA
Perfluoroundecanoic acid	2058-94-8	PFUnA
2H,2H,3H,3H-Perfluoroundecanoic acid	34598-33-9	4HPFUnA
Perfluorododecanoic acid	307-55-1	PFDoA
Perfluorotridecanoic acid	72629-94-8	PFTrA
Perfluorotetradecanoic acid	376-06-7	PFTeA
Perfluorobutane sulfonic acid	375-73-5; 59933-66-3	PFBS
Perfluorohexane sulfonic acid	355-46-4	PFHxS
Perfluoroheptane sulfonic acid	375-92-8	PFHpS
Perfluorodecane sulfonic acid	335-77-3	PFDS

Perfluorobutanesulfonate K-salt	29420-49-3	PFBS-K
Perfluorohexanesulfonate Na-salt	82382-12-15	PFHxS-Na
Perfluoroheptanesulfonate Na-salt	68555-66-8	PFHpS-Na
Perfluorodecanesulfonate Na-salt	3830-45-3	PFDS-Na
Perfluorodecanesulfonate K-salt	2806-16-8	PFDS-K
Perfluorodecanesulfonate ammonium salt	3108-42-7	APFDS
1H,1H,2H,2H-Perfluorohexane-1-ol	2043-47-2	4:2 FTOH
1H,1H,2H,2H-Perfluoro-1-octanol	647-42-7	6:2 FTOH
1H,1H,2H,2H-Perfluoro-1-decanol	678-39-7	8:2 FTOH
1H,1H,2H,2H-Perfluorododecane-1-ol	865-86-1	10:2 FTOH
1H,1H,2H,2H-Perfluorooctylacrylate	17527-29-6	6:2 FTA
1H,1H,2H,2H-Perfluorodecylacrylate	27905-45-9	8:2 FTA
1H,1H,2H,2H-Perfluorododecylacrylate	17741-60-5	10:2 FTA
1H,1H,2H,2H-Perfluorooctyl methacrylate	2144-53-8	6:2 FTMA
1H,1H,2H,2H-Perfluorodecyl methacrylate	1996-88-9	8:2 FTMA

Phenols

Name	CAS-Nr.	Abbreviation
Pentachlorophenol	87-86-5	PCP
2,3,5,6-Tetrachlorophenol	935-95-5	TeCP
2,3,4,6-Tetrachlorophenol	58-90-2	TeCP
2,3,4,5-Tetrachlorophenol	4901-51-3	TeCP
2,4,6-Trichlorophenol	88-06-2	TriCP
2,4,5-Trichlorophenol	95-95-4	TriCP
2,3,4-Trichlorophenol	15950-66-0	TriCP
2,3,5-Trichlorophenol	933-78-8	TriCP
3,4,5-Trichlorophenol	609-19-8	TriCP
2,3,6-Trichlorophenol	933-75-5	TriCP
2,3-Dichlorophenol	576-24-9	DCP
2,4-Dichlorophenol	120-83-2	DCP
2,5-Dichlorophenol	583-78-8	DCP
2,6-Dichlorophenol	87-65-0	DCP
3,4-Dichlorophenol	95-77-2	DCP
3,5-Dichlorophenol	591-35-5	DCP
2-Chlorophenol	95-57-8	MCP
3-Chlorophenol	108-43-0	MCP
4-Chlorophenol	106-48-9	MCP
Orthophenylphenol	90-43-7	OPP
Triclosan	3380-34-5	

Phthalates

Name	CAS-Nr.	Abbreviation
Bis(2-ethylhexyl)phthalate	117-81-7	DEHP
Dibutylphthalate	84-74-2	DBP
Di-iso-butylphthalate	84-69-5	DIBP
Benzylbutylphthalate	85-68-7	BBP
Di-n-octylphthalate	117-84-0	DNOP
Di-iso-nonylphthalate	28553-12-0; 68515-48-0	DINP
Di-iso-decylphthalate	26761-40-0; 68515-49-1	DIDP
Dimethylphthalate	131-11-3	DMP
Diethylphthalate	84-66-2	DEP
Di-n-propylphthalate	131-16-8	DPrP
Dipentylphthalate, branched and linear	131-18-0; 605-50-5; 776297-69-9; 84777-06-0	DPP
Dihexylphthalate, branched and linear	68515-50-4; 84-75-3; 71850-09-4	DHxP
Dicyclohexylphthalate	84-61-7	DCHP
Di-iso-octylphthalate	27554-26-3	DIOP
Di-n-nonylphthalate	84-76-4	DNP
Bis(2-methoxyethyl) phthalate	117-82-8	DMEP
Di-C6-8-branched alkylphthalates, C7-rich	71888-89-6	DIHP
Di-C7-11-branched and linear alkylphthalates	68515-42-4	DHNUP
Di-C6-10 alkylphthalates	68515-51-5	
Di-decyl/hexyl/octyl (mixed) phthalates	68648-93-1	

Isocianati / ADCA

Name	CAS-Nr.	Abbreviation
2,2’-Methylenediphenyl diisocyanate	2536-05-2	2,2'-MDI
2,4'-Methylenebis(phenyl isocyanate)	5873-54-1	2,4'-MDI
4,4’-Methylenebis(phenyl isocyanate)	101-68-8	4,4'-MDI
4,4'-Methylendicyclohexyl diisocyanate	5124-30-1	4,4'-HMDI
2,6-Diisopropylphenyl isocyanate	28178-42-9	
Hexamethylene diisocyanate	822-06-0	HMDI
1,6-hexamethylene diisocyanate trimer	28182-81-2	
1,6-hexamethylene diisocyanate biuret	4035-89-6	
Isophorone diisocyanate	4098-71-9	IPDI
Napthylene-1,5-diisocyanate	3173-72-6	1,5-NDI
Phenylisocyanate	103-71-9	
Tetramethylxylene diisocyanate	2778-42-9	TMXDI
Toluene-2,4-diisocyanate	584-84-9	2,4-TDI
Toluene-2,6-diisocyanate	91-08-7	2,6-TDI
Toluene-2,4/2,6 -diisocyanate mixture	26471-62-5	
Azodicarboxamide	123-77-3	ADCA

Solvents

Name	CAS-Nr.
Dichloromethane	75-09-2
Trichloromethane	67-66-3
1,2-Dichloroethane	107-06-2
1,1,1-Trichloroethane	71-55-6
1,1,2-Trichloroethane	79-00-5
1,1,1,2-Tetrachloroethane	630-20-6
1,1,2,2-Tetrachloroethane	79-34-5
Pentachloroethane	76-01-7
Hexachloroethane	67-72-1
1,1-Dichloroethylene	75-35-4
Trichloroethylene	79-01-6
Tetrachloroethylene	127-18-4
1,2,3-trichloropropane	96-18-4
Carbon tetrachloride	56-23-5
Benzyl chloride	100-44-7
Nitrobenzene	98-95-3
Formamide	75-12-7
N,N-Dimethylformamide	68-12-2
N-methylacetamide	79-16-3
N,N-Dimethylacetamide	127-19-5
1-Methyl-2-pyrrolidinone	872-50-4
Benzene	71-43-2
Toluene	108-88-3
Xylene	95-47-6; 108-38-3; 106-42-3; 1330-20-7
Octamethylcyclotetrasiloxane (D4)	556-67-2
Decamethylcyclopentasiloxane (D5)	541-02-6
Dodecamethylcyclohexasiloxane (D6)	540-97-6
2-(2-methoxyethoxy)-ethanol	111-77-3

PAHs

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

REACH and SVHC

All suppliers must regularly visit the ECHA (European Chemical Agency) web page and must always be up-to-date about the REACH Regulation (EC 1907/2006) requirements, in particular must check the SVHC (Substances of Very High Concern) list updated regularly.

ECHA homepage: http://echa.europa.eu

Besides respecting this Technical Safety Specifications, suppliers must immediately inform Benetton Group whenever any SVHC exceeds the 0.1% w/w (1000 ppm) of a product. They must replace the SVHC with nonhazardous substitutes in compliance with the Regulation. Benetton Group doesn't accept products containing SVHC's over 0.1% w/w.