






PHYSICAL REQUIREMENTS FOR TEXTILES, LEATHER AND FUR									
TEST PARAMETER	TESTMETHOD		WO (+Mix) SE (+Mix) CV (+Mix)	CO (+Mix)	PES (+Mix) PA (+Mix)	LI	Denim leather	lining	real fur
<b>color fastness</b>									
color fastness to ironing	DIN EN ISO 105-X11	color change	4-5	4-5	4-5	3-4	3-4	4	4-5
color fastness to washing	DIN EN ISO 105-C06	color change	4	4	4	3-4	3-4	3-4	4
		staining	4-5	4-5	4-5	4-5	3-4	3-4	4-5
color fastness to dry-cleaning	DIN EN ISO 105-D01	color change	4	4	4	4	3-4	4	4
		staining	4-5	4-5	4-5	4-5	3-4	4	4-5
color fastness to rubbing dry	DIN EN ISO 105-X12	staining	4	4	4	4	3	4	4
color fastness to rubbing wet	DIN EN ISO 105-X12	staining	3-4	4	4	3-4	2	4	3-4
color fastness to light	DIN EN ISO 105-B02	color change	4	4	4	4	4	4	4
color fastness to perspiration acid/alkaline	DIN EN ISO 105-E04	color change	4	4	4	4	4	4	4
		staining	4-5	4-5	4-5	4-5	4-5	4-5	4-5
color fastness to water	DIN EN ISO 105-E01	color change	4	4	4	4	4	4	4
		staining	4-5	4-5	4-5	4-5	4-5	4-5	4-5
color fastness to sublimation	DIN 54056	color change	4-5	4-5	4-5	4-5	4-5	4-5	4-5
		staining	4-5	4-5	4-5	4-5	4-5	4-5	4-5
color fastness to saliva	DIN 53160-1	staining	4-5	4-5	4-5	4-5	4-5	4-5	4-5
<b>dimensional stability wovens</b>									
ironing	ISO 3005	warp + weft	-3%	-3%	-3%	-3%	-3%	-2%	not applicable
washing 30°C	DIN ISO 6330	warp + weft	-3%	-3%	-3%	-3%	-3%	-3%	not applicable
dry-cleaning	commercial	warp + weft	-3%	-3%	-3%	-3%	-3%	-1,50%	not applicable
<b>dimensional stability knits</b>									
dimensional change for fabric: ironing	ISO 3005	wale/ course	-6%	-6%	-6%	not applicable	not applicable	not applicable	not applicable
dimensional change for ready garments: ironing	commercial	wale/ course	-4%	-4%	-4%	not applicable	not applicable	not applicable	not applicable
dimensional change for fabric: washing 30°C	DIN ISO 6330	wale/ course	-6%	-6%	-6%	not applicable	not applicable	not applicable	not applicable
dimensional change for ready garments: washing 30°C	commercial	wale/ course	-4%	-4%	-4%	not applicable	not applicable	not applicable	not applicable
dimensional change for ready garments: dry cleaning	commercial	wale/ course	-4%	-4%	-4%	not applicable	not applicable	not applicable	not applicable

## Quality requirements for textiles; leather and trimmings

mechanical and physical characteristics									
TEST PARAMETER	TESTMETHOD		trouser + skirt	blazer + coat	outdoor	blouse + dress	knits	shirt	lining
pillling (Martindale)	EN ISO 12945-2		2.000T grade: 3-4	2.000T grade: 3-5	2.000T grade: 4	2.000T grade: 3-4	1.000T grade: 2-3	2.000T grade: 3	2.000T grade: 4
abrasion resistance (Martindale 9kPa)	EN ISO 12947-2		18.000T	18.000T	18.000T	10.000T	8.000T	8.000T	10.000T
tensile strength: strip	EN ISO 13934-1		23daN	20daN	25daN	16daN	not applicable	not applicable	22daN
tensile strength: grab	EN ISO 13934-2		18daN	15daN	15daN	13daN	not applicable	not applicable	15daN
tear strength: Elmendorf	EN ISO 13937-1		1,6daN	1,2daN	1,2daN	1,0daN	not applicable	not applicable	1,0daN
seam slippage at 4mm	EN ISO 13936-1		16daN	14daN	14daN	12daN	not applicable	not applicable	12daN
tendency to crease	DIN EN 22313		110-120°	110-120°	110-120°	110-120°	not applicable	not applicable	not applicable
crease recovery	ISO 9867		4	4	4	4	not applicable	not applicable	not applicable
Elasticity	EN ISO 14704-1	load 3daN, 5 cycles elongation recovery time : 30min.	stretch 25% recovery 95%	stretch 25% recovery 95%	stretch 25% recovery 95%	stretch 25% recovery 95%	not applicable	not applicable	not applicable
Spray	DIN EN 24920	before wash	4	4	4	4	not applicable	not applicable	4
		after 3 washing	3	3	3	3	not applicable	not applicable	3
bursting strength	ISO 2960		110kPa	110kPa	110kPa	110kPa	not applicable	not applicable	200kPa
electrostatic behaviour	EN 1149-1		10 <sup>10</sup> Ω	10 <sup>10</sup> Ω	10 <sup>10</sup> Ω	10 <sup>10</sup> Ω	not applicable	not applicable	10 <sup>10</sup> Ω
seam twisting	BS 2819		max. 1,5%	max. 1,5%	max. 1,5%	max. 1,5%	max. 3%	max. 3%	max. 1,5%

## Quality requirements for textiles; leather and trimmings

other test parameters			
smell	sensory		no unpleasant, pestering smell
optic	visual		optic (surface, color, touch, printing ) may not be influenced after following care-instructions
weight differences	gravimetric		max + / - 5%
color; metamerism	visual	D65; TL84	color will be judged by comparing confirmed standard to 1st delivery; there is no metamerism allowed; color shades have to be within the same range <b>annotation:</b> colorimetric measurement is not decision relevant, colour-assessment of Betty Barclay group is the determining factor
flammability	DIN EN ISO 6941 DIN EN 1103		has to meet the requirements
surface flash	DIN EN ISO 6941 DIN EN 1103		<90mm/s no surface flash
resistance of trimmings and accessoires	<p>all trimmings and accessoires have to meet the following care-symbols</p> <p>      </p> <p>no corrosion or any other kind of optical change may appear due to transport and storage</p>		

LIMITS OF HARMFUL SUBSTANCES FOR TEXTILES, LEATHER, FUR, TRIMMINGS AND ACCESSORIES		
TEST PARAMETER	TESTMETHOD	MINIMUM REQUIREMENT
pH-value	ISO 4045	leather: 3,5-9,0
	ISO 3071	other materials: 4,0-7,5
formaldehyde	DIN EN ISO 14184 (textile)	<75ppm
	DIN EN ISO17226 (leather)	
pesticides (list of substances - Öko-Tex 100)	solvent extraction and filtration MS/ GC-ECD / GC-ELCD	GC- sum incl. PCP / TeCP < 1,0ppm
chlorinated phenols (list of substances - Öko-Tex 100)	DIN EN ISO 17070	PCP < 0,5ppm
		sum TeCP < 0,5ppm
		OPP < 100ppm
phthalates (list of substances- Öko-Tex 100)	DIN EN 15777	sum < 1000ppm
polycyclic aromatic hydrocarbons (PAH)	DIN CEN ISO/ TS 16190	benzo(a)pyrene < 1,0ppm
		of 18 PAH < 10ppm sum
organotin compounds	DIN EN ISO 17353 DIN EN ISO/TS 16179	dibutyltin (DBT) < 2,0ppm
		tributyltin (TBT) < 1,0ppm
		triphenyltin (TPhT) < 1,0ppm
		dioctyltin (DOT) < 2,0ppm
dimethylfumarate	Inhouse-method	not detectable
extractable heavy metals	DIN EN ISO 105 E04 DIN EN ISO 11885 DIN EN ISO 17072-1 DIN EN 16711-2 E DIN 54233-3 E DIN 54233-4	chromium (Cr) < 2,0ppm
		arsenic (As) < 1,0ppm
		lead (Pb) < 1,0ppm
		cadmium (Cd) < 0,1ppm
		cobalt (Co) < 4,0ppm
		nickel (Ni) < 4,0ppm
		mercury (Hg) < 0,02ppm
		copper (Cu) < 50ppm
		antimony (Sb) < 30ppm
heavy metals total content	DIN EN 16711-1	cadmium (Cd) < 100ppm
		lead (Pb) < 90ppm
chromium VI for leather, after Aging test	DIN EN ISO 17075	not detectable

## Quality requirements for textiles; leather and trimmings

release of nickel		DIN EN 12472, DIN EN 1811	0,28µg/cm <sup>2</sup> /week
chlorinated benzenes und toluenes		DIN 54232	not detectable
cleavable arylamines stuff of MAK III category 1+2	dye	DIN EN 14362-1 (natural fibres) DIN EN 14362-1 (polyester) DIN EN 17234-1 (leather) DIN EN 14362-3 (p-aminoazobenzene in natural fibres/polyester) DIN EN 17234-2 (p-aminoazobenzene in leather)	20ppm
carcinogenic + allergenic dye stuff of substances. Öko-Tex 100)	(list	DIN 54231	50ppm
other restricted dye stuff of substances. Öko-Tex 100)	(list	DIN 54231	50ppm
alkylphenols and -ethoxylates		LC/MS	OP, NP < 0,01%
			OPEOs. NPEOs < 500ppm
biological active products of substances to be used- Öko-Tex 100 )	(list	Inhouse method	not detectable
Perfluorooctanoic acid and related substances (PFOS)		Inhouse method	PFOS < 1µg/m2
			PFOA < 0,1ppm
flame retardant products		GC/MS	not detectable
short chained chlorinated paraffins C10-C13 (SCCP)	C10-	Inhouse method	< 0,1%
<b>REACH</b>			
In case of contents of >0,1% per article weight, substances of very high concern (SVHC) of REACH candidate list, the supplier is legally obligated to transmit the information (regulation EG 1907/2006 Art. 33 and annex XIV). SVHC-substances, see <a href="http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp">http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp</a> .			
REACH SVHC list		SVHC Screening	each SVHC < 0,1weight-%
<b>PACKAGING</b>			
sum (lead, cadmium, mercury, chromium VI)		total digestion, determination by ICP-OES according to DIN EN ISO 11885	< 100ppm
dimethylfumarate in silicone gel		Inhouse method	not detectable
cobalt chloride in silicone gel		Inhouse method	not detectable