



**EKOTEKS**

**EKOTEKS LABORATUVAR ve GÖZETİM  
HİZMETLERİ A.Ş.**

Esenyurt Firuzköy Bulvarı No:29 34325 Avcılar  
İstanbul/ TÜRKİYE



Test  
TS EN ISO/IEC 17025  
AB-0583-T

**TEST REPORT**  
*DENEY RAPORU*

AB-0583-T
19044101
11-19

<b>Customer name:</b>	TÜV AUSTRIA TURK
<b>Address:</b>	KOŞUYOLU MAH. KATİP SALİH SOK. NO:69 PK:34718 KADIKÖY/ İSTANBUL
<b>Buyer name:</b>	-
<b>Contact Person:</b>	DEMA HOURANI
<b>Order No:</b>	TEST 19094
<b>Article No:</b>	-
<b>Name and identity of test item:</b>	One sample of green woven towel. (Claimed to be; % 100 COTTON / Colour code: MINT (Manufactuer: AKTEKS TEKSTİL))
<b>The date of receipt of test item:</b>	21.11.2019
<b>Re-submitted/re-confirmation date:</b>	-
<b>Date of test:</b>	21.11.2019-28.11.2019
<b>Remarks:</b>	-
<b>Sampling:</b>	The results given in this report belong to the received sample by vendor.
<b>End-Use:</b>	Towel
<b>Care Label:</b>	-

**Number of pages of the report:** 16

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<b>Seal</b>	<b>Date</b>	<b>Customer Representative</b>	<b>Head of Testing Laboratory</b>
	28.11.2019	Servin YURTSEVEN	Sevim A. RAZAK 28.11.2019

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REQUIRED TESTS	RESULT	COMMENTS
<b>ECOLOGICAL TESTS</b>		
Forbidden Arylamines In Dyestuff	P	
Formaldehyde	P	
pH	P	
Carcinogenic& Allergenic Dispers Dyestuffs	P	
Pesticides	P	
Chlorinated Organic Carriers	P	
Heavy Metal	P	
Chlorphenols	P	
Phosphorus Flame Reterdants/ ISO 17881-2:2016 <sup>(*)</sup> (1)	-	
Brominated Flame Reterdants/ ISO 17881-1:2016 <sup>(*)</sup> (1)	-	
Tin Organic Compounds	P	
OPP (Ortho-Phenylphenol)	P	
PAH	P	
<b>COLOUR FASTNESS TESTS</b>		
Colour Fastness to Water <sup>(1)</sup>	-	
Colour Fastness to Rubbing <sup>(1)</sup>	-	
Colour Fastness to Washing <sup>(1)</sup>	-	
Colour Fastness to Perspiration <sup>(1)</sup>	-	
Colour Fastness to Saliva <sup>(1)</sup>	-	
P: Pass F: Fail R: Refer to retailer technologist. The test results were evaluated according to the eco textile limit values. (1)No requirement was given.		

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lied by a coverage factor k=2, providing a level of confidence of approximately 95 %. Tests marked (\*) in this report are not included in the accreditation schedule.



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## TEST RESULTS

### FORBIDDEN AROMATIC ARYLAMINES-MAK III GROUP A1&A2 CATEGORY

Corresponding to the Ordinance on Commodities (Bedarfsgegenständeverordnung) be in force respectively the directive 2002/61/EEC the use of certain azo colorants is banned, which can release by reductive cleavage of their azo group(s) one or more of certain listed aromatic and cancerogenic amines.

Arylamines of class MAK III A1/ A2 are determined and quantified using a Gas Chromatography / Mass Selective Detector (GC/MSD)

List of arylamines, that are not allowed to be split off from dyes under reductive conditions ;

Nr	Substances	CAS No	Index No	EC number
	<b>MAK III A1</b>			
01	4-Aminobiphenyl	92-67-1	612-072-00-6	202-177-1
02	Benzidine	92-87-5	612-042-00-2	202-199-1
03	4-Chloro-o-toluidine	95-69-2		202-441-6
04	2-Naphthylamine ( -Naphthylamine)	91-59-8	612-022-00-3	202-080-4
	<b>MAK III A2</b>			
05 *	o-Aminoazotoluol (4-amino-2,3-dimethylazobenzene)	97-56-3	611-006-00-3	202-591-2
06	p-Chloroaniline (4-chloroaniline)	106-47-8	612-137-00-9	203-401-0
07	2,4-Diaminoanisole (4-Methoxy-m-phenylenediamine)	615-05-4		210-406-1
08	4,4'-Diaminodiphenylmethane (4,4'-methylenedianiline)	101-77-9	612-051-00-1	202-974-4
09	3,3'-Dichlorbenzidine (3,3'-dichlorobiphenyl-4,4'-xylenediamine)	91-94-1	612-068-00-4	202-109-0
10	3,3'-Dimethoxybenzidine (o-Dianisidine)	119-90-4	612-036-00-X	204-355-4
11	3,3'-Dimethylbenzidine (o-Tolidine) (4,4'-bi-o-toluidine)	119-93-7	612-041-00-7	204-358-0
12	3,3'-Dimethyl-4,4'-diaminodiphenylmethane (4,4'-methylene di-o-toluidine)	838-88-0	612-085-00-7	212-658-8
13	4,4'-Methylene-bis-(2-chloro-aniline) (2,2'-dichloro-4,4'-methylenedianiline)	101-14-4	612-078-00-9	202-918-9
14 *	2-Amino-4-nitrotoluene (5-nitro-o-toluidine)	99-55-8		202-765-8
15	4,4'-Oxydianiline (4,4'-Diaminodiphenylether)	101-80-4		202-977-0
16	4,4'-Thiodianiline (4,4'-Diaminodiphenylsulfide)	139-65-1		205-370-9
17	o-Toluidine (2-aminotoluene)	95-53-4	612-091-00-X	202-429-0
18	4-Methyl-1,3-phenylenediamin (4-methyl-m-phenylenediamin) (2,4-Toluenediamine)	95-80-7	612-099-00-3	202-453-1
19	2,4,5-Trimethylaniline	137-17-7		205-282-0
20	o-Anisidine (2-Methoxyaniline)	90-04-0	612-035-00-4	201-963-1
21	2-Methoxy-5-methylaniline (p-Cresidine) (6-methoxy-m-toluidine)	120-71-8		204-419-1
22**	4-Amino Azobenzene	60-09-3	611-008-00-4	200-453-6
23***	2,4-Xylidine	95-68-1		
24***	2,6-Xylidine	87-62-7		
25****	Aniline	62-53-3		

\* The CAS-numbers 97-56-3 (No. 5) and 99-55-8 (No. 14) are detected further reduced to CAS-numbers 95-53-4 (No. 17) and 95-80-7 (No. 18).

\*\* Azo colorants that are able to form 4-aminoazobenzene generate, under the condition of this method, aniline (CAS-number 62-53-3) and 1,4-phenylenediamine (CAS – number 106-50-3). Due to detection limits, only aniline may be detected. If aniline is detected above 5 mg/kg, then the presence of these colorants should be tested by ISO 14362-3 (for leathers ISO 17234-2).

\*\*\* Not regulated by law

\*\*\*\* The sum of cleavable aniline and of possibly also as chemical residue present of aniline (The aniline is located in the "other arylamine" group of Oeko-tex-100:2018)

Note: In case the sample was a blend of coloured synthetic material with further coloured fibers several test methods were carried out if necessary.

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Component Name	Test Method	Forbidden Arylamines in Dyestuff Results	Conclusion
Green main	DIN EN ISO 14362-1:2017 (without extraction)	ND <sup>(1)</sup>	Pass

**Max. limit specified by eco-textile requirement=20 mg/kg (individual).**

**The sum of cleavable aniline and of possibly also as chemical residue present of aniline has to be also < 100 mg/kg according to eco textile limit values.**

### Interpretation:

**N.D. <sup>(1)</sup> : Not detected according to the analysis as carried out, azo colourants banned under the Ordinance on Commodities were not detected in the article submitted.**

**LS. : Lack of sample.**

**NA : Not applicable.**

**"<" = less than**

**0 = Test not necessary (commodity not coloured or printed)**

**mg/kg = milligram per kilogram**

**ppm = part per million (mg/kg)**

**with extraction : Extraction method was applied.**

**without extraction : Extraction method was not applied.**

**Note : If an arylamine is listed in the test table, this means; The analytical result suggest that the commodity submitted has been manufactured or treated using azo colourant(s) which can release one or more of certain listed amines by cleavage of their azo group(s).**

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## TEST RESULTS

<b>FORMALDEHYDE; ; ISO 14184-1:2011</b>			
A weighed fabric specimen is extracted with distilled water and the amount of formaldehyde released in the water is determined colorimetical with UV-VIS spectrophotometer at the wavelength of 415nm.			
		<b><u>RESULT</u></b>	<b><u>REQUIREMENT</u></b>
		N.D. <sup>(1)</sup>	<75 ppm

N.D <sup>(1)</sup>: Not detected (< 20mg/kg)

<b>pH; ISO 3071:2005</b>			
Place the sample and 100ml distilled water into flask and shake it mechanically for 2 hour. (±5min) Decant the extract, then the pH value of the aqueous extract of the textile is measured using pH meter at ambient temperature. (Distilled water's pH: 7,0 Temperature: 23.4 °C±1)			
		<b><u>RESULT</u></b>	<b><u>REQUIREMENT</u></b>
		7.0	4.0-7.5

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**TEST RESULTS**

**CARCINOGENIC&ALLERGENIC DYSTUFFS; DIN 54231:2005**

Extraction at 70°C in methanol. Clean up by filtration and detection by LC-MSMS.

<b>Carcinogenic Dyestuffs</b>	<b>Cas.No</b>	<b>RESULT</b>	<b>REQUIREMENT</b>
Acid Red 26	3761-53-3	N/D <sup>(1)</sup>	< 50.0 mg/kg
Basic Blue 26 (Victoria Blue)	2580-56-5	N/D <sup>(1)</sup>	< 50.0 mg/kg
Basic Red 9	569-61-9	N/D <sup>(1)</sup>	< 50.0 mg/kg
Basic Violet 3	548-62-9	N/D <sup>(1)</sup>	< 50.0 mg/kg
Basic Violet 14	632-99-5	N/D <sup>(1)</sup>	< 50.0 mg/kg
Direct Black 38	1937-37-7	N/D <sup>(1)</sup>	< 50.0 mg/kg
Direct Blue 6	2602-46-2	N/D <sup>(1)</sup>	< 50.0 mg/kg
Direct Red 28	573-58-0	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Blue 1 (*)	2475-45-8	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Orange 11	82-28-0	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Yellow 3 (*)	2832-40-8	N/D <sup>(1)</sup>	< 50.0 mg/kg
<b>Allergenic Dyestuffs</b>			
Disperse Blue 1 (*)	2475-45-8	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Blue 3	2475-46-9	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Blue 7	3179-90-6	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Blue 26	3860-63-7	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Blue 35	12222-75-2	N/D <sup>(1)</sup>	< 50.0 mg/kg
Dispers Blue 102	12222-97-8	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Blue 106	12223-01-7	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Blue 124	61951-51-7	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Brown 1	23355-64-8	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Orange 1	2581-69-3	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Orange 3	730-40-5	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Orange 37/76	13301-61-6	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Red 1	2872-52-8	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Red 11	2872-48-2	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Red 17	3179-89-3	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Yellow 1	119-15-3	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Yellow 3 (*)	2832-40-8	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Yellow 9	6373-73-5	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Yellow 39	12236-29-2	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Yellow 49	54824-37-2 / 6858-49-7	N/D <sup>(1)</sup>	< 50.0 mg/kg
<b>Other Banned Dyestuffs</b>			
Dispers Orange 149	85136-74-9	N/D <sup>(1)</sup>	< 50.0 mg/kg
Disperse Yellow 23	6250-23-3	N/D <sup>(1)</sup>	< 50.0 mg/kg
Basic Green 4 (chloride)	569-64-2	N/D <sup>(1)</sup>	< 50.0 mg/kg
Navy Blue	118685-33-9	N/D <sup>(1)</sup>	N/D <sup>(1)</sup>

<sup>(1)</sup> N.D: Not detected

(\*) : These substances are in both category of the Allergen and Carcinogenic dyestuffs.

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## TEST RESULTS

### PESTICIDES; EKOTEKS 13(\*) (in ref to EPA 8270C, 3545, 1618)

<sup>(1)</sup>Sample extraction in acetone for 15 min ultrasonic bath at room temperature.

After re-concentration and derivatisation the extract is analyzed by GC-MSD. Tolerance  $\pm$  10%

<sup>(2)</sup>Extraction at 100° C in acetone for 60 min. re-concentration by change of organic solvent and detection by GC-MSD. Tolerance  $\pm$  10%

Standard Name	Cas No.	RESULT	REQUIREMENT
2,4,5-T	93-76-5	N.D. <sup>(1)</sup>	< 1.0 mg/kg
2,4-D	94-75-7	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Azinophosmethyl	86-50-0	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Azinophosethyl	2642-71-9	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Aldrin	309-00-2	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Bromophos-ethyl	4824-78-6	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Captafol	2425-06-1	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Carbaryl (1-Naphtol)	63-25-2	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Chlordane	57-74-9	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Chlordimeform	1970-95-9	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Chlorfenvinphos	470-90-6	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Coumaphos	56-72-4	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Cyfluthrin	68359-37-5	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Cyhalothrin	91465-08-6	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Cypermethrin	52315-07-8	N.D. <sup>(1)</sup>	< 1.0 mg/kg
DEF	-	N.D. <sup>(1)</sup>	< 1.0 mg/kg
p,p'-DDD	53-19-0	N.D. <sup>(1)</sup>	< 1.0 mg/kg
o,p'-DDT	789-02-6	N.D. <sup>(1)</sup>	< 1.0 mg/kg
p,p'-DDT	50-29-3	N.D. <sup>(1)</sup>	< 1.0 mg/kg
o,p'-DDD	72-54-8	N.D. <sup>(1)</sup>	< 1.0 mg/kg
o,p'-DDE	3424-82-6	N.D. <sup>(1)</sup>	< 1.0 mg/kg
p,p'-DDE	72-55-9	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Deltamethrin	52918-63-5	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Diazinon	333-41-5	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Dichlorprop	120-36-2	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Dicrotophos	141-66-2	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Dieldrin	60-57-1	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Dimethoate	60-51-5	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Dinoseb and salts	88-85-7	N.D. <sup>(1)</sup>	< 1.0 mg/kg
$\alpha$ -Endosulfan (I)	959-98-8	N.D. <sup>(1)</sup>	< 1.0 mg/kg
$\beta$ - Endosulfan (II)	33213-65-9	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Endrin	72-20-8	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Esfenvalerate	66230-04-4	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Heptachlor	76-44-8	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Heptachlor-endo-epoxid	28044-83-9	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Heptachlor-exo-epoxid	1024-57-3	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Hexachlorbenzol	118-74-1	N.D. <sup>(1)</sup>	< 1.0 mg/kg

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## TEST RESULTS

<b>CHLORINATED ORGANIC CARRIERS; DIN 54232:2010</b>			
Sample is extracted by Dichloromethane. Clean up by filtration and detected by GC/MS			
	<b>RESULT</b>		<b>REQUIREMENT</b>
Total Monochlortoluene	N.D. <sup>(1)</sup>		< 1.0 mg/kg
Total Dichlortoluene	N.D. <sup>(1)</sup>		< 1.0 mg/kg
Total Trichlortoluene	N.D. <sup>(1)</sup>		< 1.0 mg/kg
Total Tetrchlortoluene	N.D. <sup>(1)</sup>		< 1.0 mg/kg
Pentachlortoluene	N.D. <sup>(1)</sup>		< 1.0 mg/kg
Total Dichlorbenzene	N.D. <sup>(1)</sup>		< 1.0 mg/kg
Total Trichlorbenzene	N.D. <sup>(1)</sup>		< 1.0 mg/kg
Total Tetrchlorbenzene	N.D. <sup>(1)</sup>		< 1.0 mg/kg
Pentachlorbenzene	N.D. <sup>(1)</sup>		< 1.0 mg/kg
Hexachlorbenzene	N.D. <sup>(1)</sup>		< 1.0 mg/kg
Chlorobenzene	N.D. <sup>(1)</sup>		< 1.0 mg/kg
<b>Total</b>	N.D. <sup>(1)</sup>		< 1.0 mg/kg

N.D.<sup>(1)</sup>: Not detected

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## TEST RESULTS

### HEAVY METAL; DIN 54233-3:2010

Extractable heavy metals are extracted at 40°C in artificial acidic perspiration solution (pH=5.5). and determined using ICP-MS. (DIN 38406-E29 and ISO 54233-3)

	<b><u>RESULT</u></b>	<b><u>REQUIREMENT</u></b>
Lead (Pb)	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Arsenic (As)	N.D. <sup>(1)</sup>	< 1.0 mg/kg
Cadmium (Cd)	N.D. <sup>(1)</sup>	< 0.1 mg/kg
Mercury (Hg)	N.D. <sup>(1)</sup>	< 0.02 mg/kg
Cobalt (Co)	N.D. <sup>(1)</sup>	< 4.0 mg/kg
Nickel (Ni)	N.D. <sup>(1)</sup>	< 4.0 mg/kg
Total Chromium (Cr)	N.D. <sup>(1)</sup>	< 2.0 mg/kg
Chromium VI (Cr VI)	N.D. <sup>(1)</sup>	< 0.5 mg/kg <sup>(2)</sup>
Copper (Cu)	N.D. <sup>(1)</sup>	< 50.0 mg/kg
Antimony (Sb)	N.D. <sup>(1)</sup>	< 30.0 mg/kg

N.D <sup>(1)</sup>: Not detected

<sup>(2)</sup>Quantification limit: < 0.5 mg/kg for textiles

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### CHLORPHENOLS; 35 LMBG 82.02-8:2001

Textile sample is extracted with KOH and determined using a GC/MS.

In reference to DIN 53313.

	<b><u>RESULT</u></b>	<b><u>REQUIREMENT</u></b>
Total Trichlorphenol	N.D. <sup>(1)</sup>	<2.0 mg/kg
Total Tetrachlorphenol	N.D. <sup>(1)</sup>	<0.5 mg/kg
Total Dichlorophenol	N.D. <sup>(1)</sup>	<3.0 mg/kg
Total Monochlorophenol	N.D. <sup>(1)</sup>	<3.0 mg/kg
Pentachlorphenol	N.D. <sup>(1)</sup>	<0.5 mg/kg

<b>Chlorphenol Standards</b>	<b>CAS No.</b>	<b>Result</b>
2,3,4-Trichlorphenol	15950-66-0	N.D. <sup>(1)</sup>
2,3,5-Trichlorphenol	933-78-8	N.D. <sup>(1)</sup>
2,3,6-Trichlorphenol	933-75-5	N.D. <sup>(1)</sup>
2,4,5-Trichlorphenol	95-95-4	N.D. <sup>(1)</sup>
2,4,6-Trichlorphenol	88-06-2	N.D. <sup>(1)</sup>
3,4,5-Trichlorphenol	609-19-8	N.D. <sup>(1)</sup>
2,3,4,5-Tetrachlorphenol	4901-51-3	N.D. <sup>(1)</sup>
2,3,4,6-Tetrachlorphenol	58-90-2	N.D. <sup>(1)</sup>
2,3,5,6-Tetrachlorphenol	935-95-5	N.D. <sup>(1)</sup>
2,3-Dichlorophenol	576-24-9	N.D. <sup>(1)</sup>
2,4-Dichlorophenol	120-83-2	N.D. <sup>(1)</sup>
2,5-Dichlorophenol	583-78-8	N.D. <sup>(1)</sup>
2,6-Dichlorophenol	87-65-0	N.D. <sup>(1)</sup>
3,4-Dichlorophenol	95-77-2	N.D. <sup>(1)</sup>
3,5-Dichlorophenol	591-35-5	N.D. <sup>(1)</sup>
2-Chlorophenol	95-57-8	N.D. <sup>(1)</sup>
3-Chlorophenol	108-43-0	N.D. <sup>(1)</sup>
4-Chlorophenol	106-48-9	N.D. <sup>(1)</sup>
12C <sub>6</sub> -Pentachlorphenol	87-86-5	N.D. <sup>(1)</sup>

N.D. <sup>(1)</sup>: Not detected

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## TEST RESULTS

### PHOSPHORUS FLAME RETERDANTS ; ISO 17881-2:2016<sup>(\*)</sup>

Sample is dissolved in acetone and the extract is analyzed using LC/MSMS.

<b><u>FLAME RETERDANTS</u></b>	<b><u>CAS NO</u></b>		<b><u>RESULT</u></b>
Tris (2-3-dibromopropyl) phosphate (TRIS)	126-72-7		< 10 mg/kg
Tris (1-aziridinyl) phosphineoxide (TEPA)	545-55-1		< 10 mg/kg
Tris (2-chloroethyl) phosphate (TCEP)	115-96-8		< 10 mg/kg

N.D <sup>(1)</sup> : Not Detected

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## TEST RESULTS

### BROMINATED FLAME RETARDANTS; ISO 17881-1:2016<sup>(\*)</sup>

Sample is dissolved in toluen and the extract is analyzed using GC-MS.

<b><u>FLAME RETARDANTS</u></b>	<b><u>CAS NO</u></b>	<b><u>RESULT</u></b>
Monobromobiphenyl (MonoBB)	2052-07-5	ND <sup>(1)</sup>
Dibromobiphenyl (DiBB)	57422-77-2	ND <sup>(1)</sup>
Tribromobiphenyl (TriBB)	59080-34-1	ND <sup>(1)</sup>
Tetrabromobiphenyl (TetraBB)	60044-24-8	ND <sup>(1)</sup>
Pentabromo-1,1'-biphenyl (PentaBB)	59080-39-6	ND <sup>(1)</sup>
Hexabromobiphenyl (HexaBB),	60044-26-0	ND <sup>(1)</sup>
Heptabromo-1,1'-biphenyl (HeptaBB)	88700-06-5	ND <sup>(1)</sup>
Octabromobiphenyl (OctaBB)	67889-00-3	ND <sup>(1)</sup>
Nonabromobiphenyl (NonaBB)	69278-62-2	ND <sup>(1)</sup>
Decabromobiphenyl (DecaBB)	13654-09-6	ND <sup>(1)</sup>
Tetrabromodiphenylether (TetraBDE)	5436-43-1	ND <sup>(1)</sup>
Pentabromodiphenylether (PentaBDE)	32534-81-9	ND <sup>(1)</sup>
Hexabromodiphenylether (HexaBDE)	207122-15-4	ND <sup>(1)</sup>
Heptabromodiphenylether (HeptaBDE)	207122-16-5	ND <sup>(1)</sup>
Octabromodiphenylether (OctaBDE)	337513-72-1	ND <sup>(1)</sup>
Decabromodiphenylether (DecaBDE)	1163-19-5	ND <sup>(1)</sup>
Hexabromocyclododecane (HBCDD)	25637-99-4	ND <sup>(1)</sup>

N.D <sup>(1)</sup> : Not Detected

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## TEST RESULTS

### TIN ORGANIC COMPOUNDS; EKOTEKS 24 (DIN 38407-13/DIN EN ISO 17353)

Determination of extractable tin organic compounds. Sample is extracted with organic solvent then derivated and gas chromatographic test. (In reference to DIN EN ISO 17353.)

	<u>Cas No:</u>	<u>RESULT</u>	<u>REQUIREMENT</u>
MBT(Monobutyltin)	1118-46-3	N.D. <sup>(1)</sup>	< 2.0 mg/kg
DBT(Dibutyltin)	683-18-1	N.D. <sup>(1)</sup>	< 2.0 mg/kg
TBT(Tributyltin)	1461-22-9	N.D. <sup>(1)</sup>	< 1.0 mg/kg
TeBT(Tetrabutyltin)	1461-25-2	N.D. <sup>(1)</sup>	< 2.0 mg/kg
MOT(Monooctyltin)	3091-25-6	N.D. <sup>(1)</sup>	< 2.0 mg/kg
DOT(Dioctyltin)	3542-36-7	N.D. <sup>(1)</sup>	< 2.0 mg/kg
TPhT(Triphenyltin)	639-58-7	N.D. <sup>(1)</sup>	< 1.0 mg/kg
TCyHT(Tricyclohexyltin)	3091-32-5	N.D. <sup>(1)</sup>	< 2.0 mg/kg
DMT(Dimethyltin)	753-73-1	N.D. <sup>(1)</sup>	< 2.0 mg/kg
DPhT(Diphenyltin)	1135-99-5	N.D. <sup>(1)</sup>	< 2.0 mg/kg
MMT(Monomethyltin)	993-16-8	N.D. <sup>(1)</sup>	< 2.0 mg/kg
TMT(Trimethyltin)	1066-45-1	N.D. <sup>(1)</sup>	< 2.0 mg/kg
TOT(Trioctyltin)	2587-76-0	N.D. <sup>(1)</sup>	< 2.0 mg/kg
TPT(Tripopyltin)	2279-76-7	N.D. <sup>(1)</sup>	< 2.0 mg/kg

N.D.<sup>(1)</sup>: Not detected

<b>OPP (ORTHO-PHENYLPHENOL); EKOTEKS 28</b>			
Samples are extracted in acetone at 150°C for min. 6 hours and determined using GC/MS			
	<u>CAS NO</u>	<u>RESULT</u>	<u>REQUIREMENT</u>
2-phenylphebol (2-hydroxybiphenyl)	90-43-7	N.D. <sup>(1)</sup>	< 25 mg/kg
3-phenylphebol (3-hydroxybiphenyl)	580-51-8	N.D. <sup>(1)</sup>	< 25 mg/kg
4-phenylphebol (4-hydroxybiphenyl)	92-69-3	N.D. <sup>(1)</sup>	< 25 mg/kg

N.D.<sup>(1)</sup>: Not detected

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**TEST RESULTS**

**POLYCYCLIC AROMATIC HYDROCARBONS(PAH); EKOTEKS 56 (REF:ZEK.01.02-8)**

Test sample is extracted with suitable solution in ultrasonic bath at 60±2°C. After clean-up the extract is analyzed by using GC-MS.

	<b>CAS NO</b>	<b>RESULT</b>	<b>REQUIREMENT</b>
Naphthalene	91-20-3	N.D <sup>(1)</sup>	-
Acenaphthylene	208-96-8	N.D <sup>(1)</sup>	-
Acenaphthene	83-32-9	N.D <sup>(1)</sup>	-
Fluorene	86-73-7	N.D <sup>(1)</sup>	-
Phenanthrene	85-01-8	N.D <sup>(1)</sup>	-
Anthracene	120-12-7	N.D <sup>(1)</sup>	-
Fluoranthene	206-44-0	N.D <sup>(1)</sup>	-
Pyrene	129-00-0	N.D <sup>(1)</sup>	-
1-Methylpyrene	2381-21-7	N.D <sup>(1)</sup>	-
Benzo(a)anthracene	56-55-3	N.D <sup>(1)</sup>	< 1.0 mg/kg
Cyclopenta(c,d)pyrene	27208-37-3	N.D <sup>(1)</sup>	-
Chrysene	218-01-9	N.D <sup>(1)</sup>	< 1.0 mg/kg
Benzo(b)fluoranthene	205-99-2	N.D <sup>(1)</sup>	< 1.0 mg/kg
Benzo(k)fluoranthene	207-08-9	N.D <sup>(1)</sup>	< 1.0 mg/kg
Benzo(j)fluoranthene	205-82-3	N.D <sup>(1)</sup>	< 1.0 mg/kg
Benzo(a)pyrene	50-32-8	N.D <sup>(1)</sup>	< 1.0 mg/kg
Benzo(e)pyrene	192-97-2	N.D <sup>(1)</sup>	< 1.0 mg/kg
Indeno(1,2,3-cd)pyrene	193-39-5	N.D <sup>(1)</sup>	-
Dibenzo(a,h)anthracene	53-70-3	N.D <sup>(1)</sup>	< 1.0 mg/kg
Benzo(g,h,i)perylene	191-24-2	N.D <sup>(1)</sup>	-
Dibenzo(a,l)pyrene	191-30-0	N.D <sup>(1)</sup>	-
Dibenzo(a,e)pyrene	192-65-4	N.D <sup>(1)</sup>	-
Dibenzo(a,i)pyrene	189-55-9	N.D <sup>(1)</sup>	-
Dibenzo(a,h)pyrene	189-64-0	N.D <sup>(1)</sup>	-
Total		N.D <sup>(1)</sup>	< 10.0 mg/kg

N.D <sup>(1)</sup>: Not detected

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## TEST RESULTS

### WATER; ISO 105 E01:2013

37±2°C@4 hours. DW multifiber

Evaluated with ISO 105 A02 ve ISO 105 A03 standart grey scale

	<u>RESULT</u>						<u>REQUIREMENT</u>
Colour Change	4-5						-
Staining	Acetate	Cotton	Nylon6.6	Polyester	Acrylic	Wool	-
	4-5	4-5	4-5	4-5	4-5	4-5	

### RUBBING; ISO 105 X12:2016

Performed in the conditioned room(20±2°C-65%±4)

Finger type: Rectangular

Downward force : 9±0.2 N

Evaluated with ISO 105 A03 standart grey scale for staining assessment.

	<u>RESULT</u>						<u>REQUIREMENT</u>
Wet	4-5						-
Dry	4-5						-

### WASHING; ISO 105 C06:2010

A2S 40°C Gyrowash.ECE(B)+Sodium Perborate.DW multifiber. 10 steel balls.

Evaluated with ISO 105 A02 and ISO 105 A03 standart grey scale.

	<u>RESULT</u>						<u>REQUIREMENT</u>
Colour Change	4-5						-
Staining	Acetate	Cotton	Nylon 6.6	Polyester	Acrylic	Wool	-
	4-5	4-5	4-5	4-5	4-5	4-5	

### PERSPIRATION; ISO 105 E04:2013

37±2°C@4 hours. DW multifiber

Evaluated with ISO 105 A02 ve ISO 105 A03 standart grey scale.

	<u>RESULT</u>						<u>REQUIREMENT</u>
Colour Change	4-5						-
Acidic&Alkaline							
Staining	Acetate	Cotton	Nylon6.6	Polyester	Acrylic	Wool	-
Acidic	4-5	4-5	4-5	4-5	4-5	4-5	
Alkaline	4-5	4-5	4-5	4-5	4-5	4-5	

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## TEST RESULTS

### COLOUR FASTNESS TO SALIVA AND PERSPIRATION ; GB/T 18886:2002(\*)

37±2°C. 4 hours. DW multifiber

ISO 105 A03 evaluated with standard grey scale.

	<u>RESULT</u>	<u>REQUIREMENT</u>				
<b>Colour Change</b>	4-5	-				
<b>Staining</b>	<table border="1"><thead><tr><th>Cotton</th><th>Wool</th></tr></thead><tbody><tr><td>5</td><td>5</td></tr></tbody></table>	Cotton	Wool	5	5	-
Cotton	Wool					
5	5					

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