



# REPORT

1217150

## EKOTEKS

<b>REPORT NUMBER:</b>	1217150
<b>RECEIPT DATE:</b>	12.04.2012
<b>ISSUE DATE:</b>	19.04.2012
<b>BUYER NAME:</b>	-
<b>CLIENT NAME:</b>	DURFOM İZOLASYON VE AMBALAJ SAN. TİC. A.Ş.
<b>ADDRESS:</b>	Akçalar Sanayi Bölgesi, Şırşır Cad. No:5 Nilüfer / BURSA
<b>CONTACT PERSON:</b>	TANER ÖMEROĞLU

<b>SAMPLE DESCRIPTION:</b>	One sample of dark grey foam (CHEMICAL CROSS-LINKED POLYETHYLENE FOAM)
<b>SAMPLING:</b>	Not specified
<b>ORDER NUMBER:</b>	-
<b>ARTICLE NUMBER:</b>	XLPE FOAM / FLOORLAYER
<b>END-USE:</b>	-
<b>CARE LABEL:</b>	Machine wash@30°C, do not bleach, cool iron, dry clean, do not tumble dry.

REQUIRED TESTS	RESULT	COMMENTS
<b>ECOLOGICAL TESTS</b>		
Forbidden Arylamines In Dyestuff <sup>(1)</sup>	P	
Formaldehyde	P	
Heavy Metal	P	
Chlorphenols	P	
pH	P	
Sensoric Odour	P	
P: Pass F: Fail R: Refer to retailer technologist. <sup>(1)</sup> This test results were evaluated according to EU Directive 2002/61 EC limit values. These tests results were evaluated according to eco-textile limit values. Test was performed between 12.04.2012 – 19.04.2012.		

REMARK: This report can not be reproduced except in full, without written approval of the laboratory. The results given in this report belong to the received sample. Original samples are kept for 3 months and all technical records are kept for 5 years unless otherwise specified. The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95 %. Tests marked (\*) in this report are not included in the DAkkS Accreditation Scedule for this Laboratory.

Belkıs Avcı  
Supervisor

Controlled by  
Canan Ş.Abakuş

Sevim A.Razak  
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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'-xylendiamine)	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		

\* 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 the below mentioned methods aniline and 1,4-phenylenediamine. For the detection of 4-aminoazobenzene the official testing methods are therefore modified.

Regarding 4-aminoazobenzene (Cas No: 60-09-3) : The official method is § 64 LFGB 82.02.9 September 2006 under consideration of the amendment § 64 LFGB 82.02.9 ,amendment April 2008

\*\*\* Not regulated by law

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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### TEST RESULT(S) :

Component description	Test Method	Forbidden Arylamines in Dyestuff Result	Conclusion
Foam	DIN EN 14362-1 :2003	N.D	Pass

Max. limit specified by EU directive 2002/61 EC requirement=30 ppm (individual).

#### Interpretation:

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

"<" = less than

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

mg/kg = milligram per kilogram

ppm= part per million (mg/kg)

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

#### FORMALDEHYDE; ISO 14184-1:1998(\*)

The part of ISO 14184 specifies a method for determining the amount of free formaldehyde and formaldehyde extracted partly through hydrolysis by means of water extraction method. Formaldehyde is extracted from a textile sample with water and measured colorimetrically with UV-VIS spectrometer.

**RESULT**  
N.D.<sup>(1)</sup>

**REQUIREMENT**  
< 75 mg/kg

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

#### HEAVY METAL; EKOTEKS 12:2009

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)

**RESULT**

**REQUIREMENT**

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
Copper (Cu)	N.D. <sup>(1)</sup>	< 50 mg/kg
Antimony (Sb)	N.D. <sup>(1)</sup>	< 30 mg/kg

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

Total uncertainty:  $\pm 7.5\%$



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#### CHLORPHENOLS; EKOTEKS 15:2002

Sample is extracted with acetone then esterificated with acidanhidrite and determined using a GC/MS.  
In reference to DIN 53313 and § 35 LMBG 82.02-8:2001.

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

Chlorphenol Standards	CAS No.	Result
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>
12C <sub>6</sub> -Pentachlorphenol	87-86-5	N.D. <sup>(1)</sup>

N.D. <sup>(1)</sup>: Not detected  
Total uncertainty=±2.0%

#### pH; ISO 3071: 2005

Place the sample and distilled water into flask and shake it mechanically for 1 hour. 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: 5.9 Temperature: 20.7°C

RESULT  
6.8

REQUIREMENT  
4.0-7.5

Total uncertainty: ± 0.45%



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#### SENSORIC ODOUR; SNV 195 651: 1968

Sample is kept in dessicator at 37°C for 15 hours and evaluated by 6 independent observers.

**RESULT**  
2

**REQUIREMENT**  
Max 3

#### SENSORIC ODOUR TEST RATING

- 1 Assessment
- 2 Odourless
- 3 Tolerable
- 4 Uncomfortable
- 5 Intolerable



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