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16 February 2011
jhh/-
1316613/419919-1

Test of upholstery fabric designated Comfort+ for content of selected aromatic amines according to EN 14362-2

Through e-mail and phone correspondence you have asked us to test two samples of upholstery fabrics designated Comfort+ as mentioned in the enclosed test report. We received the samples from you on 4 February 2011.

Previously we have carried out a simple extraction to detect whether aniline was present in the samples. As was reported on 7 February 2011 we found small amounts of aniline in both samples. Now we have tested the samples for content of harmful aromatic amines according to EN 14362-2.

The harmful aromatic amines are banned in the EU Commission Regulation No. 552/2009 of 22 June 2009 regarding annex XVII of the REACH Regulation. Here, under §43, azodyes, which can cleave off one or more specially listed aromatic amines, are banned, with a limit value of 30 mg/kg. Some of these amines are aniline compounds, but not aniline itself.

As can be seen in the enclosed test report none of the banned aromatic amines were detected. Aniline was again detected in small amounts. The amounts were higher than in the first analysis. This fact is likely to be caused by the more severe extraction method in standard 14362-2.

In a footnote on page 5 of the standard is mentioned the aromatic amine 4-aminoazobenzene will generate aniline and 1,4-phenylenediamine. As 1,4-phenylenediamine is not detected, it is not likely that the aniline originates from 4-aminoazobenzene.

1316613/419919-1

Invoice for handling and testing will be forwarded separately.

Kind regards,
Danish Technological Institute
Textile



John Hansen

Encl.: Test report no. 35929.2 dated 16 February 2011



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Test report no. 35929.2

Test required: Furniture Fabric
Textile samples for analyses for content of selected aromatic amines

Sampling by: Client

Sample received: 4 February 2011

Test period: 4 – 16 February 2011

Remarks: The results of the analysis and a statement for the applied method are given on the next pages.
The results were forwarded on mail.

The test is carried out on the basis of Danish Technological Institute's "Conditions for Regulating Liability". This report shall not be reproduced except in full without the written approval of Laboratory for Chemistry and Microbiology, Danish Technological Institute.

Laboratory for Chemistry and Microbiology, Taastrup

Eva Pedersen
Consultant, technician

Stine Lundsteen Andersen
Technician

Introduction

2 samples of textile (furniture fabric) were analyzed for content of selected aromatic amines.

Sample list

Lab. label	Client label
35929-1	A: Møbelstof Comfort + /Itc/Mørk blå Special, 88/12 % polyester/polyethan
35929-2	B: Møbelstof Comfort + /Itc/Lys sort Special, 88/12 % polyester/polyethan

Test results for selected aromatic amines

Lab. lbl.		35929-1	35929-2
Component	CAS-no.	µg/g	µg/g
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	-	-
4-Chloroaniline	106-47-8	-	-
4-Methoxy-m-phenylenediamine	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'-Methylen-bis-(2-chloroaniline)	101-14-4	-	-
4,4'-Oxydianiline	101-80-4	-	-
4,4'-Thiodianiline	139-65-1	-	-
o-Toluidine	95-53-4	-	-
4-Methyl-m-phenylenediamine	95-80-7	-	-
2,4,5-Trimethylaniline	137-17-7	-	-
o-Anisidine	90-04-0	-	-
2,4-Xylidine / 2,6-Xylidine	95-68-1/87-62-7	-	-

"-": Concentration under the limit of detection (L.O.D.): 2 – 5 µg/g

Comments

None of the listed aromatic amines were detected in concentrations above the detection limit 2 – 5 µg/g.

35929-1: Content of aniline was found in concentration of 28 µg/g

35929-2: Content of aniline was found in concentration of 3,5 µg/g

Analysis for 4-aminoazobenzene was not performed according to EN-14362.

Analytical method

Analyses of aromatic amines

The analyses were performed according to EN-14362 combined with gas chromatography and mass spectrometry (GC-MS).

The analyses were performed in duplicate.