

**TEST REPORT**

**Report No. : CH:TX:6420053531**

**DATE : 07/09/2015**



**SPINKS SOFTECH PVT LTD**  
160 SIDCO INDUSTRIAL ESTATE, THIRUMAZHISAI  
TAMIL NADU, CHENNAI-  
INDIA  
**CONTACT PERSON :** RAM KUMAR

**THE FOLLOWING SAMPLE(S) WAS/WERE SUBMITTED AND IDENTIFIED BY/ON BEHALF OF THE CUSTOMER AS :**

**PRODUCT DESCRIPTION** KNITTED PRINTED PANEL  
FT 003060HD WHITE PLUS + ADHESION MODIFIER 001+M02  
**COLOUR** BLACK (WHITE PLUS)  
**BUYER REFERENCE** HUGO BOSS(SELF REFERENCE)  
**COUNTRY OF ORIGIN** INDIA  
**SAMPLE RECD ON** 04/09/2015 **TESTING PERIOD :** 04/09/2015 - 07/09/2015

**RESULT SUMMARY**

TESTS	PASS	FAIL	REMARKS
Determination of Certain Listed Aromatic Amines Derived from Azo Colourants			
1	X		
HEAVY METAL			
1			REFER RESULTS

**NOTE:**

- 1.Submitted sample has been tested for supplier reference only.
- 2.The test specifications of buyer HUGO BOSS(SELF REFERENCE) has been followed as per customer request
3. Only selective tests are conducted as per Supplier's request.
4. The report is not generated in Buyer format ,as the same is for supplier reference only.

per pro SGS India Private Ltd.



**P.SHANMUGAM**

**JR. EXECUTIVE**

Email your Test Report Related Enquiries at [Feedback.SLT@sgs.com](mailto:Feedback.SLT@sgs.com)

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**R E S U L T S**

**REQ**

**COMPONENT LIST /LIST OF MATERIALS :**

SAMPLE No.	MATERIAL No.	COMPONENT	MATERIAL/COMPOSITION	COLOUR	REMARKS
1	1	PRINT AT BASE	--	GREY PRINT ON BLACK BASE	

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## R E S U L T S

REQ

### Determination of Certain Listed Aromatic Amines Derived from Azo Colourants

Test Method: According to EN 14362-1:2012 with the use of Gas Chromatography - Mass Spectrometry (GC-MS) / High Performance Liquid Chromatography - Diode Array Detector (HPLC-DAD)

1

No.	Forbidden Amines Substances	CAS-No.	Result
1	4-aminodiphenyl/xenylamine/Biphenyl-4-ylamine	92-67-1	ND
2	Benzidine	92-87-5	ND
3	4-chlor-o-toluidine	95-69-2	ND
4	2-naphthylamine	91-59-8	ND
5	o-aminoazotoluene/4-o-tolylazo-o-toluidine/4-amino-2',3'-dimethylazobenzene	97-56-3	ND
6	2-amino-4-nitrotoluol/5-nitro-o-toluidine	99-55-8	ND
7	p-chloranilin/4-chloroaniline	106-47-8	ND
8	2,4-diaminoanisol/4-methoxy-m-phenylenediamine	615-05-4	ND
9	4,4'-diaminodiphenylmethane/4,4'-methylenedianiline	101-77-9	ND
10	3,3'-dichlorobenzidine/3,3'-dichlorobiphenyl-4,4'-ylenedia mine	91-94-1	ND
11	3,3'-dimethoxybenzidine/o-dianisidine	119-90-4	ND
12	3,3'-dimethylbenzidine/4,4'-bi-o-Toluidine	119-93-7	ND
13	3,3'-dimethyl-4,4'-diaminodipenylmethane/4,4'-methylen edi-o-toluidine	838-88-0	ND
14	p-cresidin/6-methoxy-m-toluidine	120-71-8	ND
15	4,4'-methylen-bis-(2-chloro-aniline)/2,2'-dichloro-4,4'met hylene-dianiline	101-14-4	ND
16	4,4'-oxydianiline	101-80-4	ND
17	4,4'-thiodianiline	139-65-1	ND
18	o-toluidine/2-aminotoluene	95-53-4	ND
19	2,4-toluylendiamine/4-methyl-m-phenylenediamine	95-80-7	ND
20	2,4,5-trimethylaniline	137-17-7	ND
21	4-aminoazobenzene	60-09-3	ND
22	o-anisidine/ 2-methoxyaniline	90-04-0	ND
23	2,4-Xylidine*	95-68-1	ND
24	2,6-Xylidine*	87-62-7	ND
<b>Conclusion</b>			<b>PASS</b>

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Note: ND=Not Detected  
Method Detection Limit=5mg/kg(ppm) (for individual compound)  
Max Limit = 20 mg/kg (ppm)  
\* Amine tested as per customer request

### Remark:

The EN 14362-1:2012 method will enable further cleavage of 4-aminoazobenzene to non-forbidden amines: aniline and 1,4-phenylenediamine. If aniline and/or 1,4- phenylenediamine is not found (i.e. 5mg/kg) by mentioned test method, test result for 4-aminoazobenzene (CAS no. 60-09-3) is considered as "not detected" (i.e. <5mg/kg). Otherwise, the test method of EN 14362-3:2012 will be employed to verify the presence of 4-aminoazobenzene.

Whenever 4-aminodiphenyl (CAS number 92-67-1), 2-naphylamine (CAS number 91-59-8) and 4-methoxy-m-phenylene-diamine (CAS number 615-05-4) is found, the use of banned azo colorants cannot be reliably ascertained without additional information, e.g. the chemical structure of the colorants used.

In case polyurethane materials are used, e.g. PU foams and coatings and in prints, it cannot be ruled out that certain amines, e.g. 4,4'-methylene-dianiline (MDA, CAS number 101-77-9) and 2,4-toluylen-diamine (TDA, CAS number 95-80-7) are released from the PU component and not from a banned azo colorant.

In case of pigment prints care has to be taken that 4,4-methylene-dianiline (MDA, CAS number 101-77-9) is not released from a source of banned azo colorants but from e.g. a chemical fixing agent.

### COMMENT:

Based on the test result, azo colorants which can release one or more of the listed amines by cleavage of their azo group/s were not detected in sample (s) or the commodity submitted.

### IMPORTANT:

Test was conducted on composite sample as per customer's request and the test result is the overall result of a composite sample. Therefore, no reference can be made to the result of each component in the composite sample.

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### HEAVY METAL

With reference to DIN 54233-3: 2010/Analysis using ICP-MS

1

No.	PARAMETERS	RESULT	Det Limit
1	LEAD (Pb)	ND	0.05 mg/kg
2	ANTIMONY (Sb)	ND	1.0 mg/kg
3	ARSENIC (As)	ND	0.2 mg/kg
4	CADMIUM (Cd)	ND	0.05 mg/kg
5	MERCURY (Hg)	ND	0.01 mg/kg
6	NICKEL (Ni)	ND	0.5 mg/kg
7	COPPER (Cu)	ND	1.0 mg/kg
8	COBALT (Co)	ND	0.5 mg/kg
9	CHROMIUM (Cr)	ND	0.5 mg/kg

Note: ND - Not Detected

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