

TEST REPORT

Job No./Report No: TR1440508RV3

Date: 22 January 2019

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MIRANDA SP

UL JEDW ABNICA 62 700 TUREK WARSZAWA

TEL: 48691760139

FAX: .

To the attention of PI Trad

The following sample(s) was (were) submitted and identified by/on behalf of the client as:

Sample No.	Sample Description
A	Woven fabric in light brown (Claimed to be EVO kolor jasny <0,5% nr koloru 5127)

Client's reference No. : TR 1440508RV3
 Buyer : Not Provided
 Order No. : Not Provided
 Model/Style No. : Not Provided
 Article No. : Not Provided
 Age Grade : Not Provided
 Manufacturer : MIRANDA SP
 Country of Origin : Not Provided
 Country of Destination : Not Provided
 Shipment Date : Not Provided
 Fiber Composition : Not Provided
 Fabric Weight : Not Provided
 End Use : Not Provided
 Agency : Not Provided
 Sample Receiving Date : 10 December 2018
 Test Performing Period : 10 December 2018 ~ 12 December 2018
Submitted Care Label Instructions : Not Provided

Overall Conclusion : **See Results**
 Test Results : Please refer to the next page(s).
Performed Test Summary: Selected test(s) as requested by client against Client's performance standard.

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Test Parameters	Result
Chemical tests	A1
Alkylphenols	*
Alkylphenol Ethoxylates	*
Azo Dyes (Polyester)	M
Extractable Heavy Metals	*
Free Formaldehyde in Textile	*

Test Parameters	Result
Physical tests	A
Colour Fastness to Light	M
Colour Fastness to Rubbing	*
Pilling Resistance	*

Remarks	:	M = Meets client's requirement
		F = Below client's requirement
		I = Inconclusive
		* = No specified requirement
		The sample is submitted in polyethylene bag and wrapped in aluminium foil.
Notes:	Conclusions on meet/fail are based on the test result from the actual sampling of the received sample(s).	
	Residual sample can be returned to client if requested.	

Doc.No.:CTSL-F-5.10-1NF / First Publish Date:23.08.2010 / Revision Date / No.: 06.06.2016 / 5

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The test results relate to the tested items only.
Test reports without SGS seal and authorized signatures are invalid.
Reported results do not include uncertainties.

Issued in Istanbul
Signed for and on behalf of
SGS Supervise Gözetme Etüd Kontrol Servisleri A.Ş.

**IN THIS REVISED-3 REPORT, SAMPLE TYPE WAS CORRECTED BY THE REQUEST OF THE CLIENT.
THIS REPORT SUPERSEDES OUR REPORT NO: 1440508 RV2 DATED: 21.1.2019**

Naz Acar
Customer Services Supervisor

Arzu Yılmaz
Customer Services Team Leader



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Component List / List of Materials for Chemical Test

Sample No.	Sample Description	Material No.	Component	Material	Colour	Fiber Type*
A	Woven fabric	A1	Main	Textile	Light Brown	Type B

*This fiber type identification is for the selection of azo dye testing procedure(i.e. EN 14362-1/3:2012)

Note:

Type A=Textile contains natural fibers only and/or regenerated fibers exclude the group of acetate.

Type B=Textile contains polyester fibers only

Type C=Textile contains man-made fibers and/or man-made blended fibers(except polyester fibers)

N/A:Not Applicable

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Azo Dyes (Polyester)¹

Test Method: With reference to BS EN 14362-1:2012 - Analysis by GC-MS, Confirmation by LC-DAD

Component	Cas No	A1
4-Aminobiphenyl	92-67-1	n.d.
Benzidine	92-87-5	n.d.
4-Chlor-o-toluidine	95-69-2	n.d.
2-Naphthylamine	91-59-8	n.d.
o-Aminoazotoluene	97-56-3	n.d.
5-nitro-o-toluidine / 2-Amino-4-nitrotoluene	99-55-8	n.d.
4-Chloroaniline	106-47-8	n.d.
4-methoxy-m-phenylenediamine / 2,4-Diaminoanisoole	615-05-4	n.d.
4,4'-Diaminodiphenylmethane	101-77-9	n.d.
3,3'-Dichlorobenzidine	91-94-1	n.d.
3,3'-Dimethoxybenzidine	119-90-4	n.d.
3,3'-Dimethylbenzidine	119-93-7	n.d.
4,4'-methylenedi-o-toluidine /		
3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	n.d.
p-Cresidine	120-71-8	n.d.
4,4'-Methylene-bis-(2-chloroaniline)	101-14-4	n.d.
4,4'-Oxydianiline	101-80-4	n.d.
4,4'-Thiodianiline	139-65-1	n.d.
o-Toluidine	95-53-4	n.d.
4-methyl-m-phenylenediamine / 2,4-Toluendiamine	95-80-7	n.d.
2,4,5-Trimethylaniline	137-17-7	n.d.
4-aminoazobenzene	60-09-3	n.d.
O-Anisidine	90-04-0	n.d.
	Conclusion	Pass

Note(s):

n.d. = not detected

Detection Limit = 5 mg/kg

Recommended max. Limit = 30 mg/kg

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Remark: ## The BS EN 14362-1:2012 and ISO 17234-1 methods 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 / ISO 17234-2 will be employed to verify the presence of 4-aminoazobenzene.
Max. limit specified by Entry 43 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2002/61/EC).

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.

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Alkylphenols	
Test Method:	With reference to ISO 18254-1:2016 - Analysis by HPLC-MS
Component	A1
NP	n.d.
OP	n.d.
Conclusion	See results
Note(s):	
	n.d. = not detected
	Detection Limit = 10 mg/kg
Requirement by the client=	No Requirement

Doc.No.: CTSL-F-5.10-1NF / First Publish Date: 23.08.2010 / Revision Date / No.: 06.06.2016 / 5

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Alkylphenol Ethoxylates

Test Method: With reference to ISO 18254-1:2016 - Analysis by HPLC-MS

Component

A1

NPEO

n.d.

OPEO

n.d.

Conclusion

See results

Note(s):

n.d. = not detected

Detection Limit = 30 mg/kg

Requirement by the client=

No Requirement

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Extractable Heavy Metals¹

Test Method: SGS In House Test Method CTSL-SOP-RSTS-CHEM-103-1 - Analysis by ICP-OES/MS and UV-VIS for Cr VI

Component	A1
Antimony (Sb)	n.d.
Arsenic (As)	n.d.
Cadmium (Cd)	n.d.
Chromium (Cr)	n.d.
Cobalt (Co)	n.d.
Copper (Cu)	n.d.
Lead (Pb)	n.d.
Mercury (Hg)	n.d.
Nickel (Ni)	n.d.

Conclusion

See Results

Note(s):

n.d. = not detected
 Detection Limit = Sb: 1 mg/kg, As: 0,1 mg/kg, Cd: 0,05 mg/kg, Cr: 0,5 mg/kg, Co: 0,5 mg/kg, Cu: 5 mg/kg, Pb: 0,1 mg/kg, Hg: 0,01 mg/kg, Ni: 0,5 mg/kg

Requirement by the client= No Requirement

Free Formaldehyde in Textile¹

Test Method: With reference to ISO 14184-1:2011 (Water Extraction Method) - Analysis by UV-VIS Spectrophotometer
 Calibration range: 0.15 mg/L - 6.00 mg/L

Formaldehyde Content

A1

n.d.

Conclusion

See results

Note(s):

n.d. = not detected
 Detection Limit = 16 mg/kg

Requirement by the client= No Requirement

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Pilling Resistance¹			
Test Method:		ISO 12945-2:2000	
		No wash before test	
Test Conditions:		Number of Test Specimen: 3	
		Number of Observer: 2	
		The abradata used: The same as the test fabric	
		The loading mass: 415 ±2 g	
Sample ID&Colour	Revs	Original	Requirement by the Client
(a1)	2000	4-5	No Requirement
P: Pilling F: Fuzzing B: Both (Pilling & Fuzzing)			

Pilling Rating	
Grade 5	No change
Grade 4	Slight surface fuzzing and/or partially formed pills
Grade 3	Moderate surface fuzzing and/or moderate pilling. Pills of varying size and density partially covering the specimen surface.
Grade 2	Distinct fuzzing and/or distinct pilling. Pills of varying size and density covering a large proportion of the specimen surface.
Grade 1	Dense surface fuzzing and/or severe pilling. Pills of varying size and density covering the whole of the specimen surface.

Colour Fastness to Light			
Test Method:		BS EN ISO 105-B02:2014 grade 5 modified	
Sample ID&Colour		Colour Change	Requirement by the Client
(a1)	Brown Main	5	5

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Colour Fastness to Rubbing¹

Test Method:	BS EN ISO 105-X12:2016		
Used finger:	16 mm		
Percentage of soak for wet rub:	100 %		
Test Conditions:	Temperature:	20 °C	
	Humidity:	65 rh %	
	Condition time of specimen&rubbing cloth:	4 hrs	
	Assessment:	Numerical grey scale rating	

(a1)	Dry Staining	Original	Wet Staining	Requirement by the Client
Light brown main	4-5		4-5	No Requirement

Remarks: Grey Scale Rating is based on the 5-step scale of 1 to 5, where 1 is bad and 5 is good.



* * * End of Test Report * * *

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