

TEST REPORT

APPLICANT : SHINWON FELT CO., LTD.

REPORT NO. : H214-15-13030

SAMPLE RECEIVED DATE : 2015-05-28

TEST STARTED DATE : 2015-05-28

REPORT ISSUED DATE : 2015-06-03

PAGE : 1 OF 5

SAMPLE DESCRIPTION : ONE(1) PIECE OF SUBMITTED CUTTING SAID TO BE NON WOVEN FABRIC.

ITEM : NEEDLE ROOM FELT

TEST CONDUCTED : AS REQUESTED BY THE APPLICANT, FOR DETAILS PLEASE SEE ATTACHED PAGES.

PREPARED AND CHECKED BY
FOR FITI



HYUN-JIN, KOO
QUALITY MANAGER

AUTHORIZED BY
FOR FITI



MOON-OK NOH
PRESIDENT

※ Report Verification No.: WAM7-M17V-HX7D ※

(You can see the authenticity of your test report through the above "Report Verification No." at FITI homepage.)

e-DOCUMENT SERVICE

The test results contained in this report are limited to results on the sample(s) that is provided by client and are not necessarily indicative or representative of the qualities of the lot from which the sample(s) was taken or of all products. Results contained in this report are not based on the quality certification of sample by the FITI quality certification program unless specifically requested by the client. Further use of the results of this report is prohibited unless allowed under a separate agreement set forth in an official document that is established between the client identified on this letter and the FITI.

TEST CONDUCTED

TEST RESULT

(01) COLORFASTNESS TO WASHING (ISO 105 C06 : 2010, A2S, 30 MINUTES MECHANICAL WASH AT (40 ± 2) °C ,
IN 0.4 % ECE REFERENCE DETERGENT AND 0.1 % SODIUM PERBORATE TETRAHYDRATE SOLUTION
WITH 10 STEEL BALLS) : GRADE

	#1
COLOR CHANGE	4-5
COLOR STAINING	
- ACETATE	4-5
- COTTON	4-5
- NYLON	4-5
- POLYESTER	4-5
- ACRYLIC	4-5
- WOOL	4-5

(02) COLORFASTNESS TO RUBBING (ISO 105 X12 : 2001) : GRADE

	#1
WARP	
- DRY	4-5
- WET	3-4
WEFT	
- DRY	4-5
- WET	3-4

(03) COLORFASTNESS TO LIGHT (ISO 105 B02 : 2013, XENON-ARC-LAMP, BLUE SCALE) : GRADE

	#1
UP TO GRADE 4	4

e-DOCUMENT SERVICE

The test results contained in this report are limited to results on the sample(s) that is provided by client and are not necessarily indicative or representative of the qualities of the lot from which the sample(s) was taken or of all products. Results contained in this report are not based on the quality certification of sample by the FITI quality certification program unless specifically requested by the client. Further use of the results of this report is prohibited unless allowed under a separate agreement set forth in an official document that is established between the client identified on this letter and the FITI.

TEST CONDUCTED

TEST RESULT

(04) COLORFASTNESS TO PERSPIRATION (ISO 105 E04 : 2013) : GRADE

	#1
ACID	
COLOR CHANGE	4-5
COLOR STAINING	
- ACETATE	4
- COTTON	4-5
- NYLON	4-5
- POLYESTER	4-5
- ACRYLIC	4-5
- WOOL	4-5
ALKALI	
COLOR CHANGE	4-5
COLOR STAINING	
- ACETATE	4
- COTTON	4-5
- NYLON	4-5
- POLYESTER	4-5
- ACRYLIC	4-5
- WOOL	4-5

(05) RESISTANCE TO ARTIFICIAL SALIVA (DIN 53160-1 : 2010) : GRADE

	#1
COLOR STAINING	4-5

(06) FORMALDEHYDE CONTENT (ISO 14184 : 2011, PART 1) : mg/kg

#1
NOT DETECTED

NOTE) DETECTION LIMIT = 16 mg/kg

e-DOCUMENT SERVICE

The test results contained in this report are limited to results on the sample(s) that is provided by client and are not necessarily indicative or representative of the qualities of the lot from which the sample(s) was taken or of all products. Results contained in this report are not based on the quality certification of sample by the FITI quality certification program unless specifically requested by the client. Further use of the results of this report is prohibited unless allowed under a separate agreement set forth in an official document that is established between the client identified on this letter and the FITI.

TEST CONDUCTED

TEST RESULT

(07) HEAVY METAL'S CONTENT (EN 71 PART 3) : mg/kg

	#1
LEAD (Pb)	< 1
CADMIUM (Cd)	< 1
MERCURY (Hg)	< 1

NOTE) THE SAMPLE WAS EXTRACTED BY USE OF 0.07 mol/L HCl SOLUTION FOR 2 h AT 37 °C.
DETECTION LIMIT = 1 mg/kg
< = LESS THAN

e-DOCUMENT SERVICE

The test results contained in this report are limited to results on the sample(s) that is provided by client and are not necessarily indicative or representative of the qualities of the lot from which the sample(s) was taken or of all products. Results contained in this report are not based on the quality certification of sample by the FITI quality certification program unless specifically requested by the client. Further use of the results of this report is prohibited unless allowed under a separate agreement set forth in an official document that is established between the client identified on this letter and the FITI.

TEST CONDUCTED
TEST RESULT

(08) ARYLAMINES (BS EN 14362-1:2012) : mg/kg

#1

<u>NAME</u>	<u>CAS NO.</u>	
4-AMINODIPHENYL	92-67-1	<5
BENZIDINE	92-87-5	<5
4-CHLORO-o-TOLUIDINE	95-69-2	<5
2-NAPHTYLAMINE	91-59-8	<5
o-AMINOAZOTOLUENE	97-56-3	<5
2-AMINO-4-NITROTOLUENE	99-55-8	<5
p-CHLOROANILINE	106-47-8	<5
2,4-DIAMINOANISOLE	615-05-4	<5
4,4'-DIAMINODIPHENYLMETHANE	101-77-9	<5
3,3'-DICHLOOROBENZIDINE	91-94-1	<5
3,3'-DIMETHOXYBENZIDINE	119-90-4	<5
3,3'-DIMETHYLBENZIDINE	119-93-7	<5
3,3'-DIMETHYL-4,4'-DIAMINODIPHENYLMETHANE	838-88-0	<5
2-METHOXY-5-METHYLBENZENAMINE(p-CRESIDINE)	120-71-8	<5
4,4'-METHYLENE-BIS-(2-CHLOROANILINE)	101-14-4	<5
4,4'-OXYDIANILINE	101-80-4	<5
4,4'-THIODIANILINE	139-65-1	<5
o-TOLUIDINE	95-53-4	<5
2,4-TOLUENEDIAMINE	95-80-7	<5
2,4,5-TRIMETHYLANILINE	137-17-7	<5
4-AMINOAZOBENZENE	60-09-3	<5
2-METHOXYANILINE	90-04-0	<5
2,4-DIMETHYLANILINE	95-68-1	<5
2,6-DIMETHYLANILINE	87-62-7	<5
SUMMARY : PRESENCE OF CARCINOGENIC AMINES		<5

NOTE) DETECTION LIMIT : 5 mg/kg

< = LESS THAN

e-DOCUMENT SERVICE

The test results contained in this report are limited to results on the sample(s) that is provided by client and are not necessarily indicative or representative of the qualities of the lot from which the sample(s) was taken or of all products. Results contained in this report are not based on the quality certification of sample by the FITI quality certification program unless specifically requested by the client. Further use of the results of this report is prohibited unless allowed under a separate agreement set forth in an official document that is established between the client identified on this letter and the FITI.