



2018 FORECAST & CREATED

NAN YA

TPU FILM MISCELLANEOUS

NAN YA MATERIAL CHALLENGE NEW VISION WITH YOU

Various & Composites, Taking You to Run Out of Lightweight & Avant- Garde

INTRODUCTION

Because of highly vertical integration. Nan Ya TPU Film material which has lots of experience in raw material supply, development, manufacture, process technology, and final, application.

We dedicated to insisting our quality on providing you most concerned about.



And lead the trend in the non-toxic environment, let you enjoy healthy zero distance.

Our material also have International Certification, security & free of burden, so we can cooperation with famous brand. In the feature, we will continue sustainable development determination.

Let's contribute to the environment protection.

M

MEDICAL USE

Product Feature & Information:

- * Extremely waterproof, transparent, easy to printing, wind-break, anti-aging, weather resistant, long- term skin contact permissible, and anti- bacterial.
- * Repeated high pressure air- filled, light, biocompatible (without solvent, without any cells harmed after long- term skin contact), compatible with anti- microbes.
- * Without organic solvents, heavy metals, azo dyes, passing the 168 substances of REACH SVHC (Substances of Very High Concern, SVHC) screening under the EU REACH regulation, no allergic reaction caused by exposure to TPU leather, natural, and passing the bio- compatibility test ISO- 10993, suitable for chronic bedridden patients.

Our quality, insist on providing you most concerned about





TPU Film Specification:

TPU resin Hardness (shore A)	Tensile Strength (kg/ cm ²)		Elongation (%)		Tear Strength (kg/ cm)		100% Modulus (kg/ cm ²)		300% Modulus (kg/ cm ²)	
	MD	CD	MD	CD	MD	CD	MD	CD	MD	CD
80A~ 90A	200 ↑	200 ↑	300 ↑	300 ↑	30 ↑	30 ↑	35 ↑	35 ↑	65 ↑	65 ↑
90A~95A	250 ↑	250 ↑	350 ↑	350 ↑	50 ↑	50 ↑	45 ↑	45 ↑	75 ↑	75 ↑
95A ↑	300 ↑	300 ↑	250 ↑	250 ↑	70 ↑	70 ↑	50 ↑	50 ↑	85 ↑	85 ↑

Application:

- * Surgical gowns (Surgical caps and surgical shoe covers) made from TPU materials.
- * Mattress tubes and bedspreads of medical air mattresses.
- * Cooler bags, bandages, plasma bags, condoms, surgical permeable tapes made from TPU film.
- * Medical devices and instruments.

*Our Quality, Insist On Providing You
Most Concerned About*

Nylon TPU Synthetic Leather:

Substate	Tensile Strength (kg/ 3cm)		Elongation (%)		Tear Strength (kg/ cm)		Peel Strength (kg/ 3cm)		Seal Strength (kg/ 3cm)	
	MD	CD	MD	CD	MD	CD	MD	CD	MD	CD
NBC (70D)	25 ↑	20 ↑	20 ↑	20 ↑	0.6 ↑	0.6 ↑	3 ↑	3 ↑	20 ↑	20 ↑
NCD (210D)	40 ↑	25 ↑	25 ↑	25 ↑	1.0 ↑	1.0 ↑	3 ↑	3 ↑	25 ↑	25 ↑
NEB NEP (420D)	50 ↑	30 ↑	25 ↑	25 ↑	2.0 ↑	2.0 ↑	3 ↑	3 ↑	30 ↑	30 ↑
NMA (840D)	55 ↑	35 ↑	30 ↑	30 ↑	3.0 ↑	3.0 ↑	3 ↑	3 ↑	30 ↑	30 ↑
NNA (1680D)	120 ↑	80 ↑	30 ↑	30 ↑	5.0 ↑	5.0 ↑	3 ↑	3 ↑	30 ↑	30 ↑

CERTIFICATE

Intertek

Certification Name:

F.D.A. Regulation on Resinous and Polymeric Coating.

Material:

TPU/ NYLON Leather. Black fabric with TPU film (glossy side)

Test Result:

Chloroform Soluble Extractive	
*In Water	0.05mg/ in ²
*In Heptane	0.01mg/ in ²
*In 8% Alcohol	0.11mg/ in ²

Test Report

Number : TWNC00532799

Date : Aug 03, 2016

Applicant: Nan Ya Plastics Corporation
NO. 55, Wei Wang Street., Shulin Dist.,
New Taipei City, Taiwan

Sample Description:

One (1) group of submitted samples said to be :

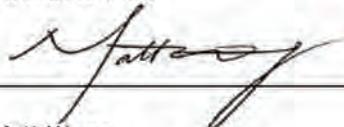
Item Name	: TPU/Nylon Leather
Item No.	: F3DNMAS6060580
Quantity	: 6 pieces
Country of Origin	: Taiwan
Date Sample Received	: Jul 07, 2016
Date Test Started	: Jul 07, 2016

Test Conducted:

As requested by the applicant, for details please refer to attached pages.

Authorized by:

On Behalf of Intertek Testing Services
Taiwan Limited



Matt Wang
Sr. Manager



Page 1 of 5

Intertek Testing Services Taiwan Ltd.

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CERTIFICATE

Intertek

Certification Name:

F.D.A. Regulation on Resinous and Polymeric Coating.

Material:

TPU/ NYLON Leather. Black fabric with TPU film (glossy side)

Test Result:

Chloroform Soluble Extractive

*In Water 0.05mg/ in²

*In Heptane 0.01mg/ in²

*In 8% Alcohol 0.11mg/ in²



End of Report

Test Report

Number : TWNC00532799

Test Conducted

Test For F.D.A. Regulation On Resinous And Polymeric Coating

As per with reference to the U.S. 21 CFR Food and Drug Administration part 175.300, clause (c)(4).

I. Condition Of Contact In Actual Use :

Hot Filled Or Pasteurized Below 150°F (65.6°C).

II. Test Results :

<u>Test Item</u>	<u>Result</u> (mg/in ²)
(A) Chloroform Soluble Extractive In Water	Black fabric with TPU film (glossy side) 0.05
(B) Chloroform Soluble Extractive In Heptane	0.01
(C) Chloroform Soluble Extractive In 8% Alcohol	0.11

Page 2 of 5

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CERTIFICATE

Intertek

Certification Name:

Mould Resistane Test with
Reference to ASTM G21- 09.

Material:

TPU Coated NYLON Fabric-
(A) TPU Side
(B) NYLON Side

Test Result:

TPU & NYLON two sides are
(2X2 inch) all evaluated
as grade 0
*0- None (no growth on
specimen surface)

Test Report

Number : TWNC00368798

Date : Jun 09, 2014

Applicant: Nan Ya Plastics Corporation
NO. 55, Wei Wang Street., Shulin Dist.,
New Taipei City, Taiwan

Sample Description:

Four (4) pieces of submitted samples said to be :

Item Name	: TPU Coated Nylon Fabric - (A)TPU Side, (B)Nylon Side
Item No.	: POPLON NCD
Color	: Blue
Quantity	: 4 Pieces
Date Sample Received	: Apr 23, 2014
Date Test Started	: Apr 25, 2014

Test Conducted:

As requested by the applicant, for details please refer to attached pages.

Authorized by:

On Behalf of Intertek Testing Services
Taiwan Limited

K. Y. Liang
Director



Page 1 of 5

Intertek Testing Services Taiwan Ltd.

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Tel: (+886-2) 6602-2888 · 297-8885 Fax: (+886-2) 6602-2410

CERTIFICATE

Intertek

Certification Name:

Mould Resistane Test with
Reference to ASTM G21- 09.

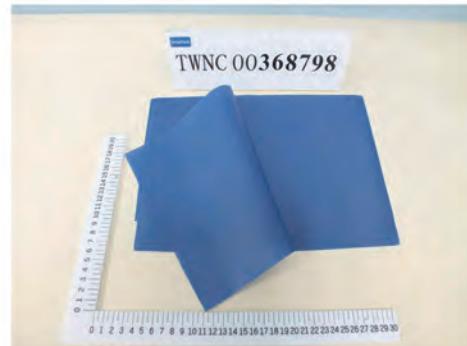
Material:

TPU Coated NYLON Fabric-
(A) TPU Side
(B) NYLON Side

Test Result:

TPU & NYLON two sides are
(2X2 inch) all evaluated
as grade 0

*0- None (no growth on
specimen surface)



End of Report

Test Report

Number : TWNC00368798

Test Conducted

Mould Resistance Test

With Reference To ASTM G21-09

Mould Culture Used : *Aspergillus niger* (ATCC 9642)
Penicillium pinophilum (ATCC 11797)
Chaetomium globosum (ATCC 6205)
Gliocladium virens (ATCC 9645)
Aureobasidium pullulans var. *melanogenum* (ATCC 15233)

Culture Medium : Nutrient-Salts Agar

Incubation Period : 28 Days

Incubation Temperature : 28°C

Test Specimen :Nylon side of submitted sample (2 x 2 inch)

Result :

Rating* At The Specific Period Of Incubation (Day)			
7 th	14 th	21 st	28 th
0	0	0	0

Test Specimen :TPU submitted sample (2 x 2 inch)

Result :

Rating* At The Specific Period Of Incubation (Day)			
7 th	14 th	21 st	28 th
0	0	0	0

Remark : * = Rating scale ranking from 0 to 4 and each number represents the degree of mould growth observed on the specimen surface.

- 0 - None (no growth on specimen surface.)
- 1 - Traces of growth (less than 10%).
- 2 - Light growth (10%-30%).
- 3 - Medium growth (30%-60%).
- 4 - Heavy growth (60% to complete coverage).

CERTIFICATE



Certification Name:

ISO 10993-5:2009

ISO 10993-12:2004

Vitro cytotoxicity
(test on extracts)

Material:

One sample of woven taffeta
fabric with TPU coating

Test Result:

Evaluated as grade 2.

Viability of the all test sample
is 50~79%.

Textile Laboratory

Test Report

No: TXB0481/2015/LI

Date: Dec. 04, 2015

Page 1 of 2

Nan Ya Plastics Corporation
No. 55, Weiwang St., Shulin District,
New Taipei City, Taiwan

The following sample was submitted and identified by applicant as:

Sample Description	One sample of woven taffeta fabric with TPU coating
Color	Blue
Fiber Content	Nylon
Fabric Weight	218g/m ²
Construction	70D
Style No.	F3TNBC0305808FK
Manufacturer/Vendor	Nan Ya Plastics Corporation
Country of Origin	Taiwan
Applicant	Nan Ya Plastics Corporation
Sample Receiving Date	Nov. 09, 2015
Test Performance Period	Nov. 09, 2015 to Dec. 04, 2015
Test Performed	Selected test(s) as requested by applicant.
Test Results	For further details, please refer to the following page(s).

Signed for and on behalf of
SGS Taiwan Ltd.


Chang Chia Hao, Ronnie
Supervisor

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Member of the SGS Group

Textile Laboratory

Test Report

No: TXB0481/2015/LI

Date: Dec. 04, 2015

Page 2 of 2

TEST(S) REQUESTED: Tests for in vitro cytotoxicity (test on extracts)

CONCLUSION:

The cytotoxicity of the sample was grade 2, which is slight cytotoxic. The negative controls and the positive controls in the test performed as anticipated.

TEST METHOD(S):

ISO 10993-5:2009 Biological evaluation of medical devices — Part 5: Tests for in vitro cytotoxicity

Test Article: The sample preparation was in accordance with ISO 10993-12:2004. Extration condition is 24h at 37°C in culture medium. The volume of extract is determined by the standard surface area.

Cell lines: L-929 cells (mouse fibroblast)

Medium: 1640 medium (Gibco) with 10% FBS

Chromogenic reagent: MTT

General Procedure: The prepared cell suspension was seeded in 96-well culture plate, set blank control, negative control, the positive control and the test sample group, inoculated with 100μL of cell suspension per well. Set CO₂ incubator (5% CO₂, the same below) 37 °C cultured for 24 h, discard the original culture medium. Adding fresh cell culture medium in blank control group, added extracts of the negative control in negative control group, added positive control solution or positive control extracts in the positive control group, added the extracts of the experimental material in the test sample. The test volume is 100μL per well, set CO₂ incubator cultured for 24h. Observed cell morphology under the microscope. Added 20μL 5g/L MTT solution, cultured 4h, discarded liquid, added 150μL DMSO and shaken 10min. Measure the absorbance at 570 nm and 630 nm and RGR was calculated, to determine the cytotoxic response.

TEST RESULT(S):

Tests for in vitro cytotoxicity (test on extracts)

Viability of the all test sample is 50~79%, cell growth state in negative control is well, the cell viability is ≥100%, the cytotoxicity of the sample was grade 2

Test results only apply to samples

Cytotoxicity scale	Viability of the test sample/%
0	≥100
1	80~99
2	50~79
3	30~49
4	0~29

Tested by relevant SGS laboratory.

*** End of Report ***

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CERTIFICATE



Certification Name:

ISO 10993- 10: 2010

- * Animal Imitation, Test- Single- Exposure Test
- * Closed- Patch Test (buehler test)

Material:

One Sample of Woven Fabric
70D NYLON Taffeta Coating
TPU.

Test Result:

* Animal Imitation Test- Single- At Each Observation Time point. The Highest Integral is 0 (Evaluated as Negligible).

* Closed- Patch Test: The Sensitized Rate of the Sample on Guinea Pigs is 0% (evaluated as very gently).

Textile Laboratory	
Test Report	No: TX33263 /2016 /JA
	Date: June 20, 2016
	Page 1 of 5
Nan Ya Plastics Corporation No. 55, Wei Wang St., Shu Lin District, New Taipei, Taiwan, R.O.C.	
The following sample was submitted and identified by applicant as:	
Sample Description	: One sample of woven fabric 70D nylon taffeta coating TPU
Color	: Blue
Fiber Content	: Nylon Fabric Coating TPU
Fabric Weight	: 218g/m ²
Style No.	: F3TNBC0305808FK
Manufacturer/Vendor	: Nan Ya Plastics Corporation
Country of Origin	: Taiwan
Applicant	: Nan Ya Plastics Corporation
Sample Receiving Date	: Mar. 30, 2016
Test Performance Period	: Mar. 30, 2016 to June 17, 2016
Test Performed	: Selected test(s) as requested by applicant.
Test Results	: For further details, please refer to the following page(s).
Signed for and on behalf of SGS Taiwan Ltd.	
Chang Chia Hao, Ronnie Asst. Manager	

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www.sgs.com
Member of the SGS Group

CERTIFICATE



Certification Name:

ISO 10993- 10:2010

- * Animal imitation, Test-
Single- Exposure Test
- * Closed- Patch Test
(buehler test)

Material:

One Sample of Woven Fabric
70D NYLON Taffeta Coating
TPU

Test Result:

- * Animal Imitation Test- Single-At Each Observation Time point. The Highest Integral is 0 (Evaluated as Negligible).
- * Closed- Patch Test: The Sensitized Rate of the Sample on Guinea Pigs is 0% (evaluated as very gently).

Textile Laboratory

Test Report

No: TX33263/2016/JA

Date: June 20, 2016

Page 2 of 5

Test Results:

1 · Animal irritation test—Single-exposure test

Test Criterion : ISO 10993-10:2010

Test Type : Animal irritation test—Single-exposure test

Test environment : Rabbit room of conventional condition. Usage License No. SYXK (Zhe) 2011-0158, Room temperature 20.4°C ~23.1°C; Relative humidity 45.8%~69.2%.

Test animals : New Zealand White Albino Rabbit, supplied by Yinhai rabbit specialty cooperative organization of Tongxiang Zhejiang Province, Production License No. SCXK (Zhe) 2013-0056.

No. of animals/sex :

Observation period : 3/Not specified
Record the appearances of the application site at 1h, 24h, 48h and 72h following removal of the patches. Extended observation can be necessary if there are persistent lesions, in order to evaluate the reversibility or irreversibility of the lesions. This need not exceed a period of 14 d.

Test method : The sample was prepared into 0.5% solution with DI water. 0.5mL 0.5% solution was applied to clipped test site and occluded for 4 hours. Test site then wiped clean with lukewarm water.

Results : At each observation time point, the highest integral is 0.

Conclusions : According to irritation response categories in rabbit, the test sample is Negligible to the skin.

2 · Closed-patch test (Buehler test)

Test Criterion : ISO 10993-10:2010

Test Type : Closed-patch test (Buehler test)

Test environment : Guinea pig room of conventional condition. Usage License No. SYXK (Zhe) 2011-0158, Room temperature 22.1°C ~23.2°C; Relative humidity 54.9%~62.8%.

Test Animals : Guinea pigs, 300-500g. Supplied by Jianfei laboratory animal farm, Simen town, Yuyao city. Certificate No. SCXK (Zhe) 2012-0050.

No. of Animals/Sex :

Sample Pretreatment : Take the sample into extracts liquid before test.

Textile Laboratory

Test Report

No: TX33263/2016/JA

Date: June 20, 2016

Page 3 of 5

Test Procedure :

1. Closely clip the fur on the left upper back of the guinea pigs 24h prior to test. The scope is 3cm×3cm.

2. Induction phase: Administer the test sample by topical application to the clipped left upper back region of each animal using appropriate patches soaked in the test sample. Remove the restrainer of any occlusive dressings and patches after 6 h. Perform this procedure on three days a week for three weeks. Treat the control animals similarly, using the blank liquid alone.

3. Challenge phase : At 14 d after the last induction application, challenge all test and control animals with the test sample. Administer the test sample by a single topical application to a clipped untested area of each animal using appropriate patches soaked in the test sample. Remove the restrainer and occlusive dressings and patches after 6 h.

4. Observation of animals : Observe the skin reaction at 24h and 48h after the primary challenge.

Results :

Conclusions :

The sensitized ratio of the sample on guinea pigs is 0%.

No skin allergies was found for the sample.

3 · Results schedule

Table 1—score of skin reaction

Animal number	skin application sites	1h				24h				48h				72h			
		Erythema and edema for matting	Total score	Erythema and edema for matting	Total score	Erythema and edema for matting	Total score	Erythema and edema for matting	Total score	Erythema and edema for matting	Total score	Erythema and edema for matting	Total score	Erythema and edema for matting	Total score	Erythema and edema for matting	Total score
1	Front of Left (Test sample)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Front of Right (control)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Behind Left (control)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Behind Right (Test sample)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Front of Left (Test sample)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Front of Right (control)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Behind Left (control)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Behind Right (Test sample)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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CERTIFICATE



Certification Name:

ISO 10993- 10:2010

- * Animal imitation, Test-
Single- Exposure Test
- * Closed- Patch Test
(buehler test)

Material:

One Sample of Woven Fabric
70D NYLON Taffeta Coating
TPU

Test Result:

- * Animal Imitation Test- Single-At Each Observation Time point. The Highest Integral is 0 (Evaluated as Negligible).
- * Closed- Patch Test: The Sensitized Rate of the Sample on Guinea Pigs is 0% (evaluated as very gently).

Textile Laboratory

Test Report

No: TX33263/2016/JA

Date: June 20, 2016

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3	Front of Left (Test sample)	0	0	0	0	0	0	0	0	0	0	0	0
	Front of Right (control)	0	0	0	0	0	0	0	0	0	0	0	0
	Behind Left (control)	0	0	0	0	0	0	0	0	0	0	0	0
	Behind Right (Test sample)	0	0	0	0	0	0	0	0	0	0	0	0
	Average of score (control)	0			0			0			0		0
	Average of score (Test sample)	0			0			0			0		0

Table 2 — Primary or cumulative irritation index categories in rabbit

Mean score	Response category
0~0.4	Negligible
0.5~1.9	Slight
2~4.9	Moderate
5~6	Severe

Table 3. The result of the skin sensitization test

groups	Number of animals	Induction dose	Challenge dose	observation time	Sensitization Intensity							Number of positive animals	Rate of sensitization %	
					erythema				edema					
					0	1	2	3	4	0	1	2	3	
experiment group	16	observation time	observation time	24h	16	0	0	0	0	16	0	0	0	0
				48h	16	0	0	0	0	16	0	0	0	0
Negative controls	16	/	/	24h	16	0	0	0	0	16	0	0	0	0
				48h	16	0	0	0	0	16	0	0	0	0
Positive controls	16	0.5 %	0.3 %	24h	0	8	6	2	0	2	10	4	0	14
				48h	2	9	5	0	0	5	9	2	0	12

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Textile Laboratory

Test Report

No: TX33263/2016/JA

Date: June 20, 2016

Page 5 of 5

Table4 —Grading of skin sensitization intensity

rate of sensitization %	Sensitization Intensity
0 ~ 8	Very Gently
9 ~ 28	Gently
29 ~ 64	Moderate
65 ~ 80	Severe
81 ~ 100	Very Severe

Note: when the rate of sensitization is 0% · the sensitization intensity can be determine to 'no skin allergies was found'.

Tested by relevant SGS laboratory.

*** End of Report ***

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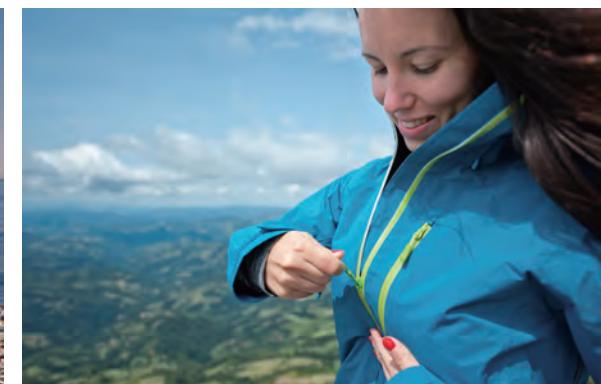
M

MISCELLANEOUS

Product Feature & Information:

- * Extremely waterproof, transparent, easy to printing, wind- break, anti-aging, weather resistant, long- term skin contact permissible, and anti- bacterial.
- * Repeated high pressure air- filled, light, biocompatible (without solvent, without any cells harmed after long- term skin contact), compatible with anti- microbes.
- * Without organic solvents, heavy metals, azo dyes, passing the 168 substances of REACH SVHC (Substances of Very High Concern, SVHC) screening under the EU REACH regulation, no allergic reaction caused by exposure to TPU leather, natural, and passing the bio- compatibility test ISO- 10993, suitable for chronic bedridden patients.

Our quality, insist on providing you most concerned about



FOR GLASS LAMINATION

ALIPHETIC TYPE TPU FLIM FOR GLASS LAMINATION

Specification:

Material No HMGL – 1070-038 / HMGL – 1070-076

Thick 0.38mm / 0.76mm

Color Clear

Width 100cm/ 120cm/ 150cm

Feature:

- * High security to building which will get more seismic- resistance, anti- theft, explosion-proof than general glass window.
- * UV yellowing & high transparent.
- * The emboss roller transfer make film get double-sided exhaust effect which suits process and not enclose the air.

Application:

- * Building& Furniture.
- * Car windshield.
- * Used in explosion-proof & bullet-proof.

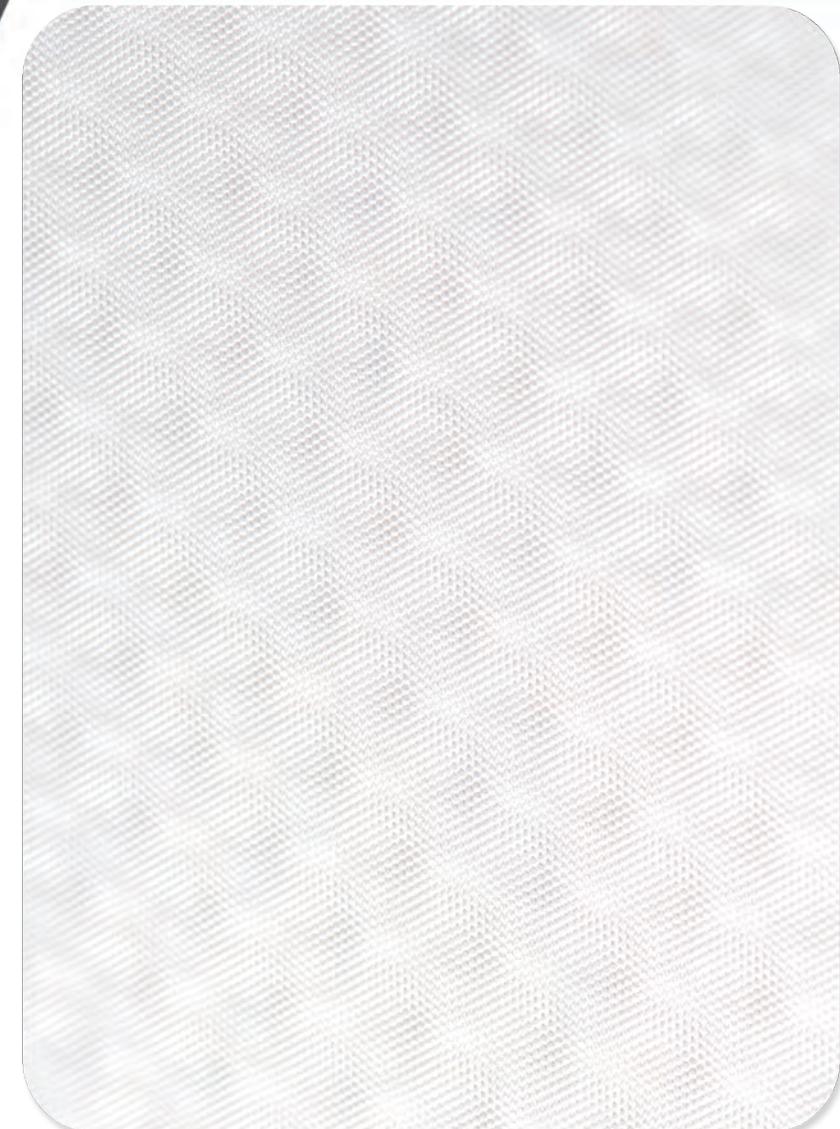


Laminated Glass TPU Film

Physical Properties:

Item of Test	Unit	Method	Result
Gauge	mm		0.38 0.76
Hardness	Shore A	Shore A	75A
100% Modulus	Kg/cm ²	JIS-7311	39.4
300% Modulus	Kg/cm ²	JIS-7311	84.43
Tensile strength	Kg/cm ²	JIS-7311	200↑
Elongation	%	JIS-7311	400↑
Tear strength	Kgf/mm	JIS-7311	6.4
Specific gravity		JIS-7311	1.1
Transmittance	%	JIS-7105	90↑
Melting Temperature(DSC)	°C	ASTM D 3418	110~120

keep cool area and no direct sunlight place, bellow 30°C & 50% relative humidity



CAR PROTECTOR

CAR PROTECTOR FILM TPU FILM

Specification:

Material No HMPF – 1080
Thick 0.05mm - 0.20mm
Color Clear
Width 100cm/ 120cm/ 150cm

Feature:

- * The highly protecting car from our TPU FILM which will get the perfect adhesive, transparent, optical and even get the low- temperature impact protection.
- * UV yellowing& high transparent
- * The emboss roller transfer make film get double-sided exhaust effect which suits process and not enclose the air.

Application:

- * Vehicle exterior the part of (Hood, Bumpers, Fenders, Doors, Rear Quarter, Rear Deck, Roof etc.)
- * Electronics protect film



Car Protector TPU Film

Physical Properties:

Item of Test	Unit	Method	Result
Gauge	mm		0.05-0.20
Hardness	Shore A	ASTM D 2240	90A
Specific gravity	--	ASTM D 792	1.1
100% Modulus	Kg/cm ²	JIS-7311	90 ↑
300% Modulus	Kg/cm ²	JIS-7311	280 ↑
Tensile Strength	Kg/cm ²	JIS-7311	400 ↑
Elongation	%	JIS-7311	300 ↑
Tear Strength	Kgf/mm	JIS-7311	6 ↑
UV Yellowing	Grade	ASTM D 4329	5 ↑
Transmittance	%	JIS-7105	90 ↑

*keep cool area and no direct sunlight place, bellow 30°C & 50% relative humidity

TPU HOTMELT FILM

TPU HOTMELT FILM POLYETHER & POLYESTER TYPE'S

Specification:

Material No HMES – 1060
Thickness 0.15mm / 0.10mm / 0.05mm
Color Clear
Width 150cm
Package 100 yards/roll

Feature:

* NAN YA Polyurethane type hot melt film which has high extension, high adhesive strength and washable.

Application:

- * Functional Spandex adhesive
- * Tights inner & under wear.
- * Apparel intimates.
- * Shoes material.



Tpu Hotmelt Film for Polyether Type

Physical Properties:

Item of Test	Unit	Method	Result
Gauge	mm		0.05mm 0.10mm 0.15mm
Hardness	Shore A	ASTM D 2240	60A
100% Modulus	Kg/cm ²	JIS-7311	18±2
300% Modulus	Kg/cm ²	JIS-7311	26±3
Tensile Strength	Kg/cm ²	JIS-7311	100 ↑
Elongation	%	JIS-7311	1000 ↑
Melting point	°C	ASTM D 3418	105
Specific gravity		ASTM D 792	1.19
UV yellowing(Grade)		ASTM D 4329	4 ↑

keep cool area and no direct sunlight place, bellow 30°C & 50% relative humidity.

O

OUTDOOR

Our quality, insist on providing you most concerned about



Product Feature & Information:

- * Extremely waterproof, transparent, easy to printing, wind-break, anti-aging, weather resistant, long- term skin contact permissible, and anti- bacterial.
- * Repeated high pressure air- filled, light, biocompatible (without solvent, without any cells harmed after long- term skin contact), compatible with anti- microbes.
- * Without organic solvents, heavy metals, azo dyes, passing the 168 substances of REACH SVHC (Substances of Very High Concern, SVHC) screening under the EU REACH regulation, no allergic reaction caused by exposure to TPU leather, natural, and passing the bio- compatibility test ISO- 10993, suitable for chronic bedridden patients.

FOR OUTDOOR

TPU FILM TPU/ PU SYNTHETIC

Specification:

Material No	Topular Series
Color	Customized
Emboss	Release paper customized
Fabric	Nylon 70D~1680D
MOQ	300y

Feature:

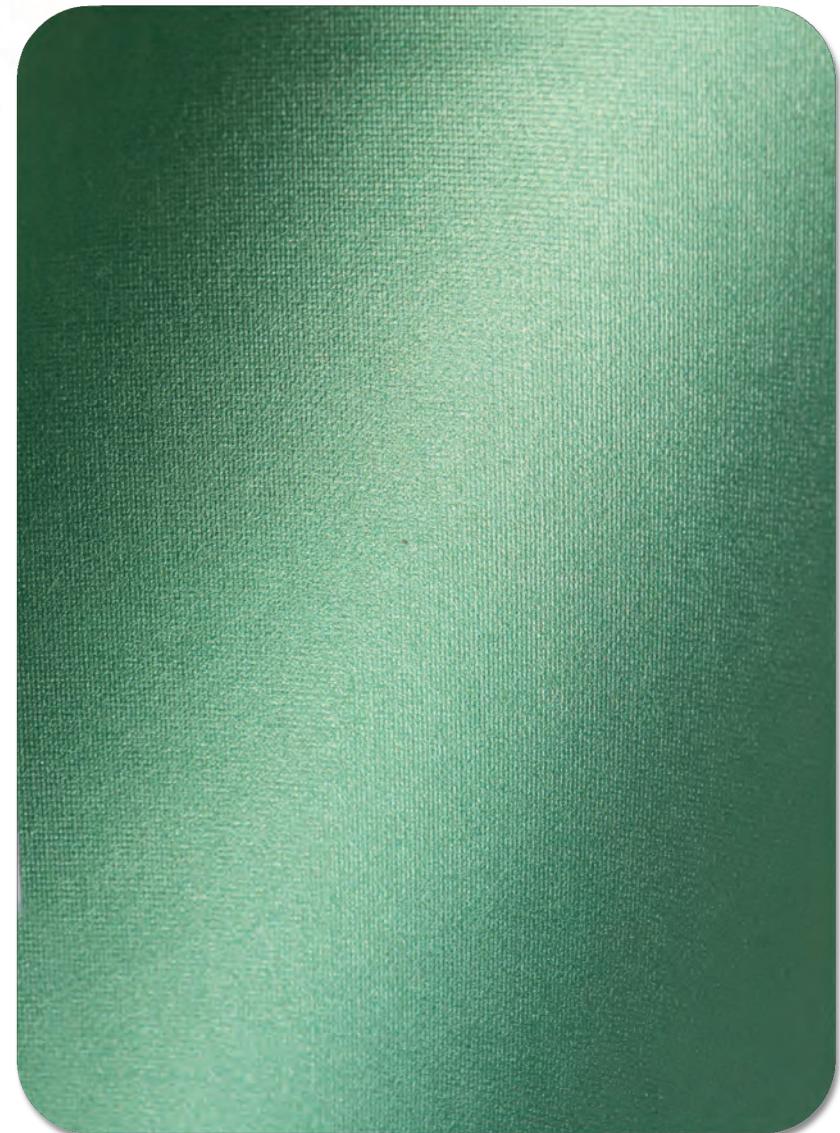
- * Suitable to overlap H-F Welding, etc
- * Easily to process can TPU+PU/ PU+TPU
- * Have waterproof function

Application:

- *Water / Outdoor sports equipment
- *Briefcase
- *Bags & Luggage



TPU Film TPU/ PU Synthetic



FOR OUTDOOR

TPU POPLON

Specification:

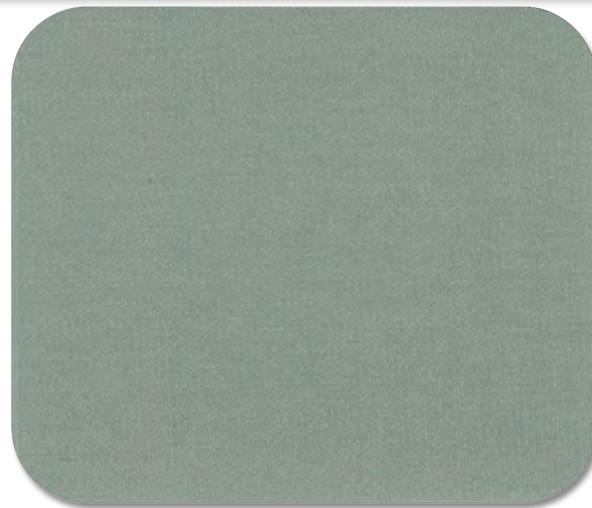
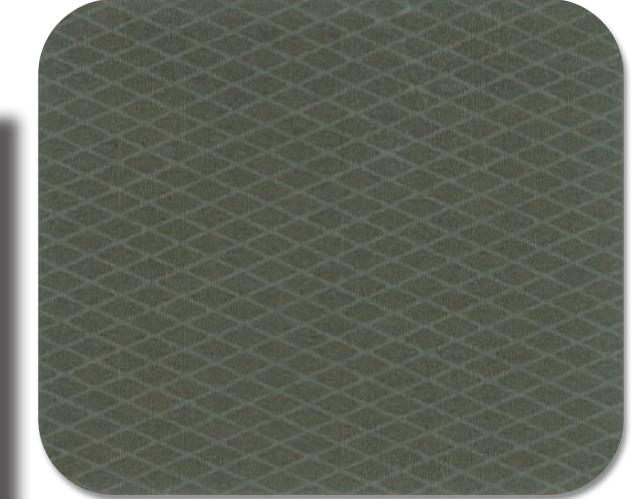
Material	Poplon
Spec	Customized
Color	Transparent
Emboss	Roller
MOQ	300y

Feature:

- * Can single side or double side lamination.
- * Perfect physical properties, easy to process.

Application:

- * Briefcase, Bags, Luggage.
- * Side strap& Reinforcement material for shoes.
- * Air mattress, Medical mattress.



FOR OUTDOOR

TPU FILM SUNRISE

Specification:

Material No	Sunrise
Thick	0.50mm
Color	Only transparent and black color are available
Emboss	Roller
Width	54"
MOQ	100y

Feature:

- * For no-sew, fusing operation.
- TPU film easy to process
- * Carbon fiber appearance effect

Application:

- * Shoes upper reinforcement.
- * Shoes decoration.



FOR OUTDOOR

TPU FOAM

Specification:

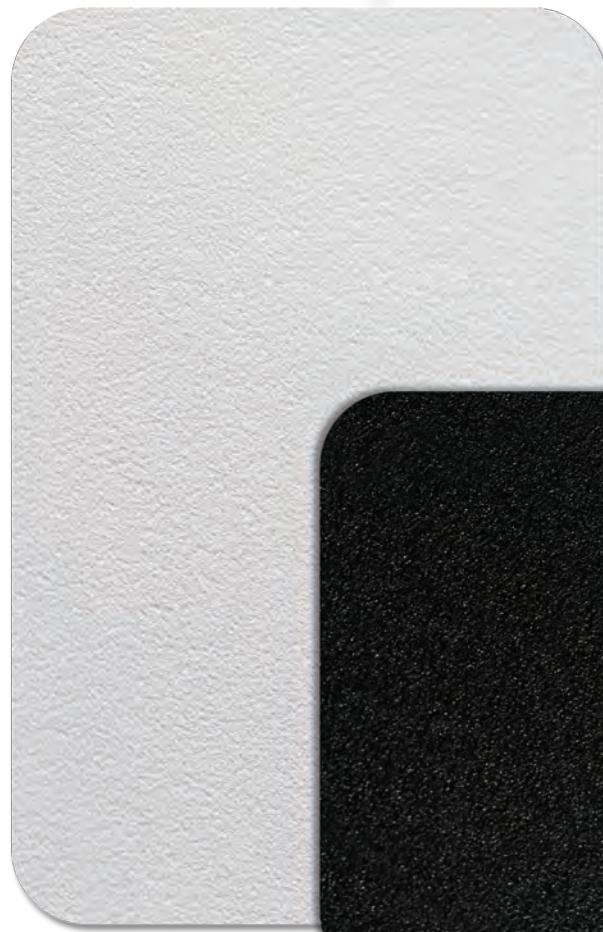
Material No TPU FOAM
Thick 1.6mm
Color White& black
Emboss Roller
Width 54"
MOQ 1,000y

Feature:

- * Good for high frequency process
- * Perfect hand touch

Application:

- * Applicable to environmental friendly sponge, packing, filler etc.



S

SHOES MATERIAL

Product Feature & Information:

- * Extremely waterproof, transparent, easy to printing, wind- break, anti-aging, weather resistant, long- term skin contact permissible, and anti- bacterial.
- * Repeated high pressure air- filled, light, biocompatible (without solvent, without any cells harmed after long- term skin contact), compatible with anti- microbes.
- * Without organic solvents, heavy metals, azo dyes, passing the 168 substances of REACH SVHC (Substances of Very High Concern, SVHC) screening under the EU REACH regulation, no allergic reaction caused by exposure to TPU leather, natural, and passing the bio- compatibility test ISO- 10993, suitable for chronic bedridden patients.

Our quality, insist on providing you most concerned about



TPU FILM ULTRA IMAGE HM.

Specification:

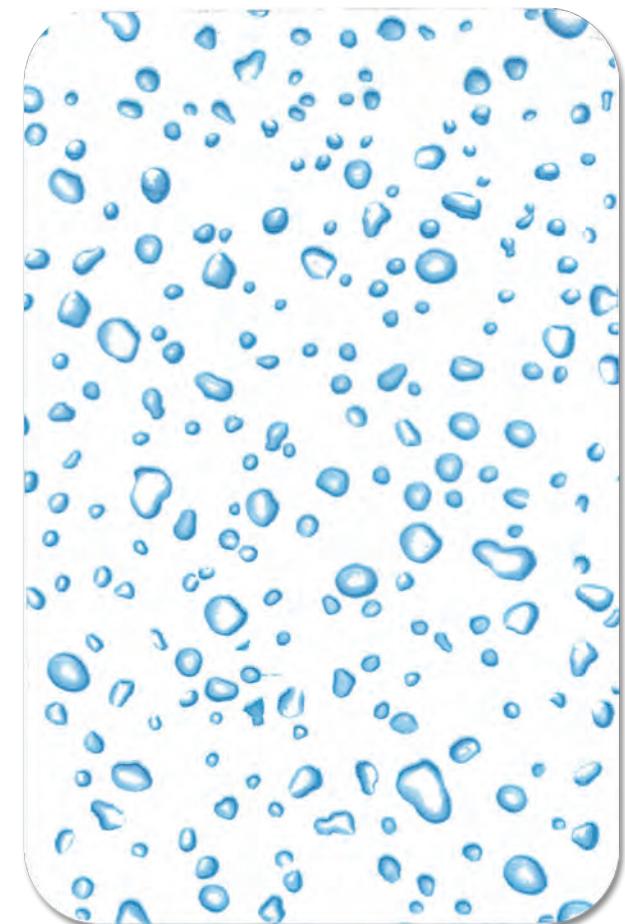
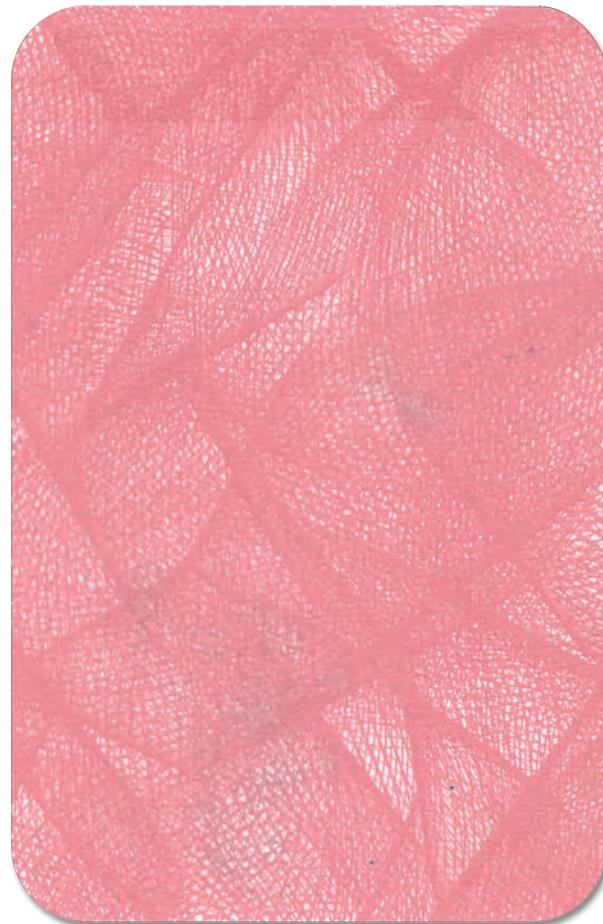
Material No	Ultra Image HM
Thick	0.40mm
Color	Customized
Emboss	Release paper customized
Width	54"
MOQ	100y

Feature:

- * New developing Dry PU + hot-melt film
- * For seamless, no-sew, weldable operation
- * Hot melt film combined together already, easy to process.

Application:

- * Shoes material
- * Water / Outdoor sports equipment
- * Briefcase , Bags , Luggage



TPU FILM UPPITOL

Specification:

Material No Uppitol
Spec 0.50mm*54"
Color Customized
Emboss Release paper
 customized
MOQ 100y

Feature:

- * Lots of emboss can select.
- * Hot melt can combined together, easy to process.

Application:

- * Upper of shoes, Logo, Vacuum forming Side strap for shoes.
- * Air bag / bed , Handbag
- * Suitable to melt cutting, etc.



PASTER NEON LX HM TPU FILM

Specification:

Material	Paster Neon LX HM
Thick	0.3-0.4mm
Color	Customized
Emboss	Customized
Width	54"
MOQ	100y

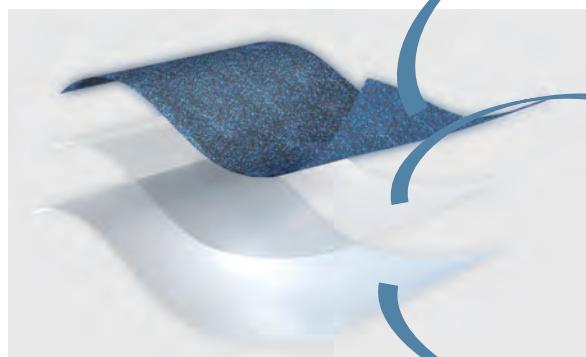


Feature:

- * With hot melt film combined, easy to process.
- * Special PP synthetic paper with Neon & translucent effect.

Application:

- * Shoes materials.



Dry PU

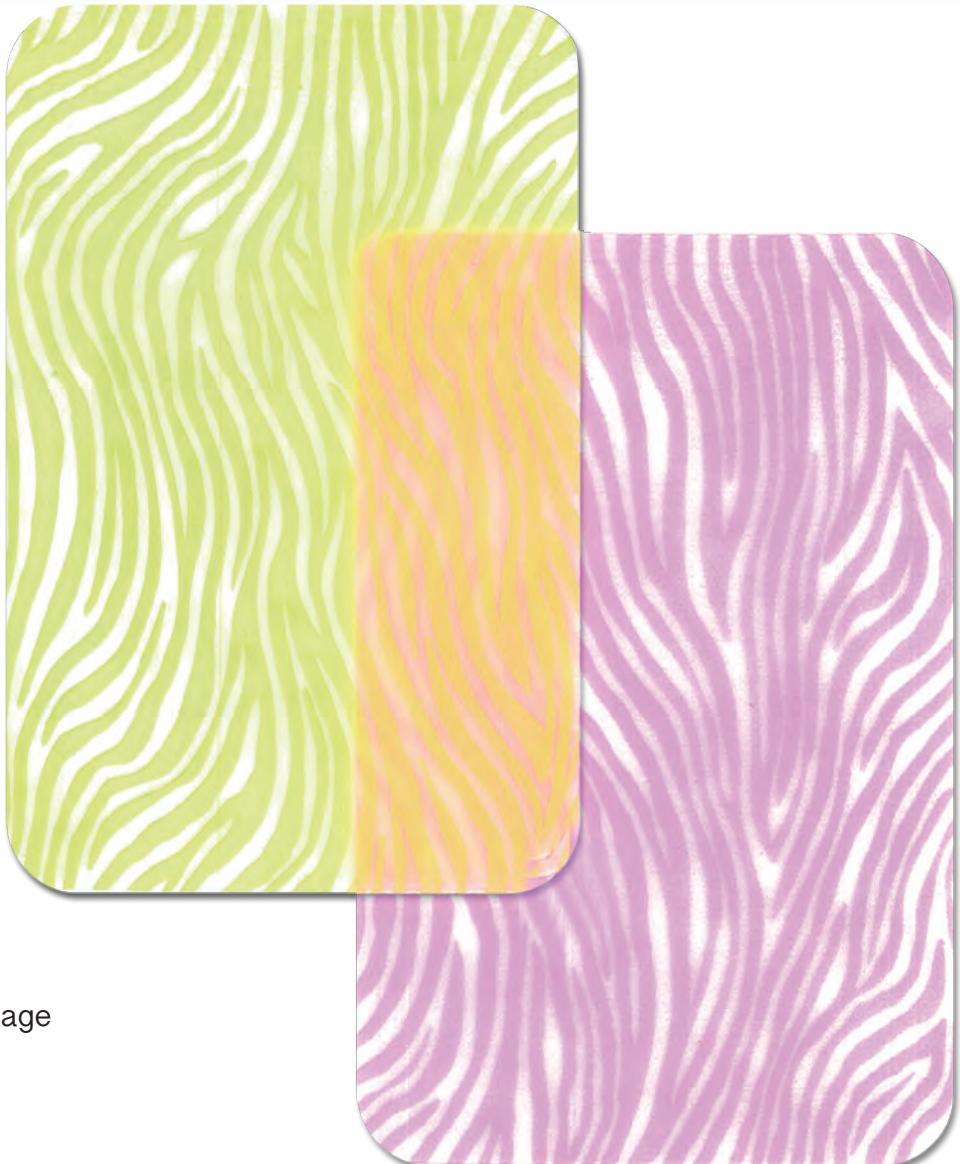
- * Customized for color & release paper

Hot Melt Film (0.1-0.2mm)

- *Coating with dry pu fabric

PP Synthetic Paper

- *Easily peeling when roll package



CUTTER MATESHINE HM TPU FILM

Specification:

Material	Cutter Mateshine HM
Thick	0.4-0.6mm
Color	Customized
Emboss	Customized
Width	54"
MOQ	100y

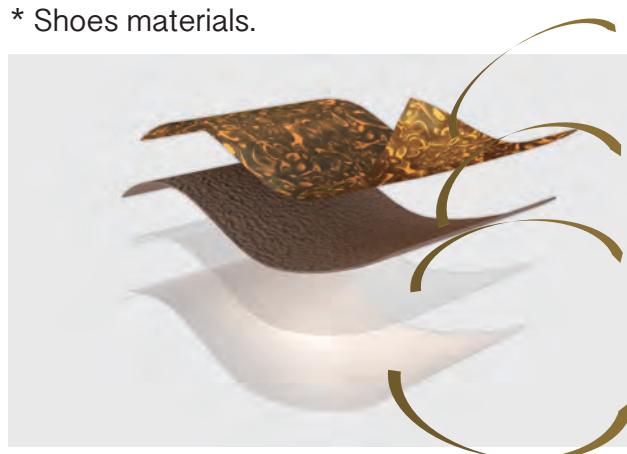


Feature:

- * For seamless, no sew, fusing operation.
- * 3D release paper with Mateshine color effect. Only 4 basic colors available.

Application:

- * Shoes materials.



Dry PU

- * Customized for color & release paper

Wet PU (0.25mm~0.4mm)

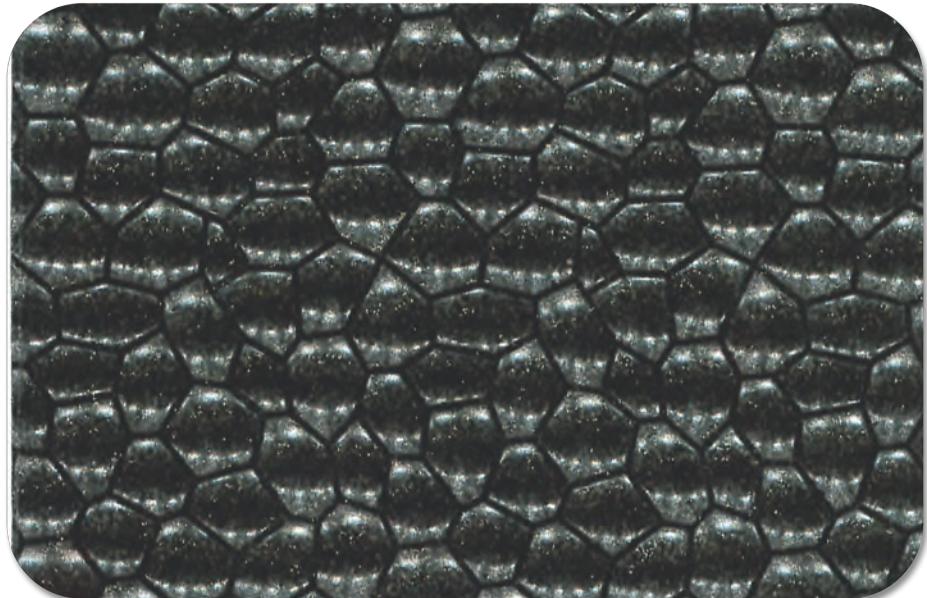
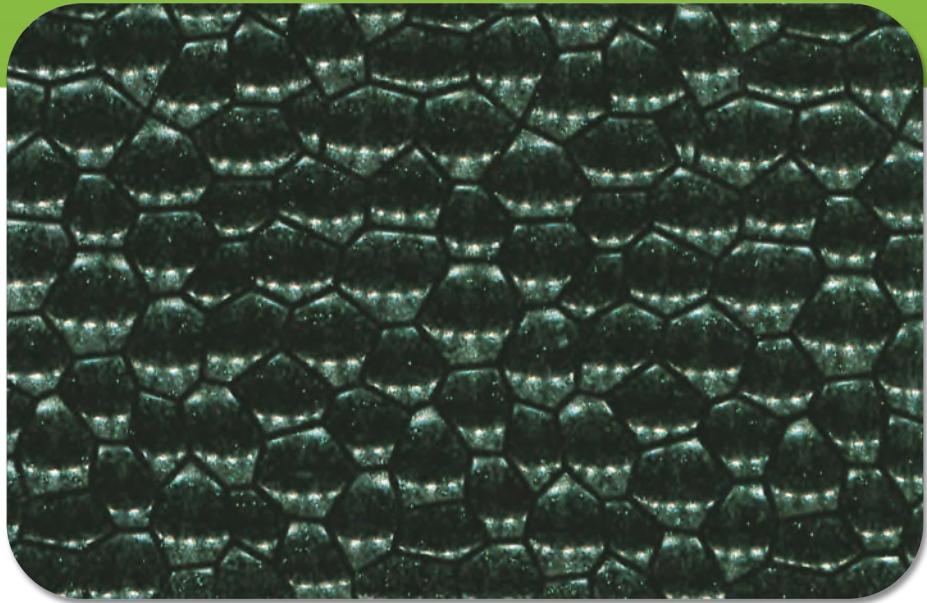
- * Promote hand touch feeling

Hot Melt Film (0.1-0.2mm)

- * Coating with dry PU fabric

PP Synthetic Paper

- * Easily peeling when roll package



ULTRA NEON HM TPU FILM

Specification:

Material	Ultra Neon HM
Thick	0.4-0.7mm
Color	Customized
Emboss	Customized
Width	54"
MOQ	100y



Feature:

- * With hot melt film combined, easy to process.
- * Geometry design and Neon color effect. Other colors are available.

Application:

- * Shoes materials.



Dry PU

- * Customized for color & release paper

TPU film (0.1-0.4mm)

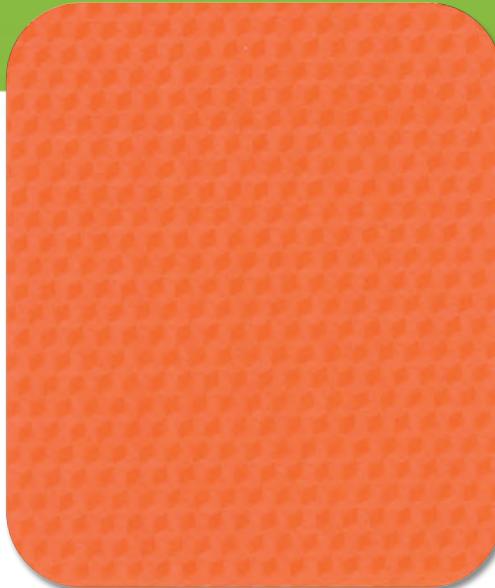
- * Perfect physical properties & promote touch feeling

Hot Melt Film (0.1-0.2mm)

- * Coating with dry PU fabric

PP Synthetic Paper

- * Easily peeling when roll package



TAIWAN NAN YA TPU FILM SPECIFICATION

Product Name	Feature	Fabric	Application	Specification	Unit	Remark
TPU FILM	ETHER (ANTI- HYDROLYSIS)	CUSTOMIZED	Water proof bag/ Clothes/ Medical ect	0.10- 0.80 mm" 54" - 60"	YARD	MOQ 300Y
	ETHER (HYDROLYSIS)		Water proof bag/ Clothes/ Shoes	0.10- 0.60 mm" 41" - 58"		
TPU HOT MELT	ETHER (ANTI- HYDROLYSIS)	CUSTOMIZED	Any adhesive for dry or wet PU leather	0.05- 0.30 mm" 39" - 56"	YARD	MOQ 300Y
	ETHER (HYDROLYSIS)					
SIDED LAMINATION TPU NYLON	ETHER (ANTI- HYDROLYSIS)	POLY 75D~300D	Medical bed	0.28- 0.50 mm" 46"- 58"	YARD	MOQ1000Y
		NYLON 70D		0.17- 0.28 mm" 45"- 58"		
		NYLON 210D		0.28- 0.35 mm" 46"- 62.5"		
		NYLON 420D		0.30- 0.55 mm" 58"		
		NYLON 840D		0.40/ 0.50 mm" 58"		
	ETHER (HYDROLYSIS)	POLY 750D	Medical bed	0.23 mm" 4.15"- 62"	YARD	MOQ 300Y
		POLY 300D		0.50 mm" 54"- 58"		
		NYLON 70D		0.17- 0.3 mm" 41.5"- 62.5"		
		NYLON 210D		0.28/ 0.35 mm" 58"/ 60"		
		NYLON 420D		0.32- 0.48 mm" 58"		
DOUBLE- SIDED LAMINATION TPU NYLON	ETHER (ANTI- HYDROLYSIS)	NYLON 1680D	Medical bed	0.60 mm" 54"	YARD	MOQ 300Y
		NYLON 210D		0.40/ 0.45/ 0.60 mm" 58"		
		NYLON 420D		0.45- 0.70 mm" 54" / 58"		
		NYLON 840D		0.60 mm" 58"		
		NYLON 1680D		0.80 mm" 54"		
	ETHER (HYDROLYSIS)	P2000D	Medical bed	1.20/ 1.40 mm" 58"	YARD	MOQ 300Y
		P750 / 1200D		1.00 mm" 54"		
		NYLON 210D		0.4 mm" 58"		
		NYLON 420D		0.45- 0.50 mm" 54" / 58"		
		NYLON 840D		0.50- 1.30 mm" 54" / 58"		
		NYLON 1680D	Medical bed	0.70- 0.80 mm" 54"	YARD	MOQ 300Y

NAN YA MATERIAL CHALLENGE NEW VISION WITH YOU



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