

# Thermoplastic Sheet —— Product Manual

Wellenhof GmbH Oeserstr.28, D-65934 Frankfurt am Main , Germany

Xiaoling Jia ,Geschäftsführerin
Tel: +49 69 9784 4199
Mob: +4917645370861
info@wellenhof.com
www.wellenhof.com / Wellenhof-ant.com

PRODUCT MANUAL

# PERFORMANCE REVIEW





# **Eco-friendly**

It can be recycled, partially replace thermosetting materials, and reduce the pressure on the earth's environment to a certain extent.



## Flame Retardance

Passed the flame retardant test of different industries.



## Security

Passed ROSH, REACH and other authoritative testing and certification



## **UV** resistance

Excellent weather resistance, to meet the different needs of customers.



## Impact Resistance

Stains on the surface of the board can be removed with the appropriate cleaning agents without color staining, fading or surface damage.



### **Chemical Resistant**

More resistant to concentrated chemicals than other thermoplastic materials.



## Easy-to-Clean

Stains on the surface of the board can be removed with the appropriate cleaning agents without color staining, fading or surface damage.



# Various Molding

High-performance thermoplastic sheets offer excellent thermoforming properties, greater responsiveness to design and man-



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ROSH REACH

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# WH-A39

#### **INTRODUCTION:**

WH-A39 is a high flame retardant, high modulus, high toughness aerospace sheet specifically formulated to meet the safety needs of the aviation

#### **SUGGESTED APPLICATION:**

·Airline Desktop
 ·Seating Components
 ·Molded Strips
 ·Lifejacket Cover
 ·Monitor Shroud
 ·Seating Components
 ·Molded Strips
 ·Tray Table
 ·Kickboard

#### **GENERAL INFORMATION:**

WH-A39 is a PVC/acrylate modifier with a density of 1.33, extremely low moisture absorption, dimensional stability after molding, and no cracking. It has higher impact strength and modulus and is significantly more resistant to a wide range of corrosive chemicals and cleaning solutions. Passed FAR 25.853 (CCAR 25.853)(a) Flame retardant testing for aerospace interior materials; passed REACH and ROHS testing. High flame retardancy, low smoke emission and low smoke toxicity. To improve passenger safety.

#### **FEATURES:**

- ·Extremely high flame retardant, self-extinguishing off fire;
- ·High modulus, stretch molding, thin wall still provides good stiffness;
- ·Dimensional stability after molding, no cracking at low temperature;
- ·Matte texture;

#### **Technical Parameters**

Name	Test Method	Typical Value	Unit
PHYSICAL			
Specific Gravity	ASTM D792	1.33	g/cm³
MECHANICAL			
Izod Impact, notched	ASTM D256	900	J/m
Flexural Modulus	ASTM D790	2450	MPA
Tensile Strength	ASTM D683	46	MPA
Flexural Strength	ASTM D790	72	MPA
Hardness Rockwel	ASTM D785	97	R
FLAMMABILITY			
Vertical Burn, 12s	CCAR 25.853(a)	Pass	
Vertical Burn	UL94	5VA	

#### Applicable processing equipment:

- 1.Conventional molding equipment;
- 2.Conventional bending molding;
- \*The above processing data is provided by the customer for reference only.

# **WH-A47**

#### **INTRODUCTION:**

WH-A47 is a high flame retardant, high tensile, high tenacity aerospace sheet specifically formulated to meet the safety needs of the aviation industry.

#### **SUGGESTED APPLICATION:**

- ·Airline Seat Armrests
- ·Airline Seat Back Plate
- ·Aircraft Internal Components
- Internal Components of Transportation Vehicles

#### **FEATURES:**

- ·Extremely high flame retardant, etc;
- ·Easy molding, dimensionally stable after processing;
- ·High toughness, good processability;
- ·Good low temperature performance;

#### GENERAL INFORMATION:

WH-A47 is a PVC/acrylate modified material. It has a density of 1.32, low hygroscopicity, is dimensionally stable after molding, and does not crack. Pre-drying is usually not required. Provides excellent impact resistance, better ductility and more uniform molding, and significantly higher resistance to a wide range of corrosive chemicals and cleaning solutions. Passes FAR 25.853 (CCAR 25.853) (a) Flame retardant testing for aerospace interior materials; REACH and ROHS tested. High flame retardancy, low smoke emission and low smoke toxicity. To improve passenger safety.

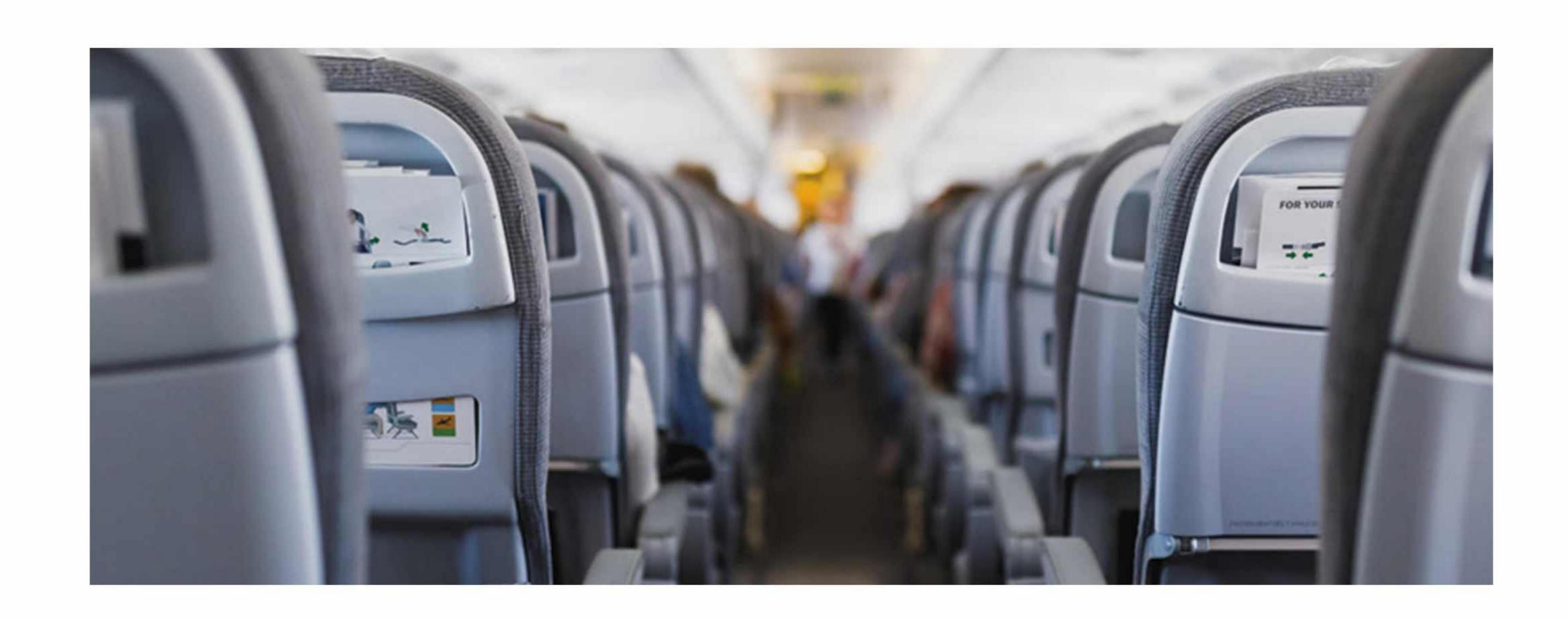
#### **Technical Parameters**

Name	Test Method	Typical Value	Unit
PHYSICAL			
Specific Gravity	ASTM D792	1.32	g/cm³
MECHANICAL			
Izod Impact, notched	ASTM D256	800	J/m
Flexural Modulus	ASTM D790	2200	MPA
Tensile Strength	ASTM D683	42	MPA
Flexural Strength	ASTM D790	66	MPA
Hardness Rockwel	ASTM D785	94	R
FLAMMABILITY			
Vertical Burn, 12s	CCAR 25.853(a)	Pass	
Vertical Burn	UL94	5VA	

#### Applicable processing equipment:

- 1.Conventional molding equipment;
- 2.Conventional bending molding;
- \*The above processing data is provided by the customer for reference only.

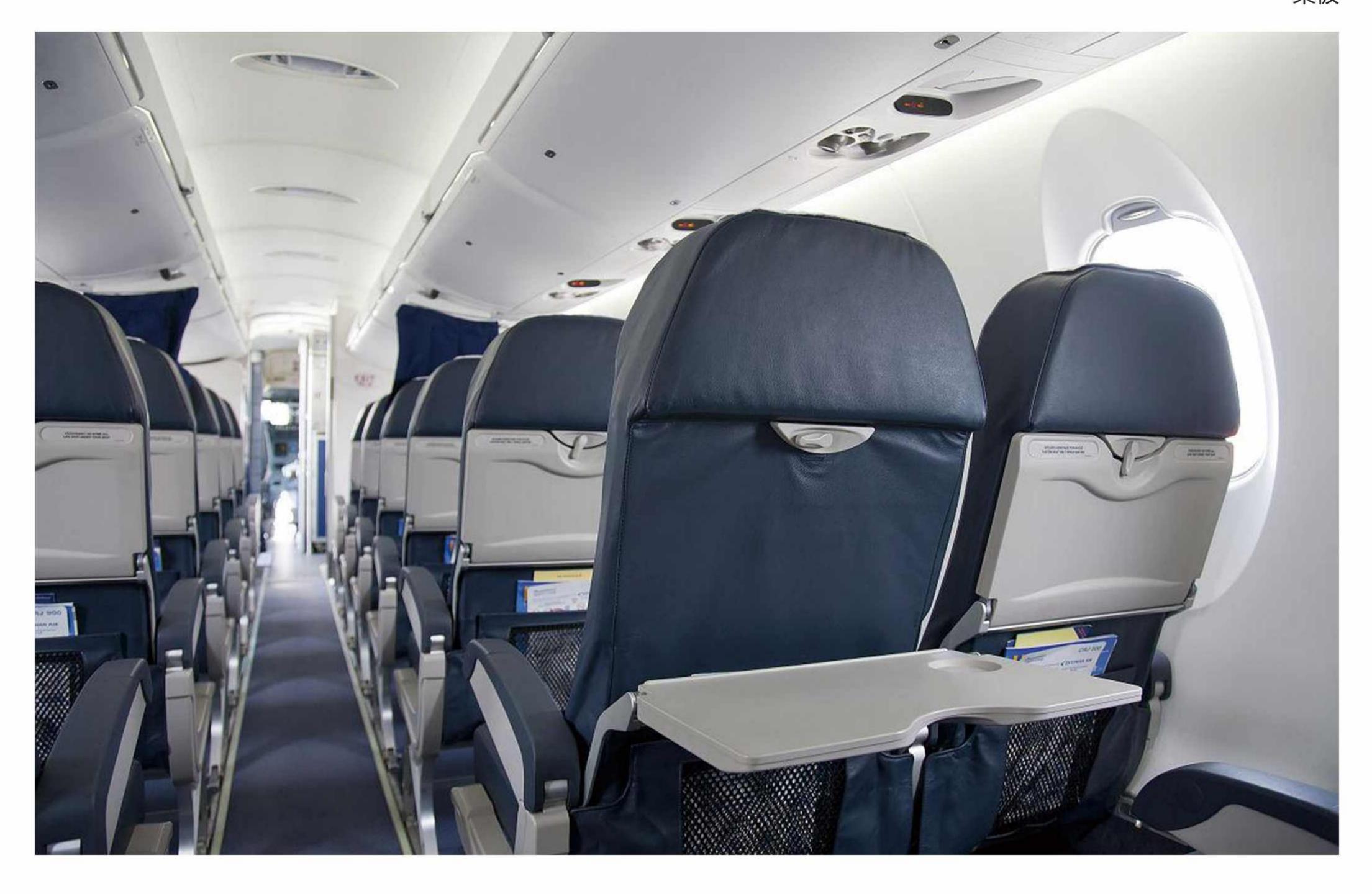








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**GENERAL INFORMATION:** 

WH-A9 is a PVC/acrylate modified material. Its

flame retardant rating reaches UL94-5VA

standard; it has passed REACH and ROHS tests.

Its thermoforming cycle time is equivalent to

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# WH-A9

#### INTRODUCTION:

WH-A9 is a proprietary thermoplastic sheet that is cost-competitive with other grades of thermoplastic sheet while offering improved performance.

#### SUGGESTED APPLICATION:

- ·Medical housings
- ·Laser, electronic equipment housings, covers
- ·Robot housings ·Transit kits

#### **FEATURES:**

- ·Flame retardant, up to UL94 V-0 grade;
- ·High mechanical strength, high modulus with very high notch punching performance, especially suitable for large-span blister parts physical requirements. Used for shells, shrouds and other parts, can be arbitrarily punched, windowed and screwed.

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- ·Good electrical properties;
- ·Good chemical resistance, antimicrobial properties, easy to clean;

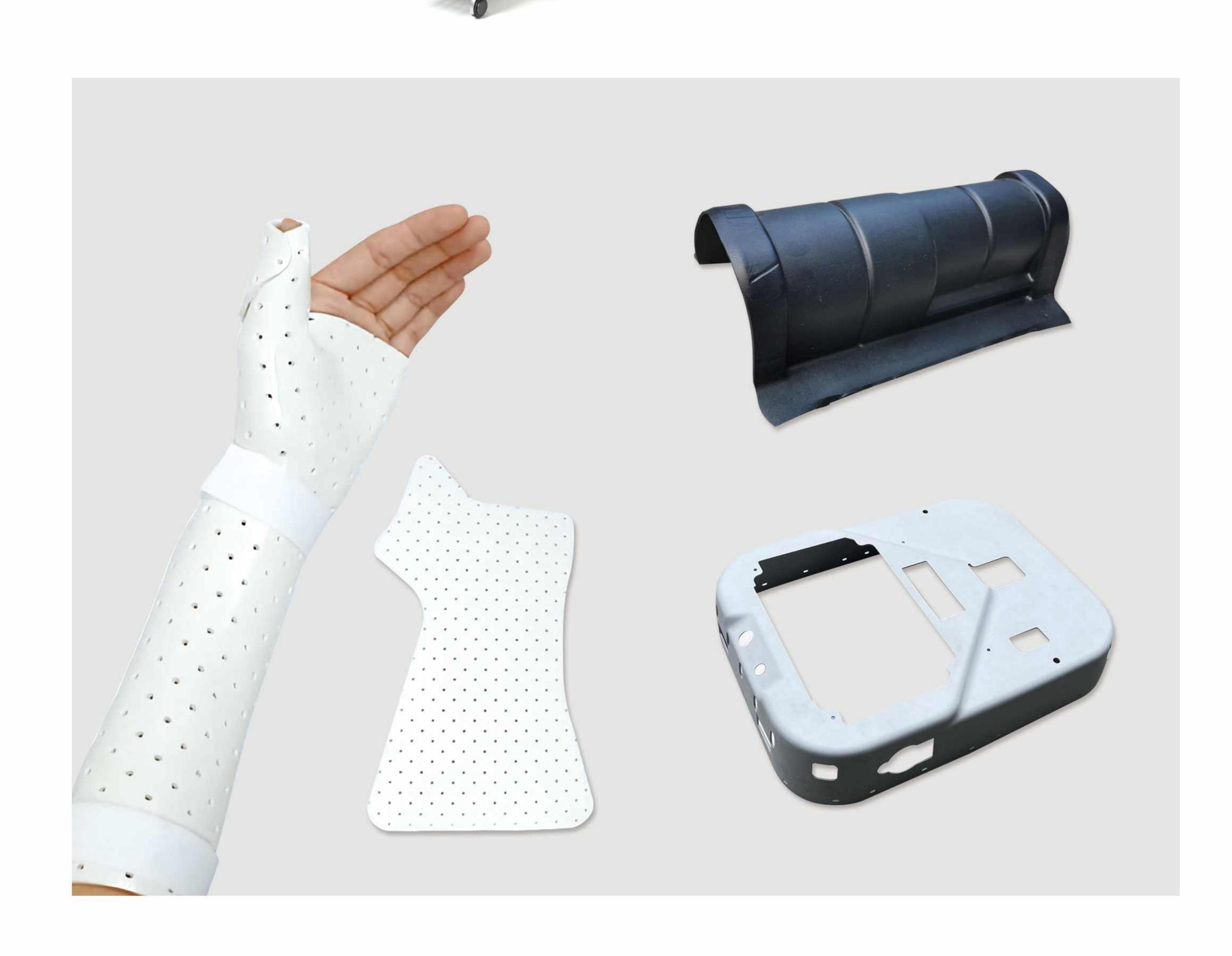
#### **Technical Parameters**

Name	Test Method	Typical Value	Unit
PHYSICAL			
Specific Gravity	ASTM D792	1.33	g/cm³
MECHANICAL			
Izod Impact, notched	ASTM D256	900	J/m
Flexural Modulus	ASTM D790	2600	MPA
Tensile Strength	ASTM D683	50	MPA
Flexural Strength	ASTM D790	70	MPA
Hardness Rockwel	ASTM D785	100	R
FLAMMABILITY			
0.71mm	UL94	5VA	

#### Applicable processing equipment:

- 1.Conventional molding equipment;
- 2.Conventional bending molding;
- \*The above processing data is provided by the customer for reference only.





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# WH-A66

#### INTRODUCTION:

WH-A66 is a thermoplastic sheet with a special extrusion process that eliminates internal stresses. It is dimensionally stable after molding, does not crack and never curls. It can be used for blister molding, or UV with backing adhesive, with bright and solid coloring.

#### SUGGESTED APPLICATION:

- ·Large sports and entertainment venues, shopping malls, schools and kindergartens,
- ·Intelligent mobile building interiors;
- ·Home Decoration

#### **FEATURES:**

- ·Dimensionally stable, no cracking or curling;
- Easy to clean;
- ·Environmentally friendly and safe;
- ·Thermoformable, customisable in a variety of colours and surface textures, paint-free;

#### **Technical Parameters**

Name	Test Method	Typical Value	Unit
PHYSICAL			
Specific Gravity	ASTM D792	1.34	g/cm³
MECHANICAL			
Izod Impact, notched	ASTM D256	800	J/m
Flexural Modulus	ASTM D790	2400	MPA
Tensile Strength	ASTM D683	45	MPA
Flexural Strength	ASTM D790	63	MPA
Hardness Rockwel	ASTM D785	94	R
FLAMMABILITY			
0.71mm	UL94	5VA	

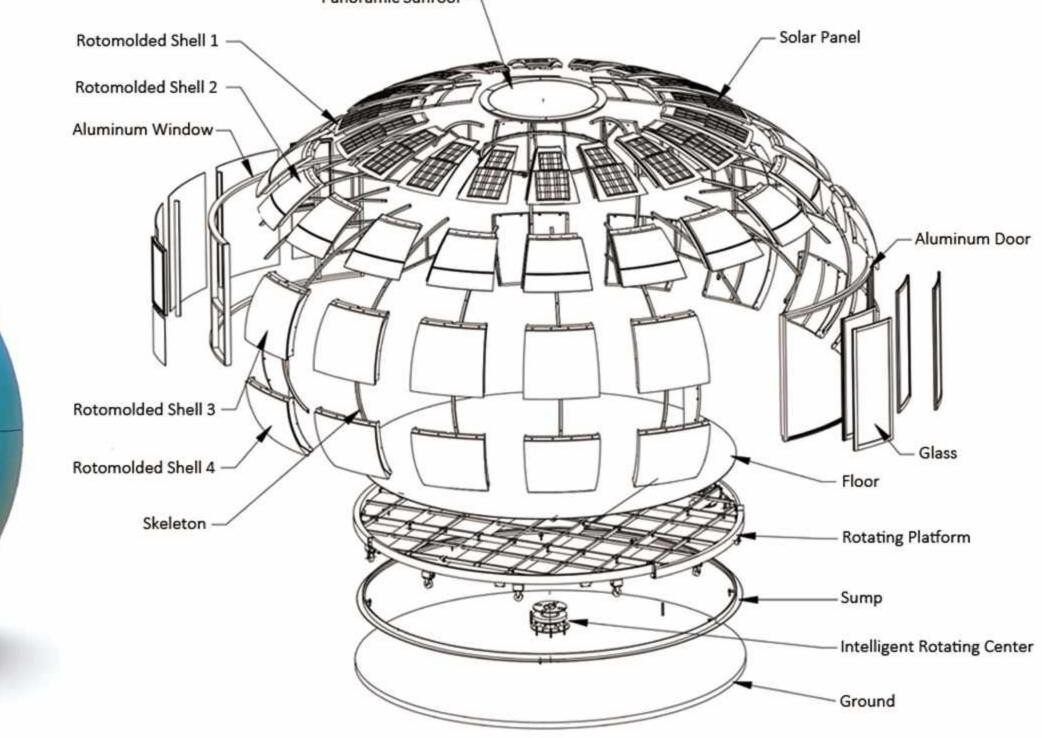
#### Applicable processing equipment:

- 1.Conventional molding equipment;
- 2.Conventional bending molding;
- \*The above processing data is provided by the customer for reference only.

#### **GENERAL INFORMATION:**

WH-A66 is a PVC/acrylate modified sheet. Its flame retardant rating reaches UL-5VA, self-extinguishing off fire; it has passed REACH and ROHS testing. Resistant to acid and alkali salts, suitable for all kinds of cleaning agents, easy to clean. Dimensionally stable. Can be assembled by screws, rivets, other general-purpose fixtures or environmentally friendly adhesives. Low stress and high impact will not crack, resistant to migration and no color loss.













# Technical Data Sheet

# WH-A32

#### INTRODUCTION:

WH-A32 is a thermoplastic sheet with a special extrusion process that is suitable for a wide range of thermoforming equipment and can be fixed without clamps, from heat drying guns, to electric ovens, to blast ovens, with very low heating shrinkage. It is an ideal DIY thermoplastic material for personalized processing design.

#### SUGGESTED APPLICATION:

- ·Holsters, Magazines, Knife sheaths
- ·Backpack Protection, Toolbox

#### **FEATURES:**

- ·Extremely high flame retardant, self-extinguishing off fire;
- ·High modulus, stretch molding, thin wall still provides good stiffness;
- ·Dimensional stability after molding, no cracking at low temperature;
- ·Matte texture;

#### **Technical Parameters**

Name	Test Method	Typical Value	Unit
PHYSICAL			
Specific Gravity	ASTM D792	1.33	g/cm³
MECHANICAL			
Izod Impact, notched	ASTM D256	700	J/m
Flexural Modulus	ASTM D790	2400	MPA
Tensile Strength	ASTM D683	42	MPA
Flexural Strength	ASTM D790	65	MPA
Hardness Rockwel	ASTM D785	98	R
FLAMMABILITY			
0.71mm	UL94	5VA	

**GENERAL INFORMATION:** 

without cracking, and is durable.

WH-A32 is a PVC/acrylate modified

compound. Its flame retardant grade reaches

UL94-5VA standard; it has passed REACH and

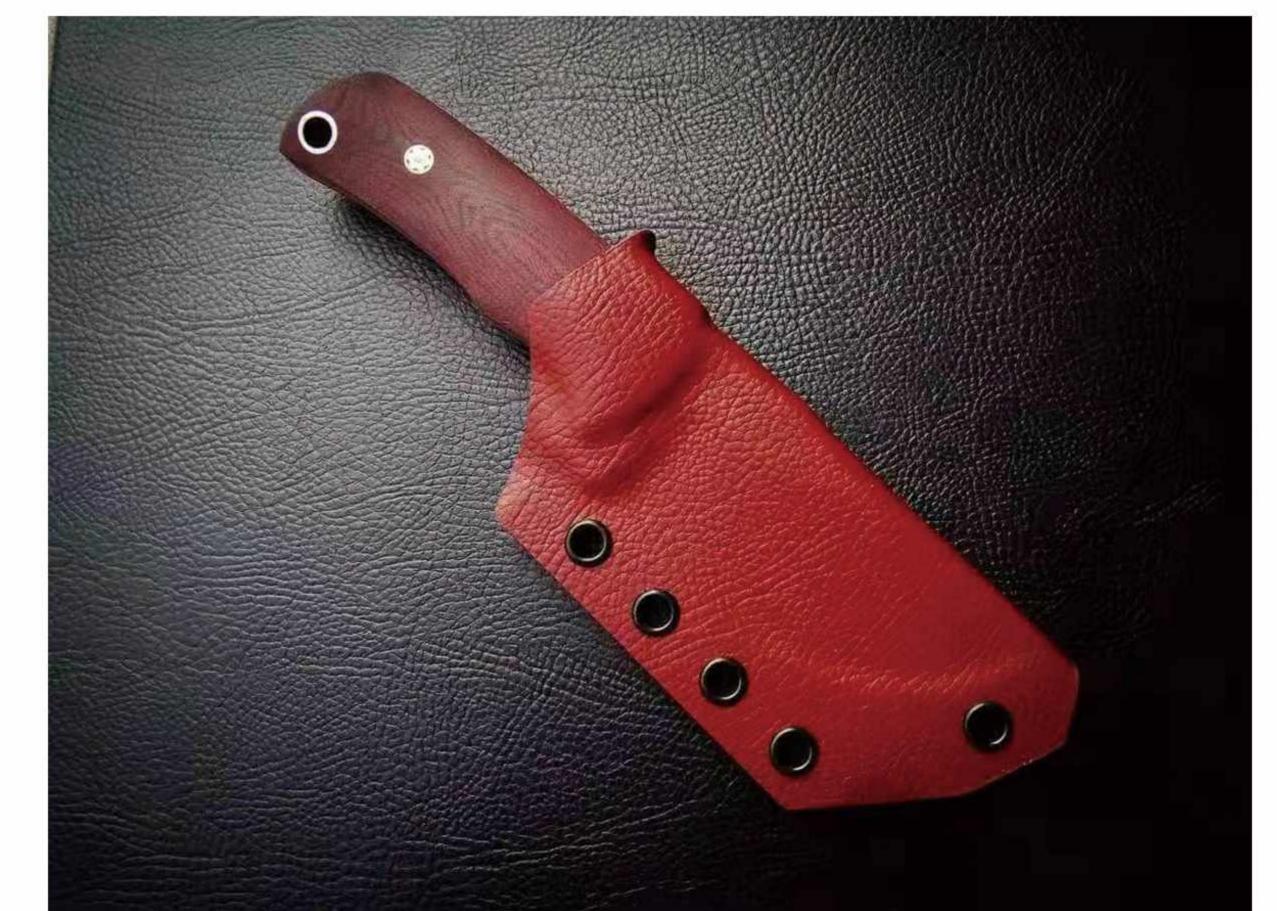
ROHS testing. It has good mechanical strength,

superior notched impact performance, meets

the outdoor low-temperature environment

#### Applicable processing equipment:

- 1.Conventional vacuum molding equipment;
- 2.the oven temperature is set at 160-170°C, when the temperature stabilizes and then put the D32 board into the oven, heating, pay attention to observe the oven changes;
- 3.the thickness of 1.5mm heating about 2min, 2mm heating 4min, and so on;1.Conventional vacuum molding equipment;
- 2.the oven temperature is set at 160-170°C, when the temperature stabilizes and then put the D32 board into the oven, heating, pay attention to observe the oven changes;
- 3.the thickness of 1.5mm heating about 2min, 2mm heating 4min, and so on;





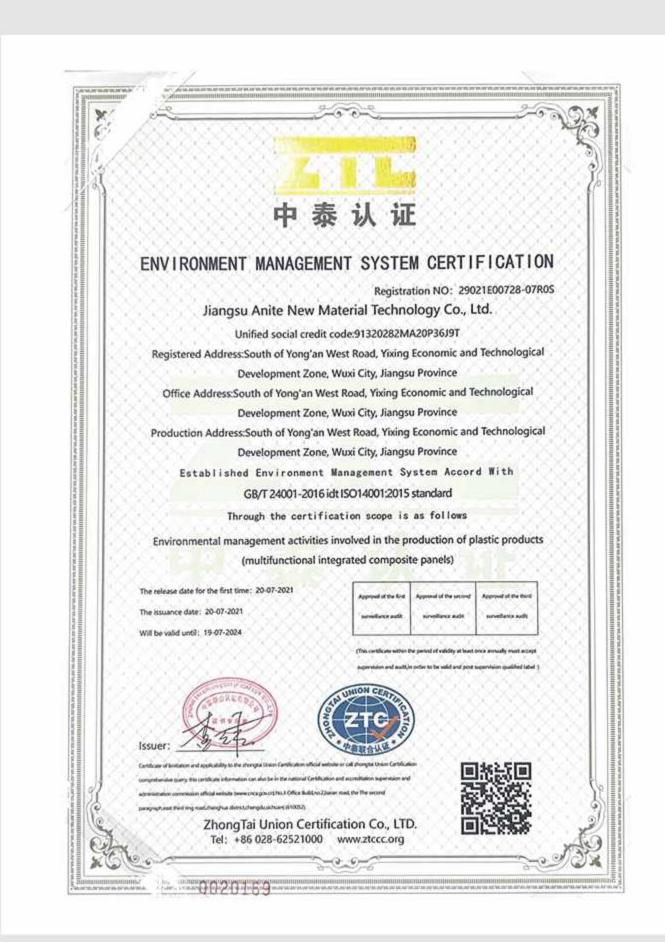


# Certification

# Customized Service







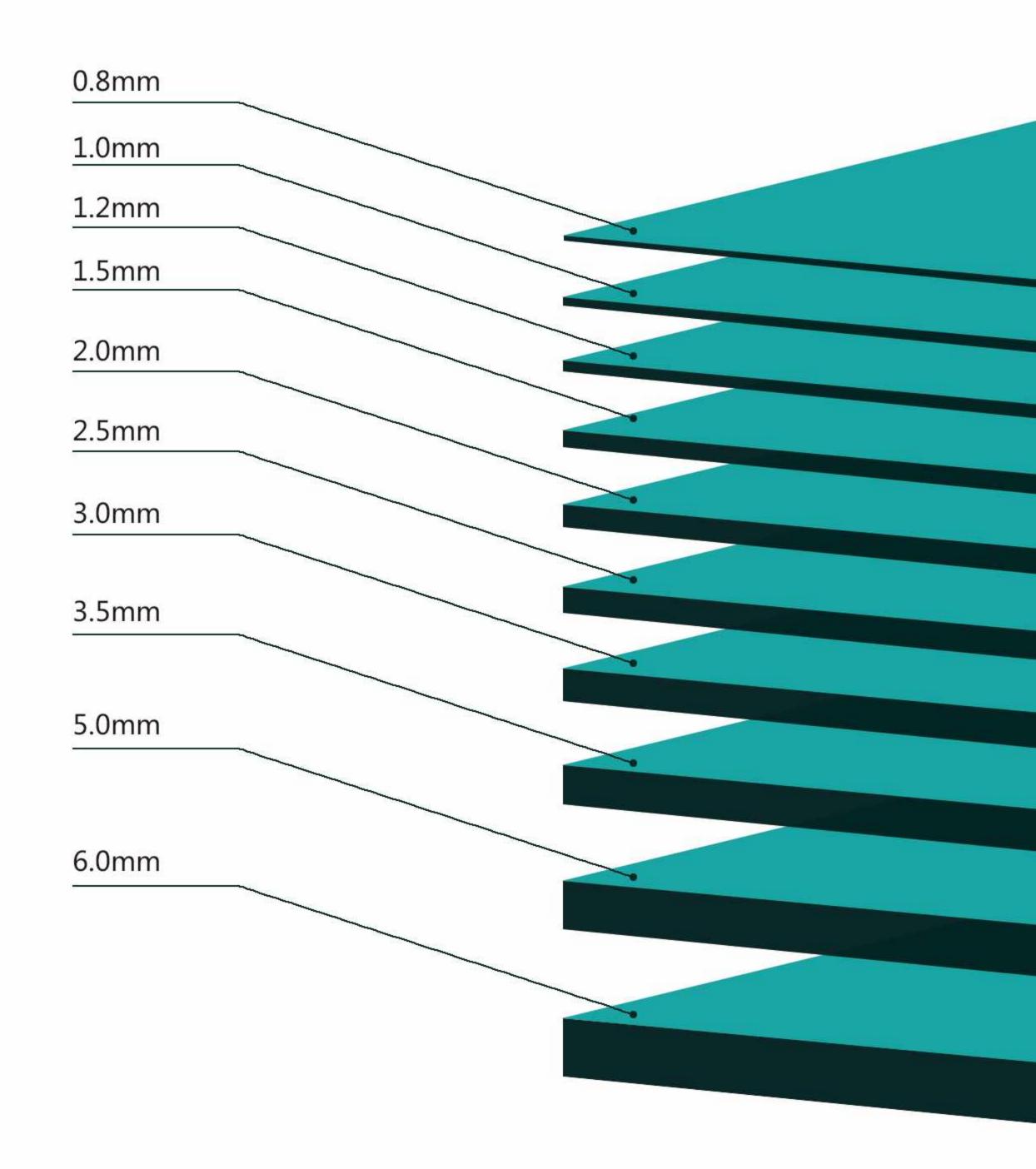


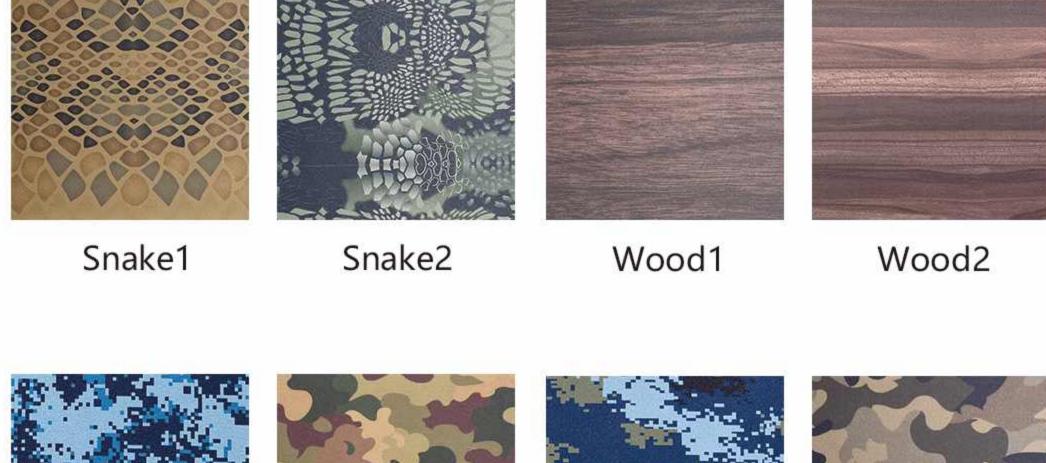


#### Color



#### Thicknesses







Camouflage5







Camouflage7



**Environment and security** 

WELLENHOF is committed to ensuring that its products can be manufactured, transported, stored, used, handled and recycled with due regard for safety, health and environmental protection. We support the safe handling of our products.

