Universal Polythex Kunststoffe GmbH Friedrich-Ebert-Straße 15 52531 Übach-Palenberg

TECHNICAL DATA SHEET

HIPS-Mirror décor

Description

HIPS mirror décor consists of a backing made of HIPS (high impact polystyrene) and a laminated mirror décor. The decorative foil is an aluminum-vaporized polyester foil. The aluminum side is finished with a primer to achieve good adhesion to the HIPS.

KEY FEATURES

- Good Brilliance
- Easy to work with

APPLICATIONS

- Decoration Purposes
- model making
- Cosmetic applications
- Toy
- Jewelry Design

PRODUCT AVAILABILITY:

Colors:	Silver, Gold, Copper (Min. Quantity)
Surface:	glossy or brushed (minimum quantity)
Thickness:	1,0 – 2 mm[1]
Width:	300 – 1300 mm [1]

	Test method	Unit	Values
Technical Properties			
Density[2]	ISO 1183	cm³/10 min	1,06
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m²	>4,5
Tensile strength at break, 23 °C	ISO 527/50 mm/min	MPa	15
Tensile Modulus of elasticity	ISO 527/ 1mm/min	MPa	1650
Elongation at break (MD)	ISO 527/50 mm/min	%	>30
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	87
Flammability Rating	DIN 4102	> 1,5 mm	B2[3]

[1] The dimension of the sheet is depending on embossing, colour, thickness, size of order – please ask our sales team
[2] The density is only a guide and depends on pigments and additives used
[3] no test report available

Technical information on the machining and processing of HIPS mirror décor

Description

HIPS mirror décor consists of a backing made of HIPS (high impact polystyrene) and a laminated mirror décor. The decorative foil is an aluminum-vaporized polyester foil. The aluminum side is finished with a primer to achieve good adhesion to the HIPS. The adhesion to the HIPS achieved after lamination is greater than the adhesion of the polyester film to the aluminum-vaporized layer.

Furthermore, the top of the board is protected with a PE protective film and should only be carefully and slowly peeled off after mechanical processing. Care must be taken to ensure that the polysterium foil is not loosened at the same time. The corners of the plate are critical.

Processing

The processing of the panels by means of impact shears, punching, sawing and drilling of the HIPS mirror decoration must always be carried out from the decorative side, i.e. the intervention of the tool must be carried out from above. Tools suitable for plastics should be used here.

Glue

HIPS mirror décor can be glued from the back with foreign materials. It is important that the adhesive is suitable for HIPS (high impact polystyrene) and the material to be bonded. Contact adhesives, both neoprene-based and water-soluble adhesives, are very suitable. Prior cleaning of the surface is essential.

Pressure-sensitive adhesives, such as adhesive tapes, are not recommended.

Printing

It is possible to print on the decorative side with inks adhering to polyester, whereby two-component inks have proven to be very suitable.

Humidity

Contact with water on the edges and corners should be avoided.

Clean

Cleaning should only be done with a damp chamois leather and with glass cleaner, preferably with an antistatic effect. The detergent must be applied to the cleaning cloth and not directly to the mirror surface.

Thermoforming

Thermal deformation of the HIPS mirror décor is not recommended. If this does happen, it is important to pay attention to the following:

1. Always heat the panel from the back and not from the décor side
2. No deformation against the mirror side
3. Cooling preferably with air only

4. Ensure slow demoulding
5. The PE protective film may be more difficult to detach after the deformation process, so check whether the PE protective film can be removed beforehand

UV and weather stability

HIPS mirror décor is not UV-resistant or weather-stable. A change in colour and a degradation of the mechanical values takes place within months under heavy load.

Chemical resistance

The chemical resistance depends on many factors, such as concentration of the medium, temperature, intensity. The following table only gives a guideline and experiments should definitely be done before use:

Reagent	Chemical resistance		Reagent	Chemical resistance
Acetone	Not recommended		Brake Fluid	Not Recommended
Acid – (Weak)	Good		Butter	Excellent
Acid – (Strong)	Fair		Coffee	Excellent
Alcohol	Good/Fair		Detergent	Excellent
Anti-freeze	Excellent		Diesel	Good
Base (Weak)	Good		Foodstuffs	Good
Base (Strong)	Good/Fair		Lubricating Oil	Very Good
Battery Acid	Good		Petrol	Good

For more information, please contact us.

Yours sincerely,

Universal Polythex Kunststoffe GmbH

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