

PRODUCT DATA SHEET

SikaBiresin® PX225 L4 OPALESCENT

VACUUM CASTING POLYURETHANE FOR TECHNICAL PARTS AND PROTOTYPES
FLEXURAL MODULUS 2,500 MPa – TG 105 °C

APPLICATIONS

- Making prototype parts and mock-ups with mechanical properties similar to thermoplastics like ABS ou polystyrene crystal by casting in silicone moulds.
- Opalescent parts like automotive ceiling lights.

MAIN PROPERTIES

- Good impact resistance
- Low viscosity
- Available in two reactivity (L4 and L7 Transparent)
- Easy to pigment in any tints

DESCRIPTION

Basis	Two component polyurethane system
Component A	SikaBiresin® PX22 , Isocyanate, light yellow (common with SikaBiresin® PX212 (B))
Component B	SikaBiresin® PX225 , Polyol, off white opalescent

PHYSICAL PROPERTIES

			Isocyanate (A)	Polyol (B)
Components			SikaBiresin® PX22	SikaBiresin® PX225
Viscosity, 25 °C	mPa.s	BROOKFIELD LVT	~ 150	~ 1,160
Density, 25 °C		ISO 1675 : 1985	1.22	1.06
Mixing ratio, 23 °C	in parts by weight		100	75
Mixture				
Colour			Opalescent	
Viscosity, 25 °C			600	
Pot life, 175 g, 25 °C	min	Gel Timer TECAM	SikaBiresin® PX225 L4	Opalescent 5
Advised Maximum casting thickness	mm		5	

MECHANICAL PROPERTIES

(Average values obtained on standardized specimens / 4 h at 70 °C)

Density, 23 °C	ISO 2781 : 1996		1.20
Shore hardness	ISO 868 : 2003	Shore D1 @ 23°C	81
Tensile strength	ISO 527 : 1993	MPa	70
Elongation at break in tension	ISO 527 : 1993	%	9
Flexural modulus of elasticity	ISO 178 : 2001	MPa	2,500
Flexural strength	ISO 178 : 2001	MPa	80
Impact resistance (CHARPY)	ISO 179/1D : 1994	kJ/m ²	50

THERMAL AND SPECIFIC PROPERTIES

(Average values obtained on standardized specimens / 12 h at 80 °C)

Glass transition temperature (Tg)	ISO 11359-2 : 1999	°C	100
Demoulding time, 3 mm, 70 °C		min	45
Linear shrinkage in 3 mm		mm/m	3

PACKAGING UNITS

- Polyol (B) **SikaBiresin® PX225 L4** OPALESCENT 6 x 0.96 KG; 4.80 KG net
- Isocyanate (A) **SikaBiresin® PX22** 6 x 1.2 KG; 6.00 KG net

HANDLING PRECAUTIONS

Normal health and safety precautions should be observed when handling these products:

- Ensure good ventilation.
- Wear gloves, glasses and protective clothes.

For further information, please consult the Safety Data Sheets.

PROCESSING DATA

Vacuum casting machine utilisation:

- Use in vacuum casting machine
- Heat the mould at 70 °C (only polyaddition silicone mould)
- Heat isocyanate and polyol at 23 °C in case of storage at lower temperature
- Weigh Isocyanate in upper bowl (do not forget additional waste)
- Weigh Polyol in lower bowl (mixing bowl)
- After degassing for 10 minutes under vacuum, pour Isocyanate into Polyol and mix 1 minute minimum.
- Cast under vacuum in silicone mould previously heated at 70 °C
- Let it cure at 70 °C for 45 to 60 minutes according to part thickness.
- Open the mould and leave it cool down a bit before complete releasing.

STORAGE CONDITIONS

Shelf life	■ Isocyanate (A), SikaBiresin® PX22	06 months
	■ Polyol (B), SikaBiresin® PX225 L4	09 months
Storage temperature	■ Isocyanate (A), SikaBiresin® PX22	15 – 25 °C
	■ Polyol (B), SikaBiresin® PX225 L4	15 – 25 °C

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Sika Advanced Resins

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BUILDING TRUST



Crystallization

- Isocyanate (A) **SikaBiresin® PX22** could crystallize if stored below 15 °C (non - homogenous liquid, crystals in the product). Store in an oven at 70 °C until the product comes back liquid. Let it cool down before use.

Opened packagings

- Any open containers must be tightly sealed and stored in a dry place under dry nitrogen.
- Avoid storage of open isocyanate (A) for more than 3 days.

FURTHER INFORMATION

The information herein is offered for general guidance only. Advice on specific applications is available on request from the Technical Department of Sika Advanced Resins. Copies of the following publications are available on request: Safety Data Sheets

BASIS OF PRODUCT DATA

All technical data stated in this document are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

HEALTH AND SAFETY INFORMATION

For information and advice regarding transportation, handling, storage and disposal of chemical products, users shall refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

LEGAL NOTICE

The information, and, in particular, the recommendations relating to the application and end use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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