

PRODUCT DATA SHEET

SikaBiresin® PX840

Vacuum casting soft polyurethane for prototypes and technical parts

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Properties	SikaBiresin® PX840 (A)	SikaBiresin® PX840 (B)	SikaBiresin® PX840 (C)
Chemical base	Isocyanate	Polyol	Polyol
Color	Yellowish mixed Off-white	Transparent	Milky white
Density	1.2 kg/l cured 1.14 kg/l ^A	1.0 kg/l	1.02 kg/l
Mixing ratio	by weight 100	100	0 – 500
Viscosity (CQP538-2 / BROOKFIELD LVT)	700 mPa·s mixed 550 mPa·s	425 mPa·s	900 mPa·s
Pot life (CQP021-3 / Gel Timer TECAM)	100 g at 23 °C	12 minutes	
Demolding time		120 minutes	
Curing time	at 23 °C	5 days ^A	
Maximum casting thickness		20 mm	
Shore A hardness (CQP023-1 / ISO 868)		95 ^A	see table 1
Tensile strength (CQP036-6 / ISO 37)		20 MPa ^A	15 MPa ^{B, C} 7 MPa ^{B, D} 6 MPa ^{B, E}
Tear strength (CQP045-1 / ISO 34)		60 kN/m ^A	29 kN/m ^{B, C} 10 kN/m ^{B, D} 9 kN/m ^{B, E}
Elongation at break (CQP036-2 / ISO 527)		4 % ^A	680 % ^{B, F}
Shelf life		9 months	12 months

CQP = Corporate Quality Procedure

D) Extender 350 parts

A) curing condition: 70 °C for 16 hours

E) Extender 450 parts

B) curing condition: 70 °C for 24 hours

F) Extender 150 – 450 parts

C) Extender 150 parts

DESCRIPTION

SikaBiresin® PX840 is a 3-component vacuum casting polyurethane system for prototypes and technical parts.

PRODUCT BENEFITS

- Three components for variable hardness
- Can be easily colored with CP colors
- Low aggressiveness against silicone molds
- Easy processing

AREAS OF APPLICATION

SikaBiresin® PX840 is designed for the manufacturing of soft prototype parts and small series of rubber like parts by vacuum casting in silicone molds. It is fully compatible with SikaBiresin® SI291 silicone molds. This product is suitable for experienced professional users only. Tests under actual processing conditions and with additional materials such as coatings and release agents must be performed to proof material compatibility.

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Version 01.01 (07 - 2026), en_DE

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METHOD OF APPLICATION

The material and processing temperature shall be between 18 °C – 25 °C. Temperature of a silicone mold shall be 70 °C.

The material can only be used in a vacuum casting machine.

Select based on the table below the required amount of extender to achieve the desired Shore A hardness.

Hardness Shore A	Extender (C)
95	0
85	50
75	75
65	150
60	200
50	250
40	350
30	450
25	500

Table 1: Shore A with different extender amount, post curing: 24 hours at 70 °C

Mixing process

Prior to use check the material for homogeneity and crystallization. After prolonged storage at low temperature, crystallization of components may occur. This process can be easily reversed by heating the affected component to a maximum of 70 °C until the crystals have disappeared. Allow to cool down to requested processing temperature before use.

Prior to mixing component B must be shaken thoroughly.

Prior to mixing component C must be shaken thoroughly.

If the product needs to be pigmented, it is recommended to add 1 % into the polyol (B-component) and mix it homogeneous. Ensure pigments are free of moisture prior application.

For the pigmentation of the vacuum casting resins CP colors must be used. These pigments have been tested and approved specifically for these products.

Weigh the isocyanate into the upper mixing cup according to the mixing ratio. Take into account the material residues that remain in the upper cup when it is emptied into the lower cup.

Weigh the polyol into the lower mixing cup according to the mixing ratio. If extender is used, add the extender in the polyol and pre-mix it.

Both components shall be evacuated separately for 5 – 10 minutes.

After evacuation, both components shall be mixed in vacuum chamber at least for 2 minutes, considering the pot life.

Note: Both containers must be closed tightly immediately after use to prevent moisture ingress.

Once opened the Product shall be used as soon as possible.

Application

Immediately after mixing pour the product into the preheated silicone mold. After casting, place the mold in a preheated oven (70 °C) for 120 minutes to cure.

Further post curing of the demolded part can improve the final mechanical properties.

Depending on the geometry and weight of the part, it is recommended to use a conformer while post curing.

STORAGE CONDITIONS

Both components must be stored at temperature between 15 °C and 25 °C in original unopened containers.

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 Industry.

Copies of the following publications are available on request:

- Safety Data Sheets

PACKAGING INFORMATION

SikaBiresin® PX840 (A)

Box with bottles	6 x 1 kg
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SikaBiresin® PX840 (B)

Box with bottles	6 x 1 kg
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SikaBiresin® PX840 (C)

Box with bottles	6 x 1 kg
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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.

DISCLAIMER

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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