

ISEPUR[®] 8100

TWO-COMPONENT POLYURETHANE SYSTEM SUITABLE FOR MEDIUM AND HIGH VOLTAGE APPLICATION, WITH GELATION AND CURING AT ROOM TEMPERATURE.

Typical casting compound:

ISEPUR [®] 8100 CA	100	Pbw
ISEPUR [®] 8100 CB	20	Pbw

Properties:

Thermal- stabilized,
long pot life

Tg: 25 ÷ 35 °C

Indoor application.



Epoxy and Polyurethane Systems Industry

I.S.E.P. srl
Via della Liberazione, 848
I - 41018 San Cesario S.P. (MO)

Phone: 0039 059 936373
Fax: 0039 059 930838
e-mail: info@isep.it
web: www.isep.it

1. Component information.

Isepur[®] 8100 is a two component polyurethane based system, with gelation and curing at room temperature; it is specially intended for casting measuring transformers and for other electrical, electronic application, where a low shrinkage of reaction during the curing is needed.

System complies with RoHS (European Directive 2002/95/CE).

Isepur[®] 8100 CA

mixture of polyols, thermal-stabilising copolymers and low-abrasive fillers.

PROPERTY	STANDARD	UNITS	VALUE
specific weight at 23 ± 2°C	ASTM D 1475/98	g/ml	1,70 ÷ 1,80
viscosity at 23 ± 2°C	ASTM D 1824/95	mPa·s	5.000 ÷ 7.000
Aspect	-	-	Fluid paste
Colour	-	-	Ral 3016 - 8016

Storage in sealed original containers, away from light at 15÷30 °C, for 6 months.

The product is sensitive to humidity. Avoid the prolonged contact with the air .

Isepur[®] 8100 CB

modified aromatic isocyanate with constant reactivity.

PROPERTY	STANDARD	UNITS	VALUE
specific weight at 23 ± 2°C	ASTM D 1475/98	g/ml	1,20 ÷ 1,24
viscosity at 23 ± 2°C	ASTM D 1824/95	mPa·s	100 ÷ 300
aspect	-	-	liquid
colour	-	-	brownish

Storage in sealed original containers, away from light at 15÷30 °C, for 6 months.

The product is sensitive to humidity. Avoid the prolonged contact with the air.

2. Gelation Time

The gelation time is measured on a 100 g of mixture.

PROPERTY	STANDARD	UNITS	VALUE
pot-life at a 23 ± 2 °C (100 gr, 15.000 Mpa s)	DIN 16945	Minutes	70 ÷ 100
Initial viscosity mixture a 23 ± 2 °C	DIN 16945	mPa s	1.500 ÷ 2.500

***Internal Method available on request.*

3. Curing

At 25 °C complete hardening is reached after approximatively 48 ÷ 72 hours.

The post – curing is carried out at 60°C/80°C for 8 ÷ 16 hours.

Important advice for processing.

Because mineral fillers can undergo some kind of sedimentation, depending also on time and temperature storage, before use, the component A must be carefully stirred, separately, with a suitable equipment.

4. Remarks

- 📖 It's recommended to do preliminary tests in order to verify if the product is suitable for the expected purpose.
- 📖 After the curing it's necessary to carry out measurement of the glass transition temperature to verify if the cross-linking has come to completion.

5. Electric and Dielectric properties.

Measurements were taken on normalized samples; curing 24 h at 25°C + 6 h at 80°C.

PROPERTY	STANDARD	UNITS	VALUE
Electric strength at 25 ± 2 °C 50 Hz thickness:2 mm	IEC 60243-1	KV/mm	18 ÷ 22
Volume resistivity at 25 ± 2 °C 50 Hz	IEC 60093	Ω x cm	10 ¹⁴
Dielectric Costant ϵ_r at 25 ± 2 °C 50 Hz	IEC 60250	-	4,5 ÷ 5,5
Loss factor tg δ at 25 ± 2 °C 50 Hz	IEC 60250	%	1,50 ÷ 3,00

6. Mechanical and Physical properties.

Measurements were taken on normalized samples; curing 24 h at 25°C + 6 h at 80°C.

PROPERTY	STANDARD	UNITS	VALUE
Density	ASTM D1475	g/ml	1,65 ÷ 1,75
Tensile strength	ISO/R 527	MPa	10 ÷ 20
Elongation at break	ISO/R 527	%	8 ÷ 12
Elastic modulus in tension	ISO/R 527	MPa	1.000 ÷ 2.000
Hardness	DIN 53505	Shore D	70 ± 5
Glass transition temperature	ASTM D 3418	°C	25 ÷ 35
Thermal conductivity	ASTM C 177	W/mK	0,6 ÷ 0,7
Decomposition temperature	VSM 77113	°C	> 350
Water absorption	DIN 53495		
10 days at 23° C		% in weight	0,10 ÷ 0,20
60 min at 100° C		% in weight	0,15 ÷ 0,25

7. Occupational Hygiene

When processing polyurethane resins and its hardeners, all the hygienic and safety rules must be strictly observed. Wear gloves, protective glasses and suitable clothes. Observe the laws in force for waste disposal. Do not throw into the sewers. For detailed information, see the product safety sheet.

All the information herein is provided to the best of our knowledge.

The product mentioned are for professional use only: the indication of use supplied by the manufacturer does not release the buyer/user from testing the product and checking that the results actually obtained comply with those required.

Furthermore, the manufacturer accepts no liability, direct or indirect, deriving from or in any case related to the incorrect and/or improper use of the products and/or in any case deriving from the use of the products in conflict with the technical specifications described in the technical data sheets.

Revision	Date	Description	Edited
01/02	April ,16, 2018	Isepur [®] 8100 technical datasheet	Bertaglia Antonella



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