

Light Electrical

Arathane™ Polyurethane Casting System

XB 5620 acc 5 Polyol **100 pbw**
XB 5610 Isocyanate **18 pbw**

Polyurethane, epoxy modified, halogen free, casting and impregnating system for processing and curing at room temperature.

Soft multi purpose polyurethane system for pressure sensitive devices.

Transformers, filters, capacitors etc.

Applications

Casting / Impregnating
Manually or with automatic mixing and dosing equipment

Processing

Halogene free system
Excellent flow properties
Good thermal conductivity
Non abrasive casting system
Good thermal shock resistance
Flammability: UL 94 approval V0 (6 mm)

Properties

Product data

(guideline values)

Polyol (Standard, containing mineral filler)

XB 5620 acc 5	Viscosity	at 25°C	DIN 53019	mPas	4500
	Specific gravity	at 25°C	DIN 53217	g/cm ³	1.47
	Flash point		DIN EN 22719	°C	> 150
As supplied		Natural beige and colored version (green, blue, anthracite)			
Hazardous decomposition products		Carbon monoxide, carbon dioxide and other toxic gases and vapors if burned			
Disposal		Regular procedures approved by national and/or local authorities			

Isocyanate

XB 5610	Viscosity	at 25°C	DIN 53019	mPas	110
	Specific gravity	at 25°C	DIN 53217	g/cm ³	1.23
	Flash point		DIN 51758	°C	>200
As supplied		Brown liquid			
Hazardous decomposition products		Carbon monoxide, carbon dioxide and other toxic gases and vapors if burned			
Disposal		Regular procedures approved by national and/or local authorities			

Storage

Store the components in a dry place at 18-25°C, in tightly sealed original containers. Under these conditions, the shelf life will correspond to the expiry date stated on the label. After this date, the product may be processed only after reanalysis. Partly emptied containers should be tightly closed immediately after use. For information on waste disposal and hazardous products of decomposition in the event of a fire, refer to the Material Safety Data Sheets (MSDS) for these particular products.

Processing and end properties

Mix ratio		Parts by weight	Parts by volume
	XB 5620 acc 5	Polyol	100
	XB 5610	Isocyanate	18

Processing data (guideline values)	Mixed System:			
	Viscosity at 25°C	DIN 53019	mPas	2700
	Geltime at 25°C	(Gelnorm)		
	XB 5620 acc 5 / XB 5610		min	5
	Minimum Curing cycle			
	XB 5620 acc 5 / XB 5610		24h at 23°C or 6h at 80°C	

XB 5620 acc 5 contains fillers, which tend to settle over time. It is therefore recommended to carefully homogenize the complete contents of the container before use.

In the storage vessels of the production equipment, the pre filled products should be stirred up from time to time to avoid sedimentation and irregular metering.

Mechanical and physical properties (guideline values)	Cured System:	Determined on standard test specimen at 23°C. Cured for 24h/23°C + 6h/80°C		
	Specific gravity	DIN 55990	g/cm ³	1.46
	Glass transition temperature	ISO 6721/94	°C	20
	Max. service temperature	IEC 85	°C	110
	Tensile strength	ISO 527	Mpa	3
	Elongation at break	ISO 527	%	83
	Thermal linear coefficient (20-50°C)	DIN 53752	ppm/K	158
	Shore A hardness	DIN 53505	---	70
	Flammability (6 mm)	V-0 according to UL 94 method		
	Water absorption (specimen: 50×50×4 mm) ISO 62/80			
	1 day at 23°C		% by wt.	0.19
	10 days at 23°C		% by wt.	0.56
	30 min at 100°C		% by wt.	0.41

Electrical properties (guideline values)	Determined on standard test specimen at 23°C. Cured for 24h/23°C + 6h/80°C			
	Dielectric strength (specimen 2 mm)	IEC 243-1	kV/mm	20
	Thermal conductivity	ISO 8894/90	W/mK	0.52
	Dielectric loss factor (tan δ, 50Hz, 25°C)	IEC 250	%	12
	Dielectric constant (ε _r , 50Hz, 25°C)	IEC 250	---	6.7
	Volume resistivity (ρ, 50Hz, 25°C)	IEC 93	Ω cm	3.0x10 ¹³
	Electrolytic corrosion	IEC 426	grade	A/1

Remarks To determine whether cross-linking has been carried to completion and the final properties are optimal, it is necessary to carry out relevant measurements on the actual object or to measure the glass transition temperature. Different gelling and cure cycles in the customer's manufacturing process could lead to a different degree of cross-linking and thus a different glass transition temperature.

Industrial hygiene

Mandatory and recommended industrial hygiene procedures should be followed whenever our products are being handled and processed. For additional information please consult the corresponding Safety Data Sheets and the brochure "Hygienic precautions for handling plastics products of Huntsman (Publ. No. 24264/e).

Handling precautions

Safety precautions at workplace:	
protective clothing	yes
gloves	essential
arm protectors	recommended when skin contact likely
goggles/safety glasses	yes
respirator/dust mask	recommended
Skin protection	
before starting work	Apply barrier cream to exposed skin
after washing	Apply barrier or nourishing cream
Cleansing of contaminated skin	Dab off with absorbent paper, wash with warm water and alkali-free soap, then dry with disposable towels. Do not use solvents
Clean shop requirements	Cover workbenches, etc. with light coloured paper. Use disposable beakers, etc.
Disposal of spillage	Soak up with sawdust or cotton waste and deposit in plastic-lined bin
Ventilation:	
of workshop	Renew air 3 to 5 times an hour
of workplace	Exhaust fans. Operatives should avoid inhaling vapors.

First Aid

Contamination of the **eyes** by resin, hardener or casting mix should be treated immediately by flushing with clean, running water for 10 to 15 minutes. A doctor should then be consulted.

Material smeared or splashed on the **skin** should be dabbed off, and the contaminated area then washed and treated with a cleansing cream (see above). A doctor should be consulted in the event of severe irritation or burns. Contaminated clothing should be changed immediately.

Anyone taken ill after **inhaling** vapors should be moved out of doors immediately. In all cases of doubt call for medical assistance.

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