Tooling & Composites

Product Data Sheet
Version 02 / 2016

Biresin® VG280
Vacuum Casting resin

Areas of Application
- Manufacture of very impact resistant housings, coverings and other mouldings
- Manufacture of thinwalled parts with complex structure

Product Benefits
- Simulation of ABS and PVC
- Fast curing with good flowability
- Very stiff, very high impact resistance
- Dyeable with **Biresin®-Farbpasten**
- Potlife can be extended by **Biresin® G48** (A)

Description
- Basis: Two component PUR system
- Component A: **Biresin® VG280**, polyol, beige
- Component B: **Biresin® G55**, MDI-based isocyanate, yellowish-transparent

Processing Data		Component A	Component B
Individual Components		**Biresin® VG280**	**Biresin® G55**
Viscosity, 25°C	mPa.s	~ 1,200	~ 250
Density	g/cm³	1.06	1.22
Mixing ratio A : B	in parts by weight	80	100
		Mixture	
Mixed viscosity, 25°C	mPa.s	~ 600	
Potlife, 500 g, 20°C	min	4	
Demoulding time at 70°C mould temperature	min	60 - 90	
Curing time, RT	d	1 - 3	

Physical Data (approx. values)			
Biresin® VG280 (A)	with component B		**Biresin® G55**
Colour			yellowish-translucent
Density	ISO 1183	g/cm³	1.1
Shore hardness	ISO 868		D 84*
E-Modulus	ISO 178	MPa	2,800*
Flexural strength	ISO 178	MPa	120*
Tensile strength	ISO 527	MPa	75*
Elongation at break	ISO 527	%	7*
Impact resistance	ISO 179	kJ/m²	> 100*
Heat distortion temperature	ISO 75B	°C	80*
CTE value, α_T	DIN 53752	K^{-1}	74 x 10^{-6}
Linear shrinkage, at 4 - 5 mm thickness	internal	%	0.35*

* values after post curing: 1 h / 70°C

Packaging

Individual components	**Biresin® VG280** (A)	4 kg net
	Biresin® G55 (B)	5 kg net

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Processing

- The material temperature must be 18 - 25°C.
- Component A must be stirred thoroughly before use.
- Both components must be under vacuum for several minutes before mixing in right mixing ratio and poured into preheated silicone moulds (70°C)
- After complete filling of the moulds, vacuum is switched off and moulds are placed in an oven at 70°C for curing until demoulding.
- Improved thermal stability of the demoulded mouldings can be obtained by thermal post curing.

Storage

- Minimum shelf life is 6 month under room condition (18 - 25°C), when stored in original un-opened containers.
- After prolonged storage at low temperature, crystallisation of components may occur. This is easily removed by warming up for a sufficient time to a maximum of 70°C. Allow to cool to room temperature before use.
- Containers must be closed tightly immediately after use to prevent moisture ingress. The residual material needs to be used up as soon as possible.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety related data.

Disposal considerations

Product Recommendations: Must be disposed of in a special waste disposal unit in accordance with the corresponding regulations.
Packaging Recommendations: Completely emptied packagings can be given for recycling. Packaging that cannot be cleaned should be disposed of as product waste.

Value Bases

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

Legal Notice

Further information available at:

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