Tooling & Composites

Product Data Sheet
Version 07 / 2010

Biresin® G28
PUR - Vacuum Casting resin

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

Product Benefits
- Simulation of PE/PP and ABS
- With hardener **Biresin® G53** for higher strength and faster curing
- With hardener **Biresin® U5** for higher temperature resistance
- Dyeable with **Biresin® -Farbpasten**
- Can be cured at RT

Description
- Basis: Two-component-PUR-system
- Resin: **Biresin® G28**, polyol, beige, unfilled
- Hardener: **Biresin® G53**, MDI-based isocyanate, amber, unfilled
- Hardener: **Biresin® U5**, MDI-based isocyanate, brown, unfilled

Processing Data		Resin	Hardener	
Individual components		**Biresin® G28**	**Biresin® G53**	**Biresin® U5**
Viscosity, 25°C	mPas	~ 50	~ 175	~ 110
Density	g/cm³	1.00	1.23	1.23
Mixing ratio resin to hardener	in pbw	100	75	67
		Mixtures		
Mixed viscosity, 25°C	mPas		~ 150	~ 120
Potlife, 200 g, RT	min		4	5
Demoulding time, RT	min		60 - 90	60 - 90
Curing time, RT	d		3	3

Physical Data (approx. values)				
Biresin® G28 resin		to hardener	**Biresin® G53**	**Biresin® U5**
Colour			beige	
Density	ISO 1183	g/cm³	1.1	1.1
Shore hardness	ISO 868	-	D 79	D 79
E-Modulus	ISO 178	MPa	1,610	1,490
Flexural strength	ISO 178	MPa	72	67
Tensile strength	ISO 527	MPa	47	40
Compressive strength	ISO 604	MPa	60*	56*
Impact resistance	ISO 179	kJ/m²	25	25
Heat distortion temperature	ISO 75B	°C	93**	102**

* at 10% compressive strain
** values after post curing: 4 h / 80°C

Packaging

Individual components	**Biresin® G28** resin	50 kg; 20 kg; 5 kg net
	Biresin® G53 hardener	60 kg; 20 kg; 10 kg; 0,9 kg net
	Biresin® U5 hardener	17 kg; 4.25 kg; 0,7 kg net

Processing

- The material temperature must be 18 - 25°C.
- The resin component 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 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.

Storage

- Minimum shelf life is 12 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 regarding transportation, handling, storage and disposal of chemical products, users should refer to the actual Material Safety Data Sheets 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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