Tooling & Composites

Product Data Sheet
Version 04 / 2014

Biresin® CR132 FR
Composite resin system

Areas of Application
- For wet lay-up processing
- Specially for applications when higher temperature resistance is required
- Production of flame retardant parts

Product Benefits
- Flame retardant
- UL94 V-0 Classification with -2 hardener
- Fast infiltration of dry fabrics and nonwovens
- Glass transition temperatures up to 130°C dependent on curing conditions

Description
- Basis: Two-component-epoxy-system
- Resin (A): **Biresin® CR132 FR**, epoxy resin, white
- Hardener (B): **Biresin® CH132-2**, amine, blue
- Hardener (B): **Biresin® CH132-5**, amine, blue
- Hardener (B): **Biresin® CH132-7**, amine, blue

Physical Data		Resin (A)	Hardener (B)		
Individual Components		**Biresin® CR132 FR**	**Biresin® CH132-2**	**Biresin® CH132-5**	**Biresin® CH132-7**
Viscosity, 25°C	mPas	5,000	< 10	< 10	20
Density, 25°C	g/ml	1.26	0.95	0.93	0.93
Mixing ratio	in parts by weight	100	20	20	23
			Mixture		
Potlife, 100 g / RT, approx. values	min		60	160	200
Mixed viscosity, 25°C, approx. values	mPas		1,330	2,100	1,900

Mechanical Data, neat resin specimen: approx. values after 8 h / 125°C					
Biresin® CR132 FR resin (A)		with hardener (B)	**Biresin® CH132-2**	**Biresin® CH132-5**	**Biresin® CH132-7**
Density	ISO 1183	g/cm³	1.24	1.24	1.24
Flexural E-Modulus	ISO 178	MPa	4,000	3,900	3,800
Tensile E-Modulus	ISO 527	MPa	3,600	3,600	3,500
Flexural strength	ISO 178	MPa	70	70	67
Compressive strength	ISO 604	MPa	124	123	117
Tensile strength	ISO 527	MPa	52	43	42
Elongation at break	ISO 527	%	1.6	1.4	1.4
Impact resistance	ISO 179	kJ/m²	15	10	12
Glass transition temperature	ISO 11357	°C	132	142	133

Processing

- The material and processing temperatures should be from 18 to 35°C.
- The resin component must be mixed thoroughly before use.
- To clean brushes or tools immediately Sika Reinigungsmittel 5 is recommended.
- Additional informations are available in “Processing Instructions for Composite Resins”.

Packaging

Individual components	**Biresin® CR132 FR** resin (A)	250 kg; 10 kg net
	Biresin® CH132-2 hardener (B)	2.8 kg net
	Biresin® CH132-5 hardener (B)	900 kg; 180 kg; 2.8 kg net
	Biresin® CH132-7 hardener (B)	180 kg; 3.2 kg net

Storage

- Minimum shelf life of Biresin® CR132 FR resin (A) is 24 month and of Biresin® CH132-2 hardener (B), Biresin® CH132-5 hardener (B) and Biresin® CH132-7 hardener (B) is 12 month under room conditions (18 - 25°C), when stored in original unopened containers.
- After prolonged storage at low temperature, crystallisation of resin may occur. This is easily removed by warming up for a sufficient time to 50-60°C.
- Containers must be closed tightly immediately after use. 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 safetyrelated 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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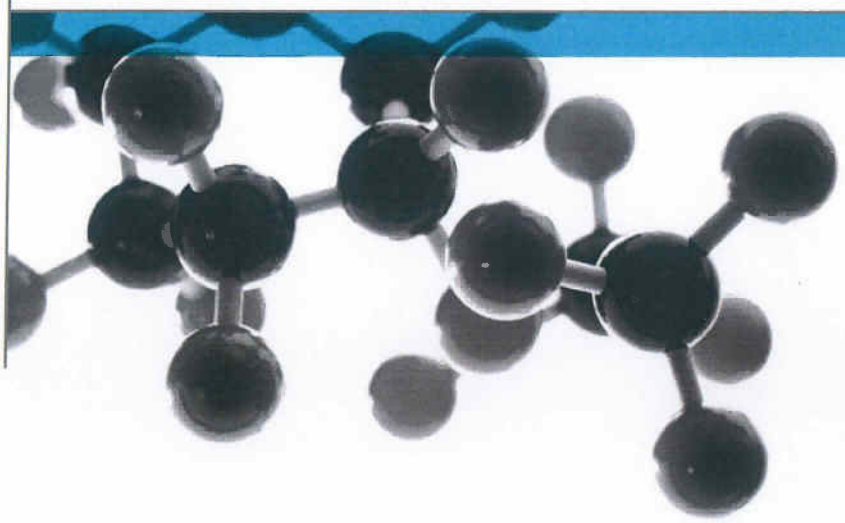
UL-94



Vertical Burning Test For Classifying Materials V-0, V-1 Or V-2

A Report To: Sika Deutschland GmbH

Document Reference: 316414

Date: 20th March 2012

Issue: 2

Testing
Advising
Assuring

UKAS TESTING
0249

Executive Summary

Objective

To determine the performance of the following material when tested in accordance with Section 8 - "50W (20mm) Vertical Burning Test for Classifying Materials V-0, V-1 or V-2" of UL94 - `Test for Flammability of Plastics Materials for Parts in Devices and Appliances'.

Generic Description	Product reference	Thickness	Density
Flame retardant grade epoxy resin system	"Biresin CR132FR"	4mm	1.24g/cm³
Please see page 5 of this test report for the full description of the product tested			

Test Sponsor

Sika Deutschland GmbH, Stuttgarter Str. 139, D-72574 Bad Urach, Germany

Test Results:

When the test results are assessed using the test criteria specified in the Standard, the material, when tested at a nominal thickness of 4mm, is classified as "V-0".

Date of Test

8th March 2012

Reason for revision

This report replaces issue 1 (dated 13th March 2012) of the same number which has now been withdrawn. The product reference "CR32FR" detailed in the issue 1 report is incorrect and the correct product reference "CR132FR" has been detailed in this issue 2 report.

Signatories

Responsible Officer T. Mort * Senior Technical Officer	Authorised S. Deeming * Operations Manager

* For and on behalf of **Exova Warringtonfire**.

Report Issued: 20th March 2012