

PRODUCT DATA SHEET

SikaBiresin® F48

UNFILLED PUR CASTING RESIN WITH LONG POTLIFE AND HIGH ABRASION AND IMPACT RESISTANCE – POT LIFE 45 – 60'

APPLICATIONS

- Face casting layer for metal sheet forming tools and foundry patterns
- With fillers for manufacture of cores for face casting or backfill casting

MAIN PROPERTIES

- Very good flowability of unfilled resins
- High abrasion and impact resistance
- High filler addition possible
- Filled compounds thick castable with high compressive strength
- Cured mouldings mechanically workable

DESCRIPTION

Basis	Two component polyurethane system
Component A	SikaBiresin® F48 , polyol, unfilled, beige
Component B	SikaBiresin® F55 , MDI-based isocyanate, unfilled, colourless
Filler	RZ 30150 / TE Filler , aluminum hydroxide powder, white
Filler	RZ 209/6 / Aluminum powder , grey

PHYSICAL PROPERTIES

		Polyol (A)	Isocyanate (B)	Filler	Filler
Components		SikaBiresin® F48	SikaBiresin® F55	RZ 30150 / TE Filler	RZ 209/6 / Aluminum powder
Viscosity, 25 °C	mPa.s	~ 3,000	~ 250	not measurable	not measurable
Density	g/cm ³	1.06	1.22	2.4	2.7
Mixing ratio A:B	in parts by weight	100	100	350	250
Mixture					
Colour		opaque		beige	grey
Viscosity, 25 °C	mPa.s	~ 2,000		castable	castable
Pot life, room temperature, 500 g	min	~ 45 – 60		~ 45 – 60	~ 45 – 60
Demoulding time, room temperature	h	~ 16 – 24		~ 16 – 24	~ 16 – 24

MECHANICAL PROPERTIES

approx. values

			SikaBiresin® F55	RZ 30150 / TE Filler	RZ 209/6 / Aluminum powder
Density	ISO 1183	g/cm ³	1.15	1.7	1.7
Shore hardness	ISO 868	-	D 80	D 86	D 84
Flexural modulus	ISO 178	MPa	2,300	9,500	8,800
Flexural strength	ISO 178	MPa	100	60	85
Tensile strength	ISO 527	MPa	60	30	45
Elongation at break	ISO 527	%	3 – 5	1	2.5
Impact resistance	ISO 179	kJ/m ²	70	6	17
Compressive strength	ISO 604	MPa	94	104	90
Linear shrinkage	Internal test	%	0.17	0.12	0.11

THERMAL AND SPECIFIC PROPERTIES

approx. values

			SikaBiresin® F55	RZ 30150 / TE Filler	RZ 209/6 / Aluminum powder
Heat deflection temperature	ISO 75B	°C	75	not measured	not measured

PACKAGING UNITS

■ Polyol (A), SikaBiresin® F48	5 kg / 20 kg
■ Isocyanate (B), SikaBiresin® F55	5 kg / 20 kg / 1,100 kg
■ Filler, RZ 30150 / TE Filler	25 kg
■ Filler, Aluminum powder	25 kg
■ Filler, RZ 209/6	5 kg / 50 kg

PROCESSING DATA

- The material, processing and mould temperature should be at least 18 – 25 °C.
- Both components must be shaken well before use.
- Recommended release agents are Sika® Liquid Wax-815 or Sika® Pasty Wax-818. For more information, see Product Data Sheets of the release agents.
- Pay attention to dry conditions and dry mould surfaces while processing.
- Porous surfaces have to be well sealed before.
- If fillers are used, mix them thoroughly into the A component or half in each component before mixing the components.
- Both components have to be mixed thoroughly according to mixing ratio and poured immediately into the released mould with beginning at the lowest point.
- For cleaning the final part from release agent residues, we recommend Sika® Reinigungsmittel-5. Before use of other cleaners, compatibility must be tested.
- Before overpainting, the parts have to be grinded or sandblasted. A polyurethane paint is recommended.

STORAGE CONDITIONS

Shelf life	■ Polyol (A), SikaBiresin® F48	12 months
	■ Isocyanate (B), SikaBiresin® F55	12 months
	■ Filler, RZ 30150 / TE Filler	12 months
	■ Filler, RZ 209/6 / Aluminum powder	12 months
Storage temperature	■ Polyol (A), SikaBiresin® F48	18 – 25 °C
	■ Isocyanate (B), SikaBiresin® F55	18 – 25 °C
	■ Filler, RZ 30150 / TE Filler	15 – 25 °C
	■ Filler, RZ 209/6 / Aluminum powder	15 – 25 °C
Crystallization	■ After prolonged storage at low temperature, crystallization 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.	
Opened packagings	■ Containers must be closed tightly immediately after use to prevent moisture ingress.	
	■ The residual material needs to be used up as soon as possible.	

FURTHER INFORMATION

The information herein is offered for general guidance only. Advice on specific applications is available on request from the Technical Department of Sika Advanced Resins. Copies of the following publications are available on request: Safety Data Sheets

BASIS OF PRODUCT DATA

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

HEALTH AND SAFETY INFORMATION

For information and advice regarding transportation, handling, storage and disposal of chemical products, users shall refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

LEGAL NOTICE

The information, and, in particular, the recommendations relating to the application and enduse of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

Contact

SIKA DEUTSCHLAND GMBH
Stuttgarter Straße 139
72574 Bad Urach - GERMANY
Phone: +49 7125 940 492
Fax: +49 7125 940 401
E-Mail: tooling@de.sika.com
Website: www.sikaadvancedresins.de

SIKA AUTOMOTIVE FRANCE S.A.S.
ZI des Béthunes - 15, Rue de l'Equerre
95310 Saint-Ouen-l'Aumône
CS 40444
95005 Cergy Pontoise Cedex - FRANCE
Phone: +33 1 34 40 34 60
Fax: +33 1 34 21 97 87
E-Mail: advanced.resins@fr.sika.com
Website: www.sikaadvancedresins.fr

AXSON TECHNOLOGIES SPAIN, S.L.
C/Guardaagullés, 8 – P.I. Congost - 08520
Les Franqueses del Valles (Barcelona) - SPAIN
Phone: +34 93 225 16 20
Fax: +34 93 225 03 05
E-Mail: spain@axson.com
Website: www.sikaadvancedresins.es

AXSON ITALIA S.R.L.
Via Morandi 15
21047 Saronno (Va) – ITALY
Phone: +39 02 96 70 23 36
Fax: +39 02 96 70 23 69
E-Mail: axson@axson.it
Website: www.sikaadvancedresins.it

AXSON UK LTD
Unit 15 Studlands Park Ind. Estate
Newmarket Suffolk, CB8 7AU - UNITED KINGDOM
Phone: +44 1638 660 062
Fax: +44 1638 665 078
E-Mail: sales.uk@axson.com
Website: www.sikaadvancedresins.uk

SIKA AUTOMOTIVE SLOVAKIA S.R.O.
Tovarenska 49
953 01 Zlate Moravce - SLOVAKIA
Phone: +421 2 5727 29 33
Fax: +421 37 3000 087
E-Mail: SikaAdvancedResins@sk.sika.com
Website: www.sikaadvancedresins.com

SIKA ADVANCED RESINS US
30800 Stephenson Highway
Madison Heights, Michigan 48071 - USA
Phone: +1 248 588 2270
Fax: +1 248 616 7452
E-Mail: advanced.resins@us.sika.com
Website: www.sikaadvancedresins.us

SIKA AUTOMOTIVE EATON RAPIDS, INC.
1611 Hults Drive
Eaton Rapids, Michigan 48827 - USA
Phone: +1 517 663 81 91
Fax: +1 517 663 05 23
E-Mail: advanced.resins@us.sika.com
Website: www.sikaadvancedresins.us

SIKA AUTOMOTIVE MEXICO S.A. DE C.V.
Ignacio Ramirez #20 Despacho 202 Col.
Tabacalera C.P. 06030 CDMX - MEXICO
Phone: +52 55 5264 49 22
E-Mail: marketing@axson.com.mx
Website: www.sikaadvancedresins.mx

SIKA AUTOMOTIVE SHANGHAI CO. LTD.
N°53 Tai Gu Road
Wai Gao Qiao
Free Trade Zone, Pudong
200131 Shanghai - CHINA
Phone: +86 21 58 68 30 37
Fax: +86 21 58 68 26 01
E-Mail: marketing.china@axson.com
Website: www.sikaaxson.cn

Sika Ltd.
10 F, Shinagawa Intercity Tower B.
2-15-2 Konan, Minato-ku
Tokyo 108-6110 - JAPAN
Phone: +81 3 6433 2314
Fax: +81 3 6433 2102
E-Mail: advanced-resins@jp.sika.com
Website: www.jpn.sika.com

AXSON INDIA PVT. LTD.
Office n°8, Building Symphony C - 3rd Floor
Range Hills Road
Bhosale Nagar
Pune 411 020 - INDIA
Phone: +91 20 25560 710
Fax: +91 20 25560 712
E-Mail: info.india@axson.com
Website: www.sikaadvancedresins.in