DNV·GL

Certificate No:
TAK00001AA

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Epoxy Systems

with type designation(s)
Biresin CR84 - Series

Issued to
Sika Deutschland GmbH
Stuttgart, Germany

is found to comply with
DNV GL class programme DNVGL-CP-0089 – Type approval – Epoxy resin systems

Application :

Laminating resin for construction of laminates made of fibre reinforced plastics.

Issued at **Hamburg** on **2018-07-06**
This Certificate is valid until **2023-07-05**.
DNV GL local station: **Hamburg Materials & Welding**

Approval Engineer: **Guido Michalek**

for **DNV GL**

Thorsten Lohmann
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Job Id: **262.1-029349-1**
Certificate No: **TAK00001AA**

Product description

Two component epoxy resin system.

Approved variants

Epoxy resin Biresin CR84 with following hardener
- Biresin CH84-20
- Biresin CH120-6

Type Approval documentation

- Technical Data Sheet
- Material Safety Data Sheet
- Test Report issued by IFB Stuttgart dated 2009-12-10.
- Approval of Manufacturer Certificate AMPM000001T, valid until 2020-11-16.
- Quality assurance/control documentation

Material Properties

Properties	**Viscosity 25°C, D=50 1/s**	**Viscosity 25°C, D=300 1/s**	**Density 20°C**	**Tg DSC**	**Amine Value**
Test Method	U-QP015	U-QP015	U-QP010	U-QP296*	U-QP040F
Unit	mPa·s	mPa·s	g/ml	°C	mg(KOH)/g
Biresin CR84	3600 - 4600	N/A	1.14 – 1.16	138.0 – 148.0	N/A
Biresin CH84-20	N/A	< 20	N/A	90.0 – 110.0	500 - 530
Biresin CH120-6	N/A	< 40	N/A	139.0 – 149.0	540 - 560

*) The Tg has been determined with SIKA standard resin or hardener for quality control. The values do not provide results comparable to the technical data sheets.

Limitation

The resin complies with the applicable requirements of DNV GL and is compatible to the fibres, adhesives and core materials. Any significant changes in design and / or quality of the material will render the approval invalid.

Assessed production site

SIKA Deutschland GmbH
Stuttgarter Strasse 117
72574 Bad Urach
Germany

Periodical assessment

A production site with a valid Approval of Manufacturer (AoM) certificate for material in question is exempted from the obligation concerning retention and renewal assessments.
For manufacturer without a valid AoM a periodical assessment after 2.5 years and at renewal after 5 years is required.

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Remarks

This certificate supersedes the type approval WP 1420018 HH.

END OF CERTIFICATE