

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Epoxy Systems**with type designation(s)  
**AMPREG 31**

Issued to

**Gurit (UK) Ltd.**  
**Newport, Isle Of Wight, United Kingdom**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 **2018-10-04**for **DNV GL**This Certificate is valid until **2023-10-03**.DNV GL local station: **Hamburg Materials & Welding**Approval Engineer: **Guido Michalek****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.



Job Id: **262.1-029901-1**  
Certificate No: **TAK00001CH**

## Product description

Two component epoxy resin system.

## Approved variants

Epoxy resin AMPREG 31 with following hardener

- Fast Hardener
- Standard Hardener
- Slow Hardener
- Extra-slow Hardener

## Type Approval documentation

- Technical Data Sheet
- Material Safety Data Sheet
- Test Report No. 11647 issued by the DNV GL approved testing laboratory of Gurit (UK) (Approval No. AOSS0000DHK), dated on 2018-09-19.
- Approval of Manufacturer (Approval No. AMPM0000023) valid until 2021-02-28.
- Quality assurance/control documentation

## Material Properties

Properties	Test Method	Ampreg 31	Fast Hardener	Standard Hardener	Slow Hardener	Extra-slow Hardener	Unit
Density at 21°C	ISO 1183-1B	1.00 - 1.20	0.90 - 1.10	0.95 - 1.15	0.90 - 1.10	0.85 - 1.05	g/cm <sup>3</sup>
Viscosity at 25°C	Brookfield RVT	2000 - 2800	300 - 500	100 - 200	20 - 30	5 - 15	mPa·s
Gel Time at 25°C	Tecam	N/A	25.0 - 35.0	60.0 - 70.0	200.0 - 220.0	260.0 - 300.0	mins

## 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

Gurit (UK) Ltd.  
St. Cross Business Park  
Newport PO30 5WU  
United Kingdom

Gurit (Spain) S.A.  
Polígono Industrial Romica, Calle 4, Parcela 11C  
02080 Albacete  
Spain

## 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.

## Remarks

None

END OF CERTIFICATE