## TYPE APPROVAL

Certificate No.: TA-DNVGL-CP-0086-07628-0

Issued: 2021-09-08

Valid until: 2026-09-07

Issued for:

# **Epoxy adhesive system**

with type designation(s)

## **SPABOND 820HTA**

Issued to:

# Gurit (UK) Ltd.

St Cross Business Park, Newport, Isle of Wight, PO30 5WU, United Kingdom

According to:

DNVGL-SE-0436:2018-04 Shop approval in renewable energy

and

**DNVGL-CP-0086:2016-03 Type approval – Adhesive systems**Applying:

**DNVGL-SE-0441:2016-06 Type and component certification of wind turbines** 

Based on the documents listed in Annex 1.

This Type Approval consists of this page and Annex 1 which is integral part of the approval.

Any significant change in design and / or quality of the material will render this Type Approval invalid.

Hellerup, 2021-09-08

Hamburg, 2021-09-08

For DNV GL Renewables Certification Bente Vestergaard Service Line Leader

For DNV GL Renewables Certification Bernhard Krüger Project Manager

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#### Product description and application

Two component epoxy based, glass filled adhesive system for bonding in wind industry and maritime applications.

#### **Approved variants**

Spabond 820HTA resin with Spabond 820HTA hardener

#### Type Approval documentation

Technical data sheet(s): SPABOND 820HTA FAST CURING STRUCTURAL EPOXY ADHESIVE, issued by

Gurit, received 2020-04-26

Safety data sheet(s): Spabond 820 Resin and Spabond 820HTA Hardener, version 1.1, issued by

Gurit, dated 2020-07-14

Test report(s): DNVGL CERTIFICATION OF SP820 HTA ADHESIVE MANUFACTURED, 100437,

issued by Gurit, dated 2021-04-06

Inspection report(s): DNVGL Approval of Manufacturer certificate with no. AMPM0000023 with validity

until 2021-02-28, currently under renewal assessment

Quality control QUALITY MANAGEMENT SYSTEM - ISO 9001:2015, FM 12919, issued by BSI,

documentation: dated 2018-12-07

Several CoAs

### Liquid components

Material properties	Test Method	Spabond 820HTA Resin	SPABOND 820HTA Hardener	Unit
Viscosity at 25 °C	ISO 2884	11 - 15	3 - 4.5	Pa∙s
Density at 21 °C	ISO 1183-1	1.34	1.19	g/cm³

### **Cured Composite**

Material Properties	Test method	Value	Unit
Glass Transition Temperature	ISO 6721 (DMA)	78	°C
Tensile Strength	ISO 527-2	66	MPa
Tensile Modulus	ISO 527-2	4.7	GPa
Flexural Strength	ISO 178	113	MPa
Flexural Modulus	ISO 178	4.7	GPa

#### **Approved Production Sites**

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

Production Site was covered by Approval of Manufacturer AMPM0000023.

### **DNV-GL**

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#### **Periodical assessment**

2.5 years after the last workshop inspection, the client shall inform DNV GL about any modifications in production. An intermediate inspection might be needed based on the implemented changes.

For renewal, an inspection 5 years after the last workshop inspection is due.

A production side with a valid Approval of Manufacturer certificate for material in question is exempted from the obligation concerning retention and renewal assessments.