



Certificate No:
TAK000026U

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Adhesive

with type designation(s)
Spabond 445

Issued to

Gurit (UK) Ltd.
Newport, Isle Of Wight, United Kingdom

is found to comply with
DNV class programme DNV-CP-0086 – Type approval – Adhesive systems

Application :

Bonding of epoxy laminates.

Issued at **Hamburg** on **2023-03-15**

for **DNV**

This Certificate is valid until **2028-03-14**.

DNV local unit: **Southampton**

Approval Engineer: **Joachim Rehbein**

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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

SPABOND 445: Two component epoxy resin system.

Approved variants

Epoxy resin **SPABOND 445** with following hardeners:

- **SPABOND 400** Fast hardener
- **SPABOND 400** Slow hardener

Material properties

Property	Test Method	Spabond 445 Resin	Spabond 400 Fast Hardener	Spabond 400 Slow Hardener	Unit
Viscosity at 25°C	ISO 2884	12.0 – 15.0	8.5 – 10.5	7.5 – 9.5	Pa·s
Density at 21°C	ISO 1183-1B	1.17	1.08	1.04	g/cm ³

Application/Limitation

The adhesive complies with the applicable requirements of DNV and is compatible to the adherends.

Any significant changes in design and / or quality of the material will render the approval invalid

Type Approval documentation

Application for DNV type approval TAA 901 of 2022-10-12;

Technical data sheet(s)	SPABOND™ 445, 5-0822, issued by Gurit;
Safety data sheet(s)	Spabond 445 Resin, version 2.2, issued by Gurit, dated 2022-08-03; Spabond 400 Slow Hardener, version 1.1, issued by Gurit, dated 2022-04-05; Spabond 400 Fast Hardener, version 2.0, issued by Gurit, dated 2022-07-06;
Test report(s)	DNVGL CERTIFICATION OF SPABOND 400 SERIES OF ADHESIVE MANUFACTURED IN GURIT NEWPORT, 12348, issued by Gurit, dated 2022-08-16;
Inspection report(s)	DNV Shop Approval, SA-DNV-SE-0436-08364-0, issued by DNV, dated 2022-01-18, valid until 2024-02-28;
Quality control documentation	ISO 9001:2015, certificate no.: 10000455166-MSC-DANAK-DNK, issued by DNV, dated 2021-11-16, valid until 2024-12-06; Certificate of Analysis, 761-0020072022, issued by Gurit, 2022-07-20.

Tests carried out

According to type approval documentation

Marking of product

The product or package shall be marked. The marking shall at least include the following information:

- manufacturer's name and address or trademark
- production plant
- product name (grade)
- storage instruction
- production date/batch number
- quality guarantee period, if any.

The marking shall be carried out in such a way that it is visible, legible and indelible. The marking of product shall enable traceability to the type approval certificate.

Periodical assessment

Periodical assessments are required after two years and after 3.5 years (retention survey) and for renewal after 5 years (renewal survey). Refer to DNV-CP-0338, Sec.4.

A production site with a valid Approval of Manufacturer (AoM) certificate for material in question is exempted from the obligation concerning periodical and renewal assessments.



Job Id: **262.1-038710-1**
Certificate No: **TAK000026U**

This certificate is only valid if required assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>

Assessed production site

Gurit (UK) Ltd.
St. Cross Business Park
Newport PO30 5WU
United Kingdom
(Holds Shop Approval, SA-DNV-SE-0436-08364-0, valid until 2024-02-28)

END OF CERTIFICATE