

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Adhesive**

with type designation(s)
SCIGRIP® SG230 HV

Issued to

SCIGRIP Adhesives Ltd
Washington, Tyne and Wear, United Kingdom

is found to comply with

DNV GL class programme DNVGL-CP-0086 – Type approval – Adhesive systems

Application :

For bonding of fibre reinforced plastics made from polyester, vinyl ester and epoxy.

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Issued at **Høvik** on **2020-03-27**

This Certificate is valid until **2025-03-26**.

DNV GL local station: **Manchester**

for **DNV GL**

Approval Engineer: **Gisle Hersvik**

Gustav Heiberg
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.



Product description

SCIGRIP® SG230 HV (High Viscosity) **Methacrylate Adhesive**, a two-component adhesive system

Application/Limitation

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

Approved substrates:

- Fibre reinforced epoxy
- Fibre reinforced vinyl ester
- Fibre reinforced polyester

Max. lap-shear strength:

- 13.0 MPa (at room temperature)
- 7.0 MPa (at 50°C)

Shear modulus:

- 440 GPa

Bondline thickness:

- The bondline thickness shall be in accordance with manufacturer's recommendations.

Following fatigue tests in accordance with ASTM D3166, SG230HV is capable of reaching over 1 million cycles at 30hz, cycling between 90N and 50% of its capable maximum load as measured through single lap shear strength tests. For further details, please contact the manufacturer.

Application of the adhesive is to be performed in line with manufacturer's recommendations, ref. Technical Data Sheet for SG230 HV.

For applications subject to dynamical loads additional testing may be required.

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

Type Approval documentation

Marking of product

Product shall be marked with *manufacturer's name, place of production and type designation*.

The marking is to be carried out in such a way that it is visible, legible and indelible. The marking of product is to enable traceability to the DNV GL Type Approval Certificate.

Periodical assessment

The scope of the Periodical Assessment is to verify that the conditions stipulated for the Type Approval is complied with and that no alterations are made to the product design or choice of materials.

Periodical assessments (for Certificate Retention and Certificate Renewal) shall be performed according to DNVGL-CP-0338.

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

END OF CERTIFICATE