Certificate No:
TAK0000214

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Glass Fibre Products

with type designation(s)
Woven Roving (200-2000 g/m²) with or without M (100-600 g/m²)

Issued to
Dipex spol. s.r.o.
Sered, Slovakia (Slovak Republic)

is found to comply with
DNV GL rules for classification – High speed and light craft
DNV GL class programme DNVGL-CP-0467 – Type approval – Uni- and multi-axial multi-ply fabrics made of glass fibres
Det Norske Veritas' Type Approval Programme 1-501.8, 2009, Glass Fibre Reinforcements
DNV GL standard DNVGL-ST-0342 – Craft
Det Norske Veritas' Standards for Certification No. 2.20, Lifeboats and Rescue Boats, 2007

Application :

Manufacturing of FRP laminates.

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

Issued at **Høvik** on **2021-05-14**
This Certificate is valid until **2026-05-13**.
DNV local station: **Prague CMC**

Approval Engineer: **Gisle Hersvik**

for **DNV**

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.

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

Woven Roving (200-2000 g/m²) with or without M (100-600 g/m²)

Legends:
STO: Glass Fibre Woven Roving 0°/90°
KM: Glass Fibre Woven Roving 0°/90° Combined with Mat
M Chopped Strand Mat

The following indicative properties have been verified by Type Testing of laminates:

Properties	**Test Method**	**STO L600 [0°/90°]**		
Tensile strength	ISO 527-4	531	MPa	mean
Tensile modulus	ISO 527-4	28	GPa	mean
Flexural strength	ISO 14125	572	MPa	mean
Fibre volume content	ISO 1172	54	%	mean
Resin:		Ineos' EXP EU RESIN Promoted B / Luperox K1S		
Curing procedure used for Type Testing:		Vacuum assisted resin infusion technology, overnight cure at room temperature		

Legends:
mean: Mean of Type Test results

Application/Limitation

The approval covers the weight ranges listed above.

The fabric complies with the applicable requirements of DNV and is compatible to the laminating resin.

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

Type Approval documentation

Tests carried out

Type Testing carried out according to **Type Approval documentation**.

Please note that the type testing and approval has been carried out with basis in DNV Type Approval Programme No. 1-501.8 as the DNVGL-CP-0467 is not specifically made for woven glass fibre products.

Marking of product

Product shall be marked with *manufacturer's name*: **Dipex spol. s.r.o., Slovakia** and *Type Designation (Product Name), Barcode, Batch number, Product ID, Width and Weight*.

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 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