

TYPE APPROVAL CERTIFICATE**This is to certify:****That the Glass Fibre Products**

with type designation(s)

G-PLY™: Bi-axial BT (0°/90°) (300 – 3000 g/m²) with or without CSM (100 - 600 g/m²),**G-PLY™: Bi-axial BXS (±45°) (150 – 3000 g/m²) with or without CSM (100 - 600 g/m²)**

Issued to

CHOMARAT TEXTILES INDUSTRIES SAS**Le Cheylard, Ardeche, France**

is found to comply with

DNV GL class programme DNVGL-CP-0467 – Type approval – Uni- and multi-axial multi-ply fabrics made of glass fibres**DNV GL rules for classification – High speed and light craft****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 GL.**Issued at **Høvik** on **2019-10-25**for **DNV GL**This Certificate is valid until **2024-10-24**.DNV GL local station: **France CMC**Approval Engineer: **Gisle Hersvik****Rikard Törnqvist**
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: **262.1-018699-7**
Certificate No: **TAK0000033**
Revision No: **5**

Product description

G-PLY™: Bi-axial BT (0°/90°) (300 – 3000 g/m²) with or without CSM (100 - 600 g/m²) and G-PLY™: Bi-axial BXS (±45°) (150 – 3000 g/m²) with or without CSM (100 - 600 g/m²); Glass Fibre Bi-axials

Fibre material: Roving 300 tex, Roving 600 tex, Roving 1200 tex, Roving 2400 tex

Manufactured by

CHOMARAT Textiles Industries, 39 avenue Chabannes, 07160 Le Cheylard, France

DNV GL local station: Marseille

CHOMARAT Engineered Textiles (Taicang) Co., Ltd., 36 Qingdao East Road, Taicang 215400, Jiangsu Province, China

DNV GL local station: Shanghai

Responsibility

The Company (stated on the front page of this Certificate) takes the responsibility that both design and production are in compliance with Rules, Standards and/or Regulations listed on page 1 of this certificate.

Application/Limitation

Manufacture of FRP components for applications including marine vessels - and rotor blades within wind energy (ref. DNVGL-ST-0376).

The fabric complies with the applicable requirements of DNV GL 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

1. Assessment Report from DNV GL Marseille of 2019-09-26.
2. Assessment Report from DNV GL Marseille of 2015-06-05 (audit date 2015-03-31).
3. Application for Type Approval of 2015-03-31.
4. Material Declaration – Asbestos of 2015-04-10.
5. POLYLITE® 506-647 (DCPD Based Infusion Resin) Product Bulletin (Reichhold).
6. Chomarats Test Reports for BT583 M450 [0°/90°+Mat, Roving 1200/600 tex + Roving 2400 tex], BT583 [0°/90°, Roving 1200/600 tex], BXS600 [±45°, Roving 600 tex].
7. Product Information: G-PLY™BT583/M450 T6 (1061 g/m²).
8. Product Information: G-PLY™BT583 T4 (611 g/m²).
9. Product Information: G-PLY™BXS600 T2,3 (612 g/m²).


Tests carried out

Type Testing carried out in accordance with **Type Approval documentation**.

Marking of product

Product/package 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.



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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