

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

with type designation(s)

**C-PLY™: Bi-axial BT (0°/90°) (150 – 1200 g/m<sup>2</sup>),****C-PLY™: Bi-axial BX (±45°) (150 – 1200 g/m<sup>2</sup>)**

Issued to

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

is found to comply with

**DNV GL class programme DNVGL-CP-0434 – Type approval – Uni- and multi-axial multi-ply fabrics made of carbon 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: **262.1-018699-6**  
Certificate No: **TAK0000032**  
Revision No: **2**

## Product description

**C-PLY™: Bi-axial BT (0°/90°) (150 - 1200g/m<sup>2</sup>)** and  
**C-PLY™: Bi-axial BX (±45°) (150 - 1200g/m<sup>2</sup>)**; Carbon Fibre Bi-axials

## 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. Chomarat's Test Reports for BT600 [0°/90°, T700SC 12K FOE], BX600 [±45°, T700SC 12K HS FOE].
6. Product Information: C-PLY™BT600 CT3,4 12K FOE (605 g/m<sup>2</sup>).
7. Product Information: C-PLY™BX600 CT2,3 12K HS FOE (600 g/m<sup>2</sup>).

## 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*; **CHOMARAT Textiles Industries, France** 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