



Certificate No:
TAK0000265

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Prepreg Materials

with type designation(s)
BT080

Issued to

Delta Preg S.p.A.
Sant'Egidio Alla Vibrata, TE, Italy

is found to comply with

DNV class programme DNV-CP-0431 – Type approval – Prepreg materials

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 **2022-11-07**

This Certificate is valid until **2027-11-06**.

DNV local unit: **Italy/Malta 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.



Form code: TA 251

Revision: 2022-09

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Product description

BT080: a prepreg system, made from fibre impregnated with epoxy.

- Curable in autoclave and out of autoclave (by only vacuum bag).
- Cure temperature: 80 - 120 °C

The approval covers product combinations within the ranges specified:

Resin system	BT080		
Fibre type	Carbon		Glass
Reinforcement style	Woven fabric	Non-Crimp	UD
Reinforcement weight	200 g/m ² - 950 g/m ²		
Resin content	30% - 42%		

List of product combinations giving an indication of which variants that are provided by the manufacturer:

Prepreg GG200T(T300)-BT080-42 GG200T(T800H-6K)-BT080-42 GG300X(T700)-BT080-40 GG300X(PX35)-BT080-42 GG315T(T700)-BT080-36 GG400X(T700)-BT080-42 GG400X(T800S)-BT080-40 T700-300-BT080-35 T800H-300-BT080-34 T800S-300-BT080-33 T800S-450-BT080-34 VV200T-BT080-38 VV950X-BT080-30 EGL-200-BT080-34 EGL-400-BT080-30	Adhesive Film – Bonding to Honeycomb core FA010 SUPPORTED (max. 300 g/m ²) FA010 UNSUPPORTED (max. 300 g/m ²)
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Please consult the manufacturer with respect to sourcing the right product combination for the relevant application.

Application/Limitation

The prepreg complies with the applicable requirements of DNV and is compatible to the core materials.

Manufacture of FRP laminates and components in applications including marine vessels – and in rotor blades within wind energy (ref. DNV-ST-0376, observing any additional test requirements).

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 in accordance with **Type Approval documentation**. Testing includes tensile strength, compressive strength, in-plane shear strength, interlaminar shear strength, water retention strength and TMA.

Marking of product

Product/package shall be marked with *manufacturer's name, production date/batch number 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 Type Approval Certificate.

Periodical assessment



Job Id: **262.1-036636-1**
Certificate No: **TAK0000265**

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 / Certificate Renewal) shall be performed according to DNV-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.dnv.com>

END OF CERTIFICATE