

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Prepreg Materials

with type designation(s)
Carbon fibre prepreg X2-121 HM

issued to
Microtex Composites S.r.l.
Pistoia PT, Italy

is found to comply with
DNV class programme DNV-CP-0431 – Type approval – Prepreg materials

Application:

Manufacturing of FRP laminates

Issued at **Hamburg** on **2025-01-22**

This Certificate is valid until **2030-01-21**.

DNV local unit: **Italy/Malta CMC**

Approval Engineer: **Joachim Rehbein**

for **DNV**



Digitally Signed By:
Stefan Röhr
Location: **DNV Hamburg,**
Germany

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 USD 300 000.

Product description

Carbon fibre prepreg:

- Epoxy resin system: X2-121 HM.
- Curable in autoclave and out of autoclave (by vacuum bag).
- Cure temperature: 80 - 120 °C.

The approval covers products within the ranges specified:

Resin system	X2-121 HM		
Designation	GG(xxx)T	GG(xxx)BX	UD(xxx)
Fabric type	Twill 2/2 (0°/90°)	Biaxial (± 45°)	Unidirectional (0°)
Fabric area weight	200 - 430 g/m ²	300 - 400 g/m ²	150 - 600 g/m ²
Fibre type	HS	HS	HS/HM

Application/Limitation

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

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

Type Approval documentation

Type approval assessment report TA 401 of 2022-01-26;
 Product Description;
 Type test report N142SJK rev. 01 of 2024-08-02 witnessed by DNV;
 Test reports issued by SUMIC of 2024-02-13;
 Inspection certificates EN 10204 3.1 including resin content acc. ASTM D3529;
 SIS X2-121 HM matrix prepreg rev. 2.1 of 2024-11-24;
 Datasheet UD150H60-HS of 2021-02-03;
 Datasheet UD600H60-HS of 2021-02-03;
 Datasheet GG 430 T 12K of 2018-11-16,
 Datasheet GG 200 T 3K of 2018-11-16;
 Datasheet GG 400 BX of 2019-06-01;
 Datasheet GG 300 BX of 2019-06-01;
 Datasheet Prepreg X2-121 rev. 1.1 of 2023-10-17.

Tests carried out

According to type approval documentation

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.

Assessed production site:

Microtex Composites S.r.l.
 Via Pozzo di San Sebastiano 15/C, 51100 Pistoia (PT)
 Italy

Periodical assessment

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

A production site with a valid Approval of Manufacturer (AoM) certificate for material in question is exempted from the obligation concerning periodical and renewal assessments.

This certificate is only valid if required 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