



TYPE APPROVAL CERTIFICATE

Certificate no.:
TAK00001TK
Revision No:
1

This is to certify:

that the **Glass Fibre Products**

with type designation(s)

Spray Up Rovings: ER13-2400-180, ER13-3000-180

issued to

Jushi Group Co., Ltd.
Tongxiang, ZHEJIANG, China

is found to comply with

DNV class programme DNV-CP-0082 – Type approval – Glass fibre rovings

DNV rules for classification – High speed and light craft

DNV standard DNV-ST-0342 – Craft

Application:

Manufacturing of FRP laminates.

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

Issued at **Hamburg** on **2024-11-01**

This Certificate is valid until **2029-10-28**.

DNV local unit:

for **DNV**

Digitally Signed By:
Martin Wenning
Location: DNV Hamburg,
Germany



Job ID: **262.1-031280-2**
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Product description

Spray Up Rovings: **ER13-2400-180** and **ER13-3000-180**

Legends:

E: E-Glass

R: Roving

13: Nominal filament diameter, μm

2400, 3000: Weight per unit length, tex

180: Sizing code

Application/Limitation

The roving 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

1. Assessment Report from DNV Shanghai of 2024-10-29.
2. ISO 9001 Certificate, DEKRA Registration No. 20319142/1-1.
3. Jushi Group Co., Ltd. Testing Center, Report Nos. BG241011105 Rev.A (ER13-2400-180), BG241011106 Rev.A (ER13-3000-180) of 2024-10-11.
4. Assessment Report from DNV GL Shanghai of 2019-05-10.
5. Letter from Jushi Group Co., Ltd. of 2019-05-10 (Declaration).
6. Testing Center, Jushi Group Co., Ltd., Report Nos. BG190304102 (ER13-2400-180), BG190304103 (ER13-3000-180) of 2019-03-25.
7. ISO 9001 Audit Report (DEKRA).
8. Application for Type Approval of 2019-03-25.
9. Email from DNV GL Shanghai of 2015-05-05, including Assessment Report of 2015-05-05 and Application Letter from Jushi of 2015-01-29.
10. Email from DNV Shanghai of 2011-05-09, including Survey Report of 2011-05-09, Declaration of Conformity from