

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Carbon Fibre Products**

with type designation(s)

Unidirectional Fabric (0°) and (90°) made of PAN Carbon Fibre

Issued to

SAERTEX GmbH & Co. KG**Saerbeck, Nordrhein-Westfalen, Germany**

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**Application :****Manufacturing of FRP laminates**This Certificate is valid until **2023-07-03**.Issued at **Hamburg** on **2018-07-04**DNV GL local station: **Hamburg Materials & Welding**Approval Engineer: **Guido Michalek**for **DNV GL**

Thorsten Lohmann
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: **262.1-029207-1**
Certificate No: **TAK00000N4**
Revision No: **1**

Product description

Unidirectional fabric made of PAN Carbon Fibers

Layer structure: 0° or 90°
Mass per unit area: 80-1500 g/m²
Max. width: 3810 mm

Limitation

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

- Technical Data Sheet
- Test Report No. 70351/01 issued by FiReCo Fredrikstad, dated on 2011-10-29
- Quality Documentation

Assessed production sites:

Saertex GmbH & Co.KG
Brochterbecker Damm 52
48369 Saerbeck
Germany

Saertex France SAS
2 lot Parc d'activities d'Arandon
38510 Arandon
France

Saertex South Africa (PTY) Ltd.
25 Boland Street Daljosafat
RSA-7624 Paarl
South Africa

Saertex India Private Limited
S.No. 282, Mann Village Mulshi
Pune 411 057
India

Saertex USA, LLC.
12200 Mt. Holly-Huntsville Rd.
Suite A
Huntsville, NC 28078
USA

Saertex Portugal, Unipessoal Lda
Parque Empresarial de Lanheses
Fracao 5B
Estrada do Engenho 320
4925-432 Lanheses
Portugal

Saertex Reinforcements (Dongying) Co., Ltd.
No. 102, Yihe Road, Dongying Economic Development Zone
Shandong Province, 257091
P.R. China

Periodical assessment

A production site with a valid Approval of Manufacturer (AoM) certificate for material in question is exempted from the obligation concerning retention and renewal assessments.
For manufacturer without a valid AoM a periodical assessment after 2.5 years and at renewal after 5 years is required.

Remarks

None

End of Certificate