

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Synthetic Fibre Ropes

with type designation(s)
HMPE/D-F3 rope

Issued to

LANEX a.s.
Bolatice, Czech Republic

is found to comply with

DNV class programme DNV-CP-0100 – Type approval – Synthetic fibre ropes for towing, mooring and anchoring

ISO 10325:2018 "Fibre ropes – High modulus polyethylene – 8-strand braided ropes, 12-strand braided ropes and covered ropes"

OCIMF Mooring Equipment Guidelines (MEG4), Fourth Edition 2018 [test requirements]

Application :

Mooring and Towing of Ships and HSLCs.

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

Issued at **Hamburg** on **2023-09-21**

This Certificate is valid until **2028-09-20**.

DNV local unit: **Ostrava**

for **DNV**

Approval Engineer: **Gisle Hersvik**

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.

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.



Product description

HMPE/D-F3 rope: 12-strand, Type T, braided synthetic fibre rope

- Fibre material: HMPE 1760dtex
- Specific gravity: 0.99 (floats in seawater)
- Elongation at break: approx. 4%

Compliance with OCIMF Mooring Equipment Guidelines (MEG4)

Mooring Line Base Design Certificate - For HMPE/D-F3 rope 28 mm and 48 mm

Certificate No.: **LNx-HMPET-2023-01-R**

Issued date: 2023-09-07

Mooring Line Certificates will be issued with reference to Mooring Line Base Design Certificate.

LANEX a.s. has performed the full test scenario as per OCIMF MEG4.

Rope Characteristics

The Rope characteristics are tabulated below observing the following:

Fibre ropes are to be delivered with a linear mass $\pm 5\%$ of the nominal linear mass given in the table.

All Break Force values are given for both un-spliced and spliced ropes.

The LDBF (Line Design Break Force) values are given for the spliced ropes.

HMPE/D-F3 rope

Ref. Number / Size		Linear Density -rope	Mass - rope	Breaking Load [kN]	
Diameter [mm]	Circ. [Inch]	[g/m]	[kg/220m]	Un-spliced	Spliced (LDBF)
28	3 1/2	445,0	97,90	685	615
30	3 5/7	508,0	111,76	775	700
32	4	575,0	126,50	865	780
34	4 1/5	646,0	142,12	965	870
36	4 4/9	722,0	158,84	1070	965
38	4 2/3	801,0	176,22	1175	1060
40	5	884,0	194,48	1285	1155
42	5 1/5	972,0	213,84	1392,5	1253,3
44	5 4/9	1062,0	233,64	1525	1372,5
46	5 2/3	1160,0	255,20	1650	1485
48	6	1255,0	276,10	1775	1600

Application/Limitation

The approval range covers ropes with diameter from 28 mm to and including 48 mm.

The OCIMF MEG4 approval range covers ropes with diameter from 28 mm to and including 48 mm.

Type Approval documentation

Tests carried out

Type Testing carried out in accordance with **Type Approval documentation**, and according to:

- OCIMF's Mooring Equipment Guidelines (MEG4) [requirements to testing].
- DNV-CP-0100.

The fibre ropes are manufactured in accordance with:

- ISO 10325:2018 Fibre ropes — High modulus polyethylene — 8-strand braided ropes, 12-strand braided ropes and covered ropes
- Lanex' Rope / Design Specification (HMPE/D-F3 rope) of 2023-09-07.

Marking of product

Product shall be marked with *manufacturer's name*: **LANEX a.s.**, *place of production*, *type designation* and *diameter*.

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

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