



Certificate No:
TAK000027W

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Synthetic Fibre Ropes

with type designation(s)
**SUPERTUF NXT 8 and SUPERTUF NXT 12 Mooring Lines,
SUPERTUF NXT 8 and SUPERTUF NXT 12 Mooring Tails**

Issued to

Tufropes Private Limited
Silvassa, Dadra & Nagar Haveli, India

is found to comply with

DNV class programme DNV-CP-0100 – Type approval – Synthetic fibre ropes for towing, mooring and anchoring
ISO 10572:2009 "Mixed polyolefin fibre ropes"
OCIMF Mooring Equipment Guidelines (MEG4), Fourth Edition 2018 [test requirements]
OCIMF Guidelines for the Purchasing and Testing of SPM Hawsers (2000)

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 **2023-04-28**

This Certificate is valid until **2028-04-27**.

DNV local unit: **India CMC MES**

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.



Form code: TA 251

Revision: 2022-12

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Product description

SUPERTUF NXT 8: 8-strand plaited synthetic rope
SUPERTUF NXT 12: 12-strand braided synthetic rope

- Fibre material: Polyolefin fibres
- Specific gravity: 0.92 (floats in sea water)
- Elongation at break: 16 % $\pm$ 2%
- With or without marine finish.
- UV-stabilized.
- Single construction: Polyolefin yarn.

Compliance with OCIMF Mooring Equipment Guidelines (MEG4)

Mooring Line Base Design Certificate – for SUPERTUF NXT 32 mm and 120 mm

Ref No.: **TF/MEG4/MLBDC/STNXT/23/001** Issue date: **2023-03-01**

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

Mooring Tail Base Design Certificate – for SUPERTUF NXT 32 mm and 120 mm

Ref No.: **TF/MEG4/MTBDC/STNXT/23/002** Issue date: **2023-03-01**

Mooring Tail Certificate will be issued with reference to Mooring Tail Base Design Certificate.

The rope Manufacturer has performed the full test scenario as per OCIMF MEG4.

Compliance with OCIMF 2000, Guidelines for the Purchasing and Testing of SPM Hawsers

Tested: Size 6 (48 mm) and Size 15 (120 mm)

Rope Characteristics

The Rope characteristics are tabulated on the next page observing the following:

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

Linear Density is tabulated on the following pages.

The breaking load values are given for dry and wet, un-spliced and spliced mooring ropes. The LDBF/TDBF (Line Tail Design Break Force) is the value stated for the spliced rope.

SUPERTUF NXT 8-strand and SUPERTUF NXT 12-strand:

Ref. Number / Size		Linear Density - rope	Mass - rope	Breaking Load [Ton]	
Diameter [mm]	Cir. [Inch]	[g/m]	[kg/ 220m]	Un-spliced	Spliced [LDBF/TDBF]
32	4	0.460	101.20	18.20	16.40
34	4-1/4	0.520	114.40	20.60	18.50
36	4-1/2	0.580	127.60	23.10	20.80
38	4-3/4	0.650	143.00	25.70	23.10
40	5	0.720	158.40	28.50	25.70
42	5-1/4	0.730	160.60	31.50	28.40
44	5-1/2	0.880	193.60	34.70	31.20
46	5-3/4	0.960	211.20	38.00	34.20
48	6	1.040	228.80	41.50	37.40
50	6-1/4	1.130	248.60	44.90	40.40
52	6-1/2	1.220	268.40	48.50	43.70
54	6-3/4	1.320	290.40	52.20	47.00
56	7	1.420	312.40	56.00	50.40
58	7-1/4	1.520	334.40	59.90	53.90
60	7-1/2	1.630	358.60	63.90	57.50
62	7-3/4	1.740	382.80	68.00	61.20
64	8	1.850	407.00	72.20	65.00
66	8-1/4	1.970	433.40	77.90	70.10
68	8-1/2	2.090	459.80	83.80	75.40
70	8-3/4	2.210	486.20	90.00	81.00

72	9	2.340	514.80	96.50	86.90
74	9-1/4	2.480	545.60	100.30	90.30
76	9-1/2	2.610	574.20	104.10	93.70
78	9-3/4	2.750	605.00	107.80	97.00
80	10	2.900	638.00	111.50	100.40
82	10-1/4	3.050	671.00	117.30	105.60
84	10-1/2	3.200	704.00	123.20	110.90
86	10-3/4	3.360	739.20	129.30	116.40
88	11	3.520	774.40	135.50	122.00
90	11-1/4	3.680	809.60	141.90	127.70
92	11-1/2	3.840	844.80	148.50	133.70
94	11-3/4	4.000	880.00	155.10	139.60
96	12	4.170	917.40	162.00	145.80
98	12-1/4	4.340	954.80	168.60	151.70
100	12-1/2	4.520	994.40	175.30	157.80
102	12-3/4	4.700	1034.00	182.10	163.90
104	13	4.890	1075.80	189.00	170.10
106	13-1/4	5.080	1117.60	196.10	176.50
108	13-1/2	5.290	1163.80	203.30	183.00
110	13-3/4	5.490	1207.80	210.60	189.50
112	14	5.700	1254.00	218.00	196.20
114	14-1/4	5.900	1298.00	225.60	203.00
116	14-1/2	6.100	1342.00	233.30	210.00
118	14-3/4	6.300	1386.00	241.10	217.00
120	15	6.500	1430.00	249.00	224.10

Application/Limitation

The approval range covers ropes with diameter from 32 mm to and including 120 mm.

The OCIMF MEG4 approval range covers ropes with diameter from 32 mm to and including 120 mm.

The OCIMF 2000 approval range covers ropes with diameter from 32 mm to and including 120 mm.

Place of Manufacture

Tufropes Private Limited, Survey No.: - 328/1/1/1, Tipco Road, Masat, Silvassa, Dadra & Nagar Haveli and Daman Div. 396230, India

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].
- OCIMF Guidelines for the Purchasing and Testing of SPM Hawsers (2000)
- DNV-CP-0100.

The fibre ropes are manufactured in accordance with:

- Design Specification (SUPERTUF NXT) - TF/MEG4/DS/STNXT/001 of 2023-03-01.
- ISO 10572:2009 "Mixed polyolefin fibre ropes"

Marking of product

Product shall be marked with *manufacturer's name, place of production and type designation, diameter, product code and strength*.

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: **262.1-039356-1**
Certificate No: **TAK000027W**

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