



Certificate No:
TAK0000240

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Synthetic Fibre Ropes

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

Issued to

INDIA NETS

Pithampur, Madhya Pradesh, 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 **Høvik** on **2022-04-04**

This Certificate is valid until **2027-04-03**.

DNV local station: **Mumbai NB & CMC**

for **DNV**

Approval Engineer: **Gisle Hersvik**

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Gustav Heiberg
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: 2021-03

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Product description

SUPERTUF PLUS 8: 8 Strand plaited / braided synthetic rope
SUPERTUF PLUS 12: 12 Strand plaited / 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 PLUS 32 mm and 120 mm

Ref No.: - **IN/MEG4/MLBDC/STPLUS/21/001**

Mooring Line Certificate will be issued with reference to mooring line base design certificate.

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

Ref No.: - **IN/MEG4/MTBDC/STPLUS/21/002**

Mooring Tail Certificate will be issued with reference to mooring tail base design certificate.

INDIA NETS 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.

All LDBF/TDBF (Line/Tail Design Break Force) values are given for dry and wet, un-spliced and spliced mooring ropes.

SUPERTUF PLUS 8 - SUPERTUF PLUS 12:

Ref. Number / Size		Linear Density - rope [kg/m]	Mass - rope [kg/ 220m]	Breaking Load [Ton]	
Diameter [mm]	Cir. [Inch]			Un-spliced	Spliced [LDBF/TDBF]
32	4	0.460	101.00	21.90	19.70
34	4-1/4	0.520	114.00	24.50	22.10
36	4-1/2	0.590	130.00	27.30	24.60
38	4-3/4	0.650	143.00	30.10	27.10
40	5	0.720	158.00	33.00	29.70
42	5-1/4	0.805	177.00	36.20	32.60
44	5-1/2	0.900	198.00	39.50	35.60
46	5-3/4	0.970	213.00	42.80	38.50
48	6	1.040	229.00	46.25	41.60
50	6-1/4	1.130	248.00	49.80	44.80
52	6-1/2	1.220	268.00	53.40	48.10
54	6-3/4	1.320	290.00	57.10	51.40
56	7	1.420	312.00	60.80	54.70
58	7-1/4	1.520	334.00	65.00	58.50
60	7-1/2	1.630	359.00	69.40	62.50
62	7-3/4	1.740	383.00	74.10	66.70
64	8	1.850	407.00	79.05	71.10
66	8-1/4	1.970	433.00	84.10	75.70
68	8-1/2	2.090	460.00	89.25	80.30
70	8-3/4	2.210	486.00	94.00	84.60
72	9	2.340	515.00	98.90	89.00

74	9-1/4	2.470	544.00	104.70	94.20
76	9-1/2	2.610	575.00	110.60	99.50
78	9-3/4	2.750	605.00	116.00	104.40
80	10	2.900	638.00	121.40	109.30
82	10-1/4	3.050	671.00	127.30	114.60
84	10-1/2	3.200	704.00	133.30	120.00
86	10-3/4	3.350	737.00	139.50	125.60
88	11	3.510	772.00	145.75	131.20
90	11-1/4	3.670	807.00	152.40	137.20
92	11-1/2	3.830	843.00	159.20	143.30
94	11-3/4	4.000	880.00	166.10	149.50
96	12	4.170	917.40	173.20	155.90
98	12-1/4	4.350	957.00	180.40	162.40
100	12-1/2	4.530	996.00	187.80	169.00
102	12-3/4	4.710	1037.00	195.30	175.80
104	13	4.900	1078.00	203.00	182.70
106	13-1/4	5.100	1121.00	210.70	189.60
108	13-1/2	5.290	1163.80	218.50	196.70
110	13-3/4	5.490	1207.80	226.50	203.90
112	14	5.700	1254.00	234.60	211.10
114	14-1/4	5.900	1298.00	242.80	218.50
116	14-1/2	6.090	1342.00	251.20	226.10
118	14-3/4	6.300	1386.00	259.70	233.70
120	15	6.500	1430.00	268.40	241.60

Application/Limitation

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.

Manufactured by

INDIA NETS Unit 1, Indore SEZ Phase-I, Sector-III, Plot No D-1 to 12, B-1, 2 & F-3 to 5, Pithampur-454775, Dist.-Dhar-454775, Madhya Pradesh, India

INDIA NETS Unit 2, Indore SEZ Phase-I, Sector-III, F-1 & F-2, Pithampur-454775, Dist.-Dhar-454775, Madhya Pradesh, India

DNV local station: Mumbai

Responsibility

The Company (stated on the front page of this Certificate) takes the responsibility that both design and production are in compliance with Rules, Standards and/or Regulations listed on page 1 of this certificate.

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 2000, Guidelines for the Purchasing and Testing of SPM Hawsers (1st Edition 2000) [testing].
- DNV-CP-0100.

The fibre ropes are manufactured in accordance with:

- Design Specification (SUPERTUF PLUS) - Ref No - IN/MEG4/DS/STPLUS/006 of 2020-12-01
- ISO 10572:2009 "Mixed polyolefin fibre ropes"

Marking of product



Job Id: **262.1-035250-1**
Certificate No: **TAK0000240**

Product shall be marked with *manufacturer's name*; **INDIA NETS**, *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

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