Certificate no.:
TAK00002NM

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Synthetic Fibre Ropes

with type designation(s)
PLATEENA 12 (Mooring Lines)

issued to
Garware Technical Fibres Limited
Pune, Maharashtra, **India**

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 **2026-03-23**
This Certificate is valid until **2031-03-22**.
DNV local unit: **India CMC MES**

for **DNV**

Approval Engineer: **Gisle Hersvik**

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 USD 300 000.

Product description

PLATEENA: 12-strand plaited synthetic fibre rope, with or without Polyester Jacket

- Fibre material: High Tenacity HMPE (rope) / Polyester, PES (Jacket)
- Specific gravity: 0.99 (floats in seawater) – without Jacket
- Specific gravity: 1.10 (sinks in seawater) – with Jacket

Compliance with OCIMF Mooring Equipment Guidelines (MEG4)

Mooring Line Base Design Certificate – For PLATEENA 20 mm and 60 mm
Ref No.: GTF/MLBDC/PLATEENA/J1 **Issue date**: 2026-02-06
Mooring Line Certificate will be issued with reference to Mooring Line Base Design Certificate.

Mooring Line Base Design Certificate – For PLATEENA w/Polyester Jacket 20 mm and 60 mm
Ref No.: GTF/MLBDC/PLATEENA/J1-1 **Issue date**: 2026-02-06
Mooring Line Certificate will be issued with reference to Mooring Line Base Design Certificate.

Garware Technical Fibres Limited has performed the full test scenario as per OCIMF MEG4.

The Mooring Line Base Design Certificate shall be maintained in accordance with OCIMF MEG4.

Rope Characteristics

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

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

All MBL (Minimum Break Load) values are given for the un-spliced ropes.
All LDBF (Line Design Break Force) values are given for the spliced ropes.

PLATEENA: 12-strand plaited synthetic fibre ropes [6 – 19 mm]

Diameter [mm] -without Jacket	Line Linear Density (LLD) [kg/m] -without Jacket	Diameter [mm] -with PES Jacket	Line Linear Density (LLD) [kg/m] -with PES Jacket	MBL [kN] (Unspliced)	MBL [ton] (Unspliced)	LDBF [ton] (Spliced)
6	0.023	8	0.038	40	4.08	3.67
7	0.034	9	0.057	54	5.50	4.95
8	0.040	10	0.066	69	7.04	6.33
9	0.051	11	0.085	83	8.50	7.65
10	0.061	12	0.104	105	10.71	9.64
11	0.077	13	0.127	123	12.50	11.25
12	0.087	14	0.145	150	15.30	13.77
13	0.109	15	0.181	172	17.50	15.75
14	0.117	16	0.195	200	20.40	18.36
15	0.134	17	0.223	229	23.40	21.06
16	0.152	18	0.253	255	26.00	23.40
17	0.171	19	0.285	284	29.00	26.10
18	0.190	20	0.316	315	32.13	28.92
19	0.212	21	0.353	348	35.50	31.95

PLATEENA: 12-strand plaited synthetic fibre ropes [20 - 60 mm]

Diameter [mm] -without Jacket	Line Linear Density (LLD) [kg/m] -without Jacket	Diameter [mm] -with PES Jacket	Line Linear Density (LLD) [kg/m] -with PES Jacket	MBL [kN] (Unspliced)	MBL [ton] (Unspliced)	LDBF [ton] (Spliced)
20	0.233	22	0.388	380	38.76	34.88
21	0.256	23	0.427	412	42.00	37.80
22	0.280	24	0.466	450	45.90	41.31
23	0.305	25	0.508	481	49.00	44.10
24	0.331	26	0.550	520	53.04	47.74
25	0.360	27	0.553	559	57.00	51.30
26	0.386	28	0.594	600	61.20	55.08
27	0.415	29	0.638	641	65.40	58.86
28	0.445	30	0.684	685	69.87	62.88
29	0.495	31	0.761	752	76.70	69.03
30	0.508	32	0.781	775	79.05	71.15
31	0.545	33	0.838	820	83.60	75.24
32	0.575	34	0.884	865	88.23	79.41
33	0.611	35	0.940	917	93.50	84.15
34	0.646	36	0.993	965	98.43	88.59
35	0.685	37	1.054	1015	103.50	93.15
36	0.722	38	1.110	1070	109.14	98.23
37	0.762	39	1.172	1121	114.30	102.87
38	0.801	40	1.144	1175	119.85	107.87
39	0.842	41	1.202	1229	125.30	112.77
40	0.884	42	1.263	1285	131.07	117.96
41	0.930	43	1.328	1346	137.30	123.57
42	0.975	44	1.393	1412	144.00	129.60
43	1.020	45	1.457	1471	150.00	135.00
44	1.062	46	1.517	1525	155.55	140.00
45	1.111	47	1.587	1585	161.60	145.44
46	1.165	48	1.664	1648	168.00	151.20
47	1.208	49	1.725	1709	174.30	156.87
48	1.255	50	1.868	1775	181.05	162.95
49	1.308	51	1.945	1847	188.30	169.47
50	1.362	52	1.771	1922	196.00	176.40
51	1.413	53	2.018	1983	202.20	181.98
52	1.464	54	2.091	2045	208.59	187.73
53	1.550	55	2.214	2125	216.70	195.03
54	1.580	56	2.257	2206	225.00	202.50
55	1.635	57	2.335	2270	231.50	208.35
56	1.688	58	2.411	2330	237.66	213.89

PLATEENA: 12-strand plaited synthetic fibre ropes [20 - 60 mm], cont'd

Diameter [mm] -without Jacket	Line Linear Density (LLD) [kg/m] -without Jacket	Diameter [mm] -with PES Jacket	Line Linear Density (LLD) [kg/m] -with PES Jacket	MBL [kN] (Unspliced)	MBL [ton] (Unspliced)	LDBF [ton] (Spliced)
57	1.755	59	2.507	2412	246.00	221.40
58	1.820	60	2.600	2491	254.00	228.60
59	1.875	61	2.678	2564	261.50	235.35
60	1.928	62	2.754	2636	268.77	241.89

The data in the table is provided by Garware Technical Fibres Limited.

Place of manufacture

Garware Technical Fibres Limited, Plot No. 11, Block D-1, MIDC Chinchwad, Pune 411019, Maharashtra, India

Application/Limitation

The approval range covers ropes with diameter from 6 mm to and including 60 mm.

The OCIMF MEG4 approval range covers ropes with diameter from 20 mm to and including 60 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:
- Product Specification (PLATEENA), QAD/D/112 of 2025-12-15.
- ISO 9554:2019 Fibre ropes -- General specifications

Remark:
Product Specification (PLATEENA), QAD/D/112 meets the linear density and minimum breaking force values listed in Appendix C of NCD 3750, Part 1, Issue 1, Specifications for High Modulus Polyethylene (HMPE) Ropes for Berthing. Rev. 0 of Dec 2014.

Marking of product

Product shall be marked with *manufacturer's name*: **Garware Technical Fibres Limited, India**, *type designation*, *diameter* and *length*.

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