



Certificate No:
TAK00002A7

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Synthetic Fibre Ropes

with type designation(s)
DYNAMICA FORTUNA

Issued to

Dynamica Ropes ApS
Fredericia, Syddanmark, Denmark

is found to comply with

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

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 **2023-09-11**

This Certificate is valid until **2028-09-10**.

for **DNV**

DNV local unit: **Fredericia FiS**

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

DYNAMICA FORTUNA, 12-strand braided, rotation free, synthetic fibre ropes

- Fibre material: 1600D UHMWPE
- Specific gravity: 0.98 (floats in seawater)

Rope characteristics:

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

Diameter, weight, break strength and other properties are determined according to ISO 2307:2019.

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

Fibre ropes are to be delivered with a breaking strength within ± 5 % of the breaking strength given in the table.

All break strength values stated in [t] are for unspliced ropes. Break strength values for spliced ropes stated in [kN].

DYNAMICA FORTUNA

ROPE CHARACTERISTICS					
Diameter	Linear Density -rope [g/m]	Mass -rope [kg/100m]	Mass -rope [kg/220m]	Break Strength -unspliced [t]	Break Strength -spliced [kN]
5	14,0	1,4	3,1	3,0	26,5
6	21,0	2,1	4,6	4,0	35,3
7	27,0	2,7	5,9	6,1	53,9
8	35,0	3,5	7,7	7,7	68,0
9	42,0	4,2	9,2	9,0	79,5
10	46,0	4,6	10,1	10,0	88,3
11	62,0	6,2	13,6	13,9	122,7
12	85,0	8,5	18,7	17,8	157,2
14	120,0	12,0	26,4	22,0	194,2
16	130,0	13,0	28,6	26,1	230,4
18	190,0	19,0	41,8	36,0	317,8
20	210,0	21,0	46,2	41,0	362,0
22	260,0	26,0	57,2	51,0	450,3
24	315,0	31,5	69,3	55,0	485,6
26	360,0	36,0	79,2	65,0	573,9
28	400,0	40,0	88,0	70,0	618,0
30	430,0	43,0	94,6	78,0	688,7
32	470,0	47,0	103,4	85,0	750,5
34	530,0	53,0	116,6	94,0	829,9
36	610,0	61,0	134,2	110,0	971,2
38	720,0	72,0	158,4	133,0	1174,3
40	765,0	76,5	168,3	145,0	1280,2
42	845,0	84,5	185,9	155,0	1368,5
44	1000,0	100,0	220,0	170,0	1500,9
48	1200,0	120,0	264,0	180,0	1589,2
52	1430,0	143,0	314,6	220,0	1942,4
56	1800,0	180,0	396,0	275,0	2428,0
60	2000,0	200,0	440,0	310,0	2737,0
64	2300,0	230,0	506,0	350,0	3090,2
72	2600,0	260,0	572,0	400,0	3531,6
80	3000,0	300,0	660,0	470,0	4149,6

Application/Limitation

The Type Approval covers ropes with diameter from 5 mm to and including 80 mm, as per table above.

Type Approval documentation

Tests carried out

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

- ISO 2307:2019, Fibre ropes -- Determination of certain physical and mechanical properties.
- ISO 9554:2019, Fibre ropes -- General specifications.
- DNV-CP-0100.

Initial setting/cycling of ropes and testing of break strength are carried out in accordance with ISO 2307.

Marking of product

Product shall be marked with *manufacturer's name*; **Dynamica Ropes ApS**, *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