



Certificate no.:
TAK00002B0

TYPE APPROVAL CERTIFICATE

This is to certify:
that the Synthetic Fibres

with type designation(s)
Grommet Type R1 and R2

issued to
Gleistein GmbH
Bremen, Germany

is found to comply with
DNV standard DNV-ST-0377 – Standard for shipboard lifting appliances

Application:

Issued at **Hamburg** on **2023-12-06**

This Certificate is valid until **2028-12-05**.

for **DNV**

DNV local unit: **CMC Northeast Germany**

Approval Engineer: **Knut Polonji**

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 281

Revision: 2023-09

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Product description

Fibre Rope Grommets made from HMPE Fibre "Dyneema SK 78"

1. Single laid Type R1
2. Double laid Type R2

Application/Limitation

Fibre Rope Grommets for Lifting Appliances on board of DNV classed ships and floating cranes.

Not permitted for lifting of persons, potentially dangerous material and where special conditions apply.

Single Laid Grommet Type R1			Double Laid Grommet Type R2		
SWL	Rope Dia.	MBL Grommet	SWL	Rope Dia.	MBL Grommet
[Metric ton]	[mm]	[kN]	[Metric ton]	[mm]	[kN]
1	8	70	2	8	140
2	10	140	4	10	280
3	12	210	6	12	420
4	14	280	8	14	560
5	16	350	10	16	700
8	18	560	16	18	1120
10	22	700	20	22	1400
11	22	770	22	22	1540
14	24	980	28	24	1960
15	26	1050	30	26	2100
17	28	1190	34	28	2380
19	30	1330	38	30	2660
21	32	1470	42	32	2940
23	34	1610	46	34	3220
25	36	1750	50	36	3500
30	38	2100	60	38	4200
35	40	2450	70	40	4900
40	46	2800	80	46	5600
45	48	3150	90	48	6300
50	52	3500	100	52	7000
60	56	4200	120	56	8400
65	60	4550	130	60	9100
75	64	5250	150	64	10500
80	76	5600	160	76	11200
90	80	6300	180	80	12600
100	88	7000	200	88	14000
110	92	7700	220	92	15400
120	96	8400	240	96	16800
135	100	9450	270	100	18900
145	104	10150	290	104	20300
160	112	11200	320	112	22400
190	120	13300	380	120	26600
210	128	14700	420	128	29400
240	136	16800	480	136	33600

Safe working load (SWL), also referred to as working load limit, rated capacity or nominal load.

1. Working conditions:

-Operating temperature -40° C till + 70° C

2. Product certification:

To obtain DNV Product Certificates, each grommet shall be inspected, and load tested in presence of DNV

up to SWL 25t	2 x SWL
over 25 t	(1,22 x SWL) + 20t

3. Maintenance & thorough examination

-The grommets must be annually inspected by a competent person who should determine shorter inspection periods if necessary, depending on the application, environment, frequency of work and similar matters.

-The grommets must be 5-yearly inspected by the manufacturer to establish their fitness for continued use.

Type Approval documentation

Tests carried out

1. DEKRA EXAM GmbH test report Nos. ZQ/B242/14/GS dated 2014-01-27
2. Gleistein Report dated 2010-09-14
3. Prüfbericht Grommets Gleistein dated 2022-01-17

Marking of product

Each product is to be labelled as follows:

1. DNV stamping
2. SWL of the grommet
3. Certificate No. of Type Approval: TAK000025Z
4. Traceability No. of the manufacturer

Periodical assessment

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