

# SHIP'S PARTICULARS

Ship's name	<b>MARAN MARINER</b>									
Call Sign	<b>SVBH4</b>									
Nationality	<b>HELLENIC</b>									
Port of Registry/Official No	<b>PIRAEUS</b>									
IMO Number / Official number	<b>9439072 / 12068</b>									
Inmarsat FB250	<b>00870 773060445 (Master office)</b>									
V-SAT	<b>00302112342782 (Master Office)</b>									
Inmarsat C Telexes	<b>424110610 / 11</b>									
FB 500	<b>00870 773140086 (Bridge) FAX:783140152</b>									
E - Mail	<b>mariner@fleet.marandry.com</b>									
Dsc ( NBDP-VHF-EPIRB-MF/HF)	<b>241106000</b>									
Owner	<b>LUTON MARITIME INC. 80 BROAD STREET MONROVIA-LIBERIA</b>									
Operators	Maran Dry Management Inc. Doiranis Street 216-226 Doiranis Street, 17674, Athens, Greece T: +30 2106136112 M: +30 6951652271 E: operations@marandry.com									
MMSI No.	<b>241106000</b>									
Builder	<b>DAEWOO MANGALIA HEAVY INDUSTRIES</b>									
Date Keel laid	<b>25/06/2010</b>									
Date Launched	<b>19/12/2010</b>									
Date delivered	<b>06/07/2011</b>									
Classification Society	<b>BUREAU VERITAS</b>									
Class	<b>+HULL, +MACH, Bulk Carrier BC-A (maximum cargo density 3,00t/m<sup>3</sup>), HOLDS(2,4,6,8),MAY BE EMPTY, GRAB(30), ESP, CSR, CPS (WBT), Unrestricted navigation, VeriSTAR-HULL, +AUT-UMS, MON-SHAFT, INWATERSURVEY</b>									
BV ID Number	<b>12659M</b>									
Stem	<b>BULBOUS BOW</b>									
Stern	<b>TRANSOM</b>									
Type of Freeboard	<b>B-60</b>									
Type of Ship	<b>BULK CARRIER</b>									
International GRT / NRT	<b>90117 / 59647</b>									
Suez Canal GRT / NRT / ID	<b>93419.9 / 87079.81 / 43645</b>									
Panama Canal GRT / NRT	<b>89486.22m<sup>3</sup> / Net Tonnage 36210m<sup>3</sup> Equates to PC/UMS</b>									
LOA / LBP	<b>292.00 m / 283.00 m</b>									
Breath moulded	<b>45.00 m</b>									
Depth moulded	<b>24.70 m</b>									
Height Keel - Bridge top mast	<b>58.533 m</b>									
Height Keel - Hatch Cover	<b>27.79 m (hatch open)</b>									
Light Ship weight	<b>26216.94 Ton</b>									
TPC @ Summer Draft	<b>123.6 Ton/1cm</b>									
FWA	<b>416 mm</b>									
Main Engine	<b>B&amp;W 6S70MC-C(Mark7) MCR 18,660kW x 91.0 rpm, NCR 16,790kW x 87.9</b>									
Propeller Pitch	<b>5.683</b>									
Service Speed	<b>15.4 knots at 16.5 m draft x 90% MCR with 15% SM</b>									
Strength	Tank Top Holds	1	2	3	4	5	6	7	8	9
	Hatch covers	37.79	22.90	38.62	22.90	38.60	22.90	38.62	22.90	38.60
	Upper deck between hatches	8.90	5.96	3.49	3.49	3.49	8.70	3.49	3.49	3.49
	Outside hatches	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
<b>LOAD LINE</b>		Freeboard	Draft (ext)		Displac.		Deadweight			
Summer		5.538	18.2225		205754.2		179537.26			
Winter		5.917	17.8435		201072.1		174855.16			
Tropical		5.159	18.6015		210444.0		184227.06			
Fresh		5.122	18.6385		205758.3		179541.36			
Tropical FW		4.743	19.0175		210342.3		184125.36			

## CREW LIST

Vessel's Name		Port of Registry		Port of Arrival:		Arrival Date:		Last Port of call:		
M/V MARAN MARINER		PIRAEUS								
No.	Name	Gender	Rank	Nationality	Date and Place of Birth	Passport No w/expire date	Sign on Place and Date			
1	LIVANIS EVANGELOS	M	MASTER	HELLENIC	13/02/1991	AGRINIO	AY5682145	12/09/2033	SINGAPORE	29/05/2025
2	PETRIDIS RAFAIL	M	CHIEF OFFICER	HELLENIC	21/11/1987	KALYMNOS	AT1062995	16/12/2025	LANSHAN	22/10/2024
3	CHATZOPOULOS KONSTANTINOS	M	2ND OFFICER	HELLENIC	01/10/1997	CHANIA	BA7093024	24/04/2035	YANTAI	13/06/2025
4	PETROGLOU PANAGIOTIS	M	2ND OFFICER	HELLENIC	28/09/1998	KAVALA	BA4426819	14/10/2034	ROTTERDAM	09/03/2025
5	BATSARI AIKATERINI TAXIARCHOULA	F	APR. OFF.	HELLENIC	14/10/1999	MYTILINI	BA0733795	04/04/2027	CHANGZHOU	27/07/2025
6	ALEXIOU IOANNIS	M	CHIEF ENGINEER	HELLENIC	27/01/1983	ATHINA	AT5248949	13/04/2027	ROTTERDAM	09/03/2025
7	HAGAD PABLITO HUFEMIA	M	2ND ENGINEER	FILIPINO	27/05/1982	STA LUCIA ILS SR	P9161778A	11/10/2028	YANTAI	13/06/2025
8	MANTZAS CHRYSOVALANTIS	M	3RD ENGINEER	HELLENIC	08/11/1999	MAROUSI	AT4729055	03/03/2027	CHANGZHOU	27/07/2025
9	GUARIN ANTHONY DELA CRUZ	M	3RD ENGINEER	FILIPINO	11/12/1992	HINOBA - AN NEG OC	P3679291B	28/10/2029	ROTTERDAM	11/03/2025
10	GAVRILĂ MAXIM	M	ELECTRICIAN	ROMÂNĂ	03/02/1980	MANGALIA	060566735	08/10/2031	CHANGZHOU	27/07/2025
11	SO ALEJANDRO JR . GREGORIO	M	BOSUN	FILIPINO	14/10/1975	PRES ROXAS CAPIZ	P7520493B	02/09/2031	ROTTERDAM	11/03/2025
12	GUEVARA JEROME ESTRADA	M	ABLE SEAMAN	FILIPINO	28/08/1987	GASAN MARINDUQUE	P8888672B	08/02/2032	YANTAI	13/06/2025
13	CABAHUG ROYCE DAVIN BAGOL	M	ABLE SEAMAN	FILIPINO	23/07/1992	TUBOD LANA O DN	P8419758B	08/10/2031	SINGAPORE	29/05/2025
14	MIRADOR NELBERT NAVIDA	M	ABLE SEAMAN	FILIPINO	17/11/1995	BURGOS PGN	P1435474B	10/04/2029	SINGAPORE	29/05/2025
15	LASQUITE IVAN SUMAGAYSAY	M	AB / GP	FILIPINO	25/02/1980	DUMANGAS ILOILO	P3843401B	13/11/2029	CHANGZHOU	27/07/2025
16	BENITEZ FRANCIS JOHN SORIA	M	ORDINARY SEAMAN	FILIPINO	27/10/1996	TABACO ALBAY	P6816263A	18/04/2028	SINGAPORE	29/05/2025
17	GULMATICO MARK JOSEPH MAMPULA	M	WIPER	FILIPINO	28/02/1991	ILOILO CITY	P8633859B	04/01/2032	ROTTERDAM	11/03/2025
18	OBLEFIAS BILLMARK SALVA	M	COOK	FILIPINO	08/08/1982	LUCBAN QUEZON	P3643745B	24/10/2029	SINGAPORE	29/05/2025
19	CABUS JANMARK CATINDOY	M	MESSMAN	FILIPINO	10/01/1996	GEN SANTOS CITY	P6902913B	02/06/2031	SINGAPORE	29/05/2025
20	CASTRO WARREN BALLESTEROS	M	FITTER	FILIPINO	27/04/1989	CLAVERIA CAGAYAN	P5649334A	16/01/2028	ROTTERDAM	11/03/2025
21	PORTNYAGIN KOSTYANTYN	M	FITTER ENGINE	UKRAINE	26/11/1982	UKR	FT378351	28/11/2028	CHANGZHOU	27/07/2025
22	PAPAGKONTELAS VASILEIOS	M	TR. DECK 2ND Y.	HELLENIC	28/11/2002	AMAROUSIO	AT5555507	08/05/2027	ROTTERDAM	09/03/2025
23	KOUKOUTSIS PANAGIOTIS	M	TR. DECK 1ST YR	HELLENIC	18/03/2006	KALAMATA	AT5635625	15/05/2027	CHANGZHOU	27/07/2025
24	PAPAKOSTAS EVANGELOS	M	TR. ENG. 2ND Y.	HELLENIC	28/06/2003	TRIKALA	AT6083051	14/06/2027	ROTTERDAM	09/03/2025

Date and Signature by Master, Authorized Agent or Officer

Capt. Evangelos Livanis



# KATRADIS MARINE ROPES INDUSTRY S.A.

Nº 1

RECEIVED ZUPJGSIANGANG  
16106123

Synthetic Ropes • Rope Making Ropes • Anchors • Anchors & Studs • Anchor Chains • Wireline de Servicio

DATE PUT IN USE:  
08/05/2024

## Mooring Line Certificate as per MEG4

This document certifies that the mooring line as described below is successfully tested and examined for compliance before taken into use, according to MEG4 and latest editions of relevant international standards as mentioned below.

Line Supply Information		Certificate No: <b>2023/3818-2</b>			
Product Name	IMPROVED MIXED NIKA-STEEL 12 RSB				
Line Construction	12 STRANDS				
Diameter (mm)	72				
Coil Weight (kg)	595	kg	Length (m)	220	m Under Tension
Product code (unique line identifier)	P012210				
Load Bearing Core Material type and grade	NIKA-Steel® fibers (Polyolefin mixture made by Polypropylene, Polyethylene & UV stabilizers) combined with High Tenacity Polyester fibers (75% / 25% respectively) acc to MEG4 §5.6.2				
Over-braided jacket	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Type Of jacket		
Ship Design MBL	83,92	tn			
New Straight Break Force (NSBF)	98,0	tn			
Splice Type	Katradis Type A/B Splice		Eyes Length (m)	1,8	
Eyes chafe protection	PES Tubular Sleeve		Rope Body Chafe Protection		
Rotating Construction	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Melting point	165 oC (NIKA-Steel®) / 265 oC (Polyester)				
Elongation at break	15-18%				
UV stabilized fibers	YES				
Other Characteristics	Floating				
Color	White with Blue & Yellow stripes				
Buyer	MARAN DRY MANAGEMENT	Vessel	MARAN MARINER,4500337834		
Date of shipment	7.6.2023				
PO Number					
Reference Standards	CI 1500B-15 / CI 1500A-15 / CI 1502:2006 / ISO 2307:2019 / ISO 9554:2019 / EN ISO 10556:2009				
Environmental note: All materials used for packaging of the ropes are recyclable & environmentally safe. All new materials used in the production of our ropes are virgin. No recycled/previously used materials are utilised in any production stage. All our products are asbestos-free & environmentally safe.					



# KATRADIS MARINE ROPES INDUSTRY S.A.

Services: Ropes • Nylon Ropes • Polyester Ropes • Twines • Anchors & Shackles • Anchor Chains • Worldwide Service

Performance Indicators						
Line Design Break Force (LDBF)	88,0	tn				
Line Linear Density	2,70	kg/m				
Load Bearing Linear Density	2,70	kg/m				
Line Tenacity	32,54	tn/kg/m	Maximum Line Tenacity	40,3	tn/kg/m	
<i>Tested on a 36mm mooring line</i>						
	D/d: 5		D/d: 10			
Angled Break Force (ABF) as % of average NSBF	240,08%		250,53%			
Angled Endurance (AE) after 17,000cycles as % of average NSBF	114,62%		118,23%			
<i>Tested on a 36mm mooring line</i>						
Axial Compression Resistance (ACR) after 10,000 cycles as % of average NSBF	N/A					
<i>Tested on a 36mm mooring line</i>						
	%LDBF: 10	%LDBF: 20	%LDBF: 30	%LDBF: 40	%LDBF: 50	
Average Immediate Strain (e )	3,22%	5,02%	6,48%	7,59%	8,99%	
<i>Tested on fiber level</i>						
	-20 °C	0 °C	20 °C	40 °C	60 °C	80 °C
Strength at a given temperature as % of Break Force at 20°C	119 (NIKASsteel) / 106 (Polyester)	107,9 (NIKASsteel) / 104,2 (Polyester)	100 (NIKASsteel) / 100 (Polyester)	87,4 (NIKASsteel) / 95 (Polyester)	78,4 (NIKASsteel) / 86,7 (Polyester)	77,4 (NIKASsteel) / 79,1 (Polyester)

Base design sample and product domentation reviewed

- |   |                                     |     |                                     |     |                          |     |                          |    |
|---|-------------------------------------|-----|-------------------------------------|-----|--------------------------|-----|--------------------------|----|
| Base Design Certificate                                     | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/>            | No  |                          |     |                          |    |
| Manufacturing reports                                       | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/>            | No  |                          |     |                          |    |
| User agreed deviations                                      | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/>            | No  |                          |     |                          |    |
| Product supply test report                                  | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/>            | No  |                          |     |                          |    |
| Operation and maintenance guidelines                        |                                     |     | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> | No  |                          |    |
| Manufacturer's discard & inspection criteria                |                                     |     | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> | No  |                          |    |
| Procedure for testing & inspection of retired mooring lines |                                     |     | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |

STAMP:



DATE: 7.6.2023

LRQA CERTIFIED  
ISO 9001:2015  
ISO 14001:2015



# KATRADIS MARINE ROPES INDUSTRY S.A.

Nº 2

RECEIVED ZHANGJIANG

16/06/23

DATE PUT IN USE:

08/05/2024

## Mooring Line Certificate as per MEG4

This document certifies that the mooring line as described below is successfully tested and examined for compliance before taken into use, according to MEG4 and latest editions of relevant international standards as mentioned below.

Line Supply Information				Certificate No:		2023/3818-3	
Product Name		IMPROVED MIXED NIKA-STEEL 12 RSB					
Line Construction		12 STRANDS					
Diameter (mm)		72					
Coil Weight (kg)		595	kg	Length (m)		220	m Under Tension
Product code (unique line identifier)		P012357					
Load Bearing Core Material type and grade		NIKA-Steel® fibers (Polyolefin mixture made by Polypropylene, Polyethylene & UV stabilizers) combined with High Tenacity Polyester fibers (75% / 25% respectively) acc to MEG4 §5.6.2					
Over-braided jacket		<input type="checkbox"/> Yes	Type Of jacket				
		<input checked="" type="checkbox"/> No					
Ship Design MBL		83,92	tn				
New Straight Break Force (NSBF)		98,0	tn				
Splice Type		Katradis Type A/B Splice		Eyes Length (m)		1,8	
Eyes chafe protection		PES Tubular Sleeve		Rope Body Chafe Protection			
Rotating Construction		<input type="checkbox"/> Yes					
		<input checked="" type="checkbox"/> No					
Melting point		165 oC (NIKA-Steel®) / 265 oC (Polyester)					
Elongation at break		15-18%					
UV stabilized fibers		YES					
Other Characteristics		Floating					
Color		White with Blue & Yellow stripes					
Buyer		MARAN DRY MANAGEMENT		Vessel		MARAN MARINER,4500337834	
Date of shipment		7.6.2023					
PO Number							
Reference Standards		CI 1500B-15 / CI 1500A-15 / CI 1502:2006 / ISO 2307:2019 / ISO 9554:2019 / EN ISO 10556:2009					
<p>Environmental note: All materials used for packaging of the ropes are recyclable &amp; environmentally safe.</p> <p>All new materials used in the production of our ropes are virgin. No recycled/previously used materials are utilised in any production stage.</p> <p>All our products are asbestos-free &amp; environmentally safe.</p>							



# KATRADIS MARINE ROPES INDUSTRY S.A.

Specialty Ropes • Steel Wire Ropes • Anchors • Deck • Rigging • Knots • Appurtenances • Worldwide Service

Performance indicators						
Line Design Break Force (LDBF)	88,0	tn				
Line Linear Density	2,70	kg/m				
Load Bearing Linear Density	2,70	kg/m				
Line Tenacity	32,54	tn/kg/m	Maximum Line Tenacity	40,3	tn/kg/m	
Tested on a 36mm mooring line						
	D/d: 5		D/d: 10			
Angled Break Force (ABF) as % of average NSBF	240,08%		250,53%			
Angled Endurance (AE) after 17,000cycles as % of average NSBF	114,62%		118,23%			
Tested on a 36mm mooring line						
Axial Compression Resistance (ACR) after 10,000 cycles as % of average NSBF	N/A					
Tested on a 36mm mooring line						
	%LDBF: 10	%LDBF: 20	%LDBF: 30	%LDBF: 40	%LDBF: 50	
Average Immediate Strain (e)	3,22%	5,02%	6,48%	7,59%	8,99%	
Tested on fiber level						
	-20 °C	0 °C	20 °C	40 °C	60 °C	80 °C
Strength at a given temperature as % of Break Force at 20°C	119 (NIKASsteel) / 106 (Polyester)	107,9 (NIKASsteel) / 104,2 (Polyester)	100 (NIKASsteel) / 100 (Polyester)	87,4 (NIKASsteel) / 95 (Polyester)	78,4 (NIKASsteel) / 86,7 (Polyester)	77,4 (NIKASsteel) / 79,1 (Polyester)

**Base design sample and product domentation reviewed**

- Base Design Certificate  Yes  No
- Manufacturing reports  Yes  No
- User agreed deviations  Yes  No
- Product supply test report  Yes  No
- Operation and maintenance guidelines  Yes  No
- Manufacturer's discard & inspection criteria  Yes  No
- Procedure for testing & inspection of retired mooring lines  Yes  No

STAMP:



DATE: 7.6.2023

LRQA CERTIFIED  
ISO 9001:2015  
ISO 14001:2015



# KATRADIS MARINE ROPES INDUSTRY S.A.

Nº 3

RECEIVED ZIANGJIANGNC

Scaffolding Ropes • Steel Wire Ropes • Anodes • Anchors & Supports • Anchor Chains • Wire Ropes Services

16106123

DATE PUT IN USE:

08/05/2024

## Mooring Line Certificate as per MEG4

This document certifies that the mooring line as described below is successfully tested and examined for compliance before taken into use, according to MEG4 and latest editions of relevant international standards as mentioned below.

Line Supply Information		Certificate No:	
Product Name	IMPROVED MIXED NIKA-STEEL 12 RSB		
Line Construction	12 STRANDS		
Diameter (mm)	72		
Coil Weight (kg)	595	kg	Length (m) <span style="margin-left: 20px;">220</span> <span style="margin-left: 20px;">m</span> Under Tension
Product code (unique line identifier)	P025839		
Load Bearing Core Material type and grade	NIKA-Steel® fibers (Polyolefin mixture made by Polypropylene, Polyethylene & UV stabilizers) combined with High Tenacity Polyester fibers (75% / 25% respectively) acc to MEG4 §5.6.2		
Over-braided jacket	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Type Of jacket	
Ship Design MBL	83,92	tn	
New Straight Break Force (NSBF)	98,0	tn	
Splice Type	Katradis Type A/B Splice	Eyes Length (m)	1,8
Eyes chafe protection	PES Tubular Sleeve	Rope Body Chafe Protection	
Rotating Construction	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Melting point	165 oC (NIKA-Steel®) / 265 oC (Polyester)		
Elongation at break	15-18%		
UV stabilized fibers	YES		
Other Characteristics	Floating		
Color	White with Blue & Yellow stripes		
Buyer	MARAN DRY MANAGEMENT	Vessel	MARAN MARINER,4500337834
Date of shipment	7.6.2023		
PO Number			
Reference Standards	CI 1500B-15 / CI 1500A-15 / CI 1502:2006 / ISO 2307:2019 / ISO 9554:2019 / EN ISO 10556:2009		
Environmental note: All materials used for packaging of the ropes are recyclable & environmentally safe. All new materials used in the production of our ropes are virgin. No recycled/previously used materials are utilised in any production stage. All our products are asbestos-free & environmentally safe.			



# KATRADIS MARINE ROPES INDUSTRY S.A.

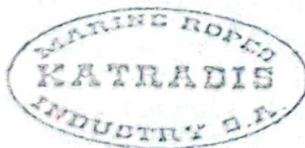
Performance Indicators • Design of the Ropes • Selection of Ropes & Equipment • Anchoring Systems • Marine Hardware Services

Performance Indicators						
Line Design Break Force (LDBF)	88,0	tn				
Line Linear Density	2,70	kg/m				
Load Bearing Linear Density	2,70	kg/m				
Line Tenacity	32,54	tn/kg/m	Maximum Line Tenacity	40,3	tn/kg/m	
Tested on a 36mm mooring line						
	D/d: 5		D/d: 10			
Angled Break Force (ABF) as % of average NSBF	240,08%		250,53%			
Angled Endurance (AE) after 17,000cycles as % of average NSBF	114,62%		118,23%			
Tested on a 36mm mooring line						
Axial Compression Resistance (ACR) after 10,000 cycles as % of average NSBF	N/A					
Tested on a 36mm mooring line						
	%LDBF: 10	%LDBF: 20	%LDBF: 30	%LDBF: 40	%LDBF: 50	
Average Immediate Strain (e)	3,22%	5,02%	6,48%	7,59%	8,99%	
Tested on fiber level						
	-20 °C	0 °C	20 °C	40 °C	60 °C	
Strength at a given temperature as % of Break Force at 20°C	119 (NIKASSteel) / 106 (Polyester)	107,9 (NIKASSteel) / 104,2 (Polyester)	100 (NIKASSteel) / 100 (Polyester)	87,4 (NIKASSteel) / 95 (Polyester)	78,4 (NIKASSteel) / 86,7 (Polyester)	77,4 (NIKASSteel) / 79,1 (Polyester)

Base design sample and product domentation reviewed

- |   |                                     |     |                                     |     |
|---|-------------------------------------|-----|-------------------------------------|-----|
| Base Design Certificate                                     | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/>            | No  |
| Manufacturing reports                                       | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/>            | No  |
| User agreed deviations                                      | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/>            | No  |
| Product supply test report                                  | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/>            | No  |
| Operation and maintenance guidelines                        |                                     |     | <input checked="" type="checkbox"/> | Yes |
|   |                                     |     | <input type="checkbox"/>            | No  |
| Manufacturer's discard & inspection criteria                |                                     |     | <input checked="" type="checkbox"/> | Yes |
|   |                                     |     | <input type="checkbox"/>            | No  |
| Procedure for testing & inspection of retired mooring lines |                                     |     | <input checked="" type="checkbox"/> | Yes |
|   |                                     |     | <input type="checkbox"/>            | No  |

STAMP:



DATE: 7.6.2023

LRQA CERTIFIED  
ISO 9001:2015  
ISO 14001:2015



# KATRADIS MARINE ROPES INDUSTRY S.A.

Nº 4

RECEIVED ZHANGJIACANG

16/01/23

DATE PUT IN USE:  
08/05/2024

## Mooring Line Certificate as per MEG4

This document certifies that the mooring line as described below is successfully tested and examined for compliance before taken into use, according to MEG4 and latest editions of relevant international standards as mentioned below.

Line Supply Information				Certificate No: <b>2023/3818-5</b>			
Product Name		IMPROVED MIXED NIKA-STEEL 12 RSB					
Line Construction		12 STRANDS					
Diameter (mm)		72					
Coil Weight (kg)		595	kg	Length (m)		220	m Under Tension
Product code (unique line identifier)		P025840					
Load Bearing Core Material type and grade		NIKA-Steel® fibers (Polyolefin mixture made by Polypropylene, Polyethylene & UV stabilizers) combined with High Tenacity Polyester fibers (75% / 25% respectively) acc to MEG4 §5.6.2					
Over-braided jacket		<input type="checkbox"/> Yes	Type Of jacket				
		<input checked="" type="checkbox"/> No					
Ship Design MBL		83,92	tn				
New Straight Break Force (NSBF)		98,0	tn				
Splice Type		Katradis Type A/B Splice		Eyes Length (m)		1,8	
Eyes chafe protection		PES Tubular Sleeve		Rope Body Chafe Protection			
Rotating Construction		<input type="checkbox"/> Yes					
		<input checked="" type="checkbox"/> No					
Melting point		165 oC (NIKA-Steel®) / 265 oC (Polyester)					
Elongation at break		15-18%					
UV stabilized fibers		YES					
Other Characteristics		Floating					
Color		White with Blue & Yellow stripes					
Buyer		MARAN DRY MANAGEMENT		Vessel		MARAN MARINER,4500337834	
Date of shipment		7.6.2023					
PO Number							
Reference Standards		CI 1500B-15 / CI 1500A-15 / CI 1502:2006 / ISO 2307:2019 / ISO 9554:2019 / EN ISO 10556:2009					
Environmental note: All materials used for packaging of the ropes are recyclable & environmentally safe. All new materials used in the production of our ropes are virgin. No recycled/previously used materials are utilised in any production stage. All our products are asbestos-free & environmentally safe.							



# KATRADIS MARINE ROPES INDUSTRY S.A.

KATRADIS ROPES • CABLES • RIGGING ROPES • TETHERS • KNOTS & SHACKLES • ANCHOR CHAINS • WORKING SURFACES

Performance Indicators						
Line Design Break Force (LDBF)	88,0	tn				
Line Linear Density	2,70	kg/m				
Load Bearing Linear Density	2,70	kg/m				
Line Tenacity	32,54	tn/kg/m	Maximum Line Tenacity	40,3	tn/kg/m	
<i>Tested on a 30mm mooring line</i>						
Angled Break Force (ABF) as % of average NSBF	D/d: 5		D/d: 10			
	240,08%		250,53%			
Angled Endurance (AE) after 17,000cycles as % of average NSBF	114,62%		118,23%			
<i>Tested on a 30mm mooring line</i>						
Axial Compression Resistance (ACR) after 10,000 cycles as % of average NSBF	N/A					
<i>Tested on a 30mm mooring line</i>						
	%LDBF: 10	%LDBF: 20	%LDBF: 30	%LDBF: 40	%LDBF: 50	
Average Immediate Strain (e)	3,22%	5,02%	6,48%	7,59%	8,99%	
<i>Tested on fiber level</i>						
	-20 °C	0 °C	20 °C	40 °C	60 °C	80 °C
Strength at a given temperature as % of Break Force at 20°C	119 (NIKASSteel) / 106 (Polyester)	107,9 (NIKASSteel) / 104,2 (Polyester)	100 (NIKASSteel) / 100 (Polyester)	87,4 (NIKASSteel) / 95 (Polyester)	78,4 (NIKASSteel) / 86,7 (Polyester)	77,4 (NIKASSteel) / 79,1 (Polyester)

**Base design sample and product domentation reviewed**

- |   |                                     |     |                                     |     |                          |    |
|---|-------------------------------------|-----|-------------------------------------|-----|--------------------------|----|
| Base Design Certificate                                     | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/>            | No  |                          |    |
| Manufacturing reports                                       | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/>            | No  |                          |    |
| User agreed deviations                                      | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/>            | No  |                          |    |
| Product supply test report                                  | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/>            | No  |                          |    |
| Operation and maintenance guidelines                        |                                     |     | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Manufacturer's discard & inspection criteria                |                                     |     | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Procedure for testing & inspection of retired mooring lines |                                     |     | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> | No |



DATE: 7.6.2023

LRQA CERTIFIED  
ISO 9001:2015  
ISO 14001:2015



No 5 DATE PUT IN USE: 15/03/2022 Reval AT Zhangjiang 27.03.22  
END TO END DATE: 03/06/2025

**D | S | R**

**ORIGINAL**

SALES OFFICE : Woosin Bldg. 7F, 145, Teheran-ro, Gangnam-gu, Seoul, Korea  
TEL : 82-2-3420-3500, FAX : 82-2-3420-3600, sales@dsr.com, www.DSR.com

**MILL TEST CERTIFICATE / CERTIFICATE OF INSPECTION**

Cert. No. : RMC2202-14 Date : Mar. 11. 2022  
Purchaser : Maran Ship Supplies Pte Ltd Order No. : RF1919  
L/C No. : -  
P.O. No. : MARAN MARINER  
B/No. : 14 ( 1 COIL / EA )

**1. TYPE**

Name of Rope : NEW D-FLEX ROPE  
Diameter : 70 MM Construction : 12-STRAND  
Length : 220 METER Lay : REGULAR  
Net Weight : 530 KG Twist : --  
Gross Weight : 530.5 KG Specification : MILL SPEC  
Color : EMERALD GREEN

**2. TEST RESULTS**

Items	Norminal or Specified	Actual
Diameter	70 MM	70 MM
Breaking Strength	97 MT	99 MT

※ Tested according to ISO 2307 : 2010 standards

**3. MATERIAL**

Name of Material..... POLYESTER/POLYOLEFIN DUAL FIBRES

Comment :  
Manufactured in accordance with  
Quality Management System approved to ISO 9001 : 2015



CHULHONG MIN  
QUALITY MANAGEMENT TEAM

Nº 6 DATE PUT IN USE 15/09/2022  
END TO END DATE: 03/06/2025

Revd AT ZHANGJIANG 21.03.22

**D | S | R**

**ORIGINAL**

SALES OFFICE : Woosin Bldg. 7F, 145, Teheran-ro, Gangnam-gu, Seoul, Korea  
TEL : 82-2-3420-3500, FAX : 82-2-3420-3600, sales@dsr.com, www.DSR.com

**MILL TEST CERTIFICATE / CERTIFICATE OF INSPECTION**

Cert. No. : RMC2202 - 15  
Purchaser : Maran Ship Supplies Pte Ltd

Date : Mar. 11. 2022  
Order No. : RF1919  
L/C No. : -  
P.O. No. : MARAN MARINER

B/No. : 15 ( 1 COIL / EA )

**1. TYPE**

Name of Rope : NEW D-FLEX ROPE  
Diameter : 70 MM Construction : 12-STRAND  
Length : 220 METER Lay : REGULAR  
Net Weight : 530 KG Twist : --  
Gross Weight : 530.5 KG Specification : MILL SPEC  
Color : EMERALD GREEN

**2. TEST RESULTS**

Items	Norminal or Specified	Actual
Diameter	70 MM	70 MM
Breaking Strength	97 MT	99 MT

\* Tested according to ISO 2307 : 2010 standards

**3. MATERIAL**

Name of Material..... POLYESTER/POLYOLEFIN DUAL FIBRES

Comment :  
Manufactured in accordance with  
Quality Management System approved to ISO 9001 : 2015



CHULHONG MIN  
QUALITY MANAGEMENT TEAM

RECEIVED AT SPORE  
05/11/2022

PUT IN USE: 17/05/2023

No 11

DSR

ORIGINAL

SALES OFFICE : 203, Bongeunsa-ro, Gangnam-gu, Seoul, Korea  
TEL : 82-2-3420-3500, FAX : 82-2-3420-3600, sales@dsr.com, www.DSR.com

### MILL TEST CERTIFICATE / CERTIFICATE OF INSPECTION

Cert. No. : SMC1553 - 11  
Purchaser : Maran Ship Supplies Pte Ltd

Date : Nov. 3. 2022  
Order No. : SF1911  
L/C No. : -  
P.O. No. : Maran Mariner

B/No. : 11 ( 1 COIL / EA )

#### 1. TYPE

Name of Rope : NEW D-FLEX ROPE  
Diameter : 70 MM Construction : 12-STRAND  
Length : 220 METER Lay : REGULAR  
Net Weight : 530 KG Twist : ---  
Gross Weight : 530.5 KG Specification : MILL SPEC  
Color : EMERALD GREEN

#### 2. TEST RESULTS

Items	Normal or Specified	Actual
Diameter	70 MM	70 MM
Breaking Strength	97 MT	97.9 MT

Tested according to ISO 2307 : 2010 standards

#### 3. MATERIAL

Name of Material..... POLYESTER/POLYOLEFIN DUAL FIBRES

Comment :

Manufactured in accordance with

Quality Management System approved to ISO 9001 : 2015

Lloyd's Register



CHULHONG MIN  
QUALITY MANAGEMENT TEAM

RECEIVED AT SPORE  
05/11/2022

PUT IN USE 17/05/2023

No 12

**DSR**

**ORIGINAL**

SALES OFFICE : 203, Bongeunsa-ro, Gangnam-gu, Seoul, Korea  
TEL : 82-2-3420-3500, FAX : 82-2-3420-3600, sales@dsr.com. www.DSR.com

**MILL TEST CERTIFICATE / CERTIFICATE OF INSPECTION**

Cert. No. : SMC1553 - 12  
Purchaser : Maran Ship Supplies Pte Ltd

Date : Nov. 3. 2022  
Order No. : SF1910  
L/C No. : -  
P.O. No. : Maran Mariner

B/No. : 12 ( 1 COIL / EA )

**1. TYPE**

Name of Rope : NEW D-FLEX ROPE  
Diameter : 70 MM Construction : 12-STRAND  
Length : 220 METER Lay : REGULAR  
Net Weight : 530 KG Twist : ---  
Gross Weight : 530.5 KG Specification : MILL SPEC  
Color : EMERALD GREEN

**2. TEST RESULTS**

Items	Norminal or Specified	Actual
Diameter	70 MM	70 MM
Breaking Strength	97 MT	97.9 MT

Tested according to ISO 2307 : 2010 standards

**3. MATERIAL**

Name of Material..... POLYESTER/POLYOLEFIN DUAL FIBRES

Comment :

Manufactured in accordance with

Quality Management System approved to ISO 9001 : 2015



CHULHONG MIN  
QUALITY MANAGEMENT TEAM

№13

DATE PUT IN USE: 15/09/2022  
END TO END DATE: 03/06/2025

Revised 09.02.2022

LIANYUNGANG

**D|S|R**

**ORIGINAL**

SALES OFFICE : Woosin Bldg. 7F, 145, Teheran-ro, Gangnam-gu, Seoul, Korea  
TEL : 82-2-3420-3500, FAX : 82-2-3420-3600, sales@dsr.com, www.DSR.com

**MILL TEST CERTIFICATE / CERTIFICATE OF INSPECTION**

Cert. No. : RMC1965 - 24  
Purchaser : Maran Ship Supplies Pte Ltd

Date : Jan. 20. 2022  
Order No. : RF1916  
L/C No. : -  
P.O. No. : MARAN MARINER

B/No. : 24 ( 1 COIL / EA )

**1. TYPE**

Name of Rope : NEW D-FLEX ROPE  
Diameter : 70 MM Construction : 12-STRAND  
Length : 220 METER Lay : REGULAR  
Net Weight : 530 KG Twist : ---  
Gross Weight : 530.5 KG Specification : MILL SPEC  
Color : EMERALD GREEN

**2. TEST RESULTS**

Items	Norminal or Specified	Actual
Diameter	70 MM	70 MM
Breaking Strength	97 MT	99 MT

※ Tested according to ISO 2307 : 2010 standards

**3. MATERIAL**

Name of Material..... POLYESTER/POLYOLEFIN DUAL FIBRES

Comment :

Manufactured in accordance with  
Quality Management System approved to ISO 9001 : 2015



CHULHONG MIN  
QUALITY MANAGEMENT TEAM

No 14

DATE PUT IN USE: 13/02/2022

Revd At Liangyungang  
01/02/2022

DATE OF WRN: 06/12/2024

**D | S | R**

**ORIGINAL**

SALES OFFICE : Woosin Bldg. 7F, 145, Teheran-ro, Gangnam-gu, Seoul, Korea  
TEL : 82-2-3420-3500, FAX : 82-2-3420-3600, sales@dsr.com, www.DSR.com

**MILL TEST CERTIFICATE / CERTIFICATE OF INSPECTION**

Cert. No. : RMC1965-21  
Purchaser : Maran Ship Supplies Pte Ltd

Date : Jan. 20. 2022  
Order No. : RF1916  
L/C No. :-  
P.O. No. : MARAN MARINER

B/No. : 21 ( 1 COIL / EA )

**1. TYPE**

Name of Rope : NEW D-FLEX ROPE  
Diameter : 70 MM Construction : 12-STRAND  
Length : 220 METER Lay : REGULAR  
Net Weight : 530 KG Twist : ---  
Gross Weight : 530.5 KG Specification : MILL SPEC  
Color : EMERALD GREEN

**2. TEST RESULTS**

Items	Norminal or Specified	Actual
Diameter	70 MM	70 MM
Breaking Strength	97 MT	99 MT

※ Tested according to ISO 2307 : 2010 standards

**3. MATERIAL**

Name of Material..... POLYESTER/POLYOLEFIN DUAL FIBRES

Comment :

Manufactured in accordance with  
Quality Management System approved to ISO 9001 : 2015



CHULHONG MIN  
QUALITY MANAGEMENT TEAM

№15

DATE PUT IN USE: 20/11/2024

# KATRADIS MARINE ROPES INDUSTRY S.A.

RECEIVED ZHANGJIANGANG

1610619023

Synthetic Ropes • Steel Wire Ropes • Anodes • Anchors & Studlink • Anchor chains • Worldwide Service

## Mooring Line Certificate as per MEG4

This document certifies that the mooring line as described below is successfully tested and examined for compliance before taken into use, according to MEG4 and latest editions of relevant international standards as mentioned below.

Line Supply Information		Certificate No: 2023/3818-1			
Product Name	IMPROVED MIXED NIKA-STEEL 12 RSB				
Line Construction	12 STRANDS				
Diameter (mm)	72				
Coil Weight (kg)	595	kg	Length (m)	220	m Under Tension
Product code (unique line identifier)	P012207				
Load Bearing Core Material type and grade	NIKA-Steel® fibers (Polyolefin mixture made by Polypropylene, Polyethylene & UV stabilizers) combined with High Tenacity Polyester fibers (75% / 25% respectively) acc to MEG4 §5.6.2				
Over-braided jacket	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Type Of jacket			
Ship Design MBL	83,92	tn			
New Straight Break Force (NSBF)	98,0	tn			
Splice Type	Katradis Type A/B Splice		Eyes Length (m)	1,8	
Eyes chafe protection	PES Tubular Sleeve		Rope Body Chafe Protection		
Rotating Construction	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Melting point	165 oC (NIKA-Steel®) / 265 oC (Polyester)				
Elongation at break	15-18%				
UV stabilized fibers	YES				
Other Characteristics	Floating				
Color	White with Blue & Yellow stripes				
Buyer	MARAN DRY MANAGEMENT	Vessel	MARAN MARINER,4500337834		
Date of shipment	7.6.2023				
PO Number					
Reference Standards	CI 1500B-15 / CI 1500A-15 / CI 1502:2006 / ISO 2307:2019 / ISO 9554:2019 / EN ISO 10556:2009				
Environmental note: All materials used for packaging of the ropes are recyclable & environmentally safe. All new materials used in the production of our ropes are virgin. No recycled/previously used materials are utilised in any production stage. All our products are asbestos-free & environmentally safe.					



# KATRADIS MARINE ROPES INDUSTRY S.A.

Synthetic Ropes • Steel Wire Ropes • Anodes • Anchors & Shackle • Anchor chains • Worldwide Service

Performance indicators						
Line Design Break Force (LDBF)	88,0	tn				
Line Linear Density	2,70	kg/m				
Load Bearing Linear Density	2,70	kg/m				
Line Tenacity	32,54	tn/kg/m	Maximum Line Tenacity	40,3	tn/kg/m	
Tested on a 36mm mooring line						
		D/d: 5	D/d: 10			
Angled Break Force (ABF) as % of average NSBF	240,08%		250,53%			
Angled Endurance (AE) after 17,000cycles as % of average NSBF	114,62%		118,23%			
Tested on a 36mm mooring line						
Axial Compression Resistance (ACR) after 10,000 cycles as % of average NSBF	N/A					
Tested on a 36mm mooring line						
	%LDBF: 10	%LDBF: 20	%LDBF: 30	%LDBF: 40	%LDBF: 50	
Average Immediate Strain (e)	3,22%	5,02%	6,48%	7,59%	8,99%	
Tested on fiber level						
	-20 °C	0 °C	20 °C	40 °C	60 °C	80 °C
Strength at a given temperature as % of Break Force at 20°C	119 (NIKASsteel) / 106 (Polyester)	107,9 (NIKASsteel) / 104,2 (Polyester)	100 (NIKASsteel) / 100 (Polyester)	87,4 (NIKASsteel) / 95 (Polyester)	78,4 (NIKASsteel) / 86,7 (Polyester)	77,4 (NIKASsteel) / 79,1 (Polyester)

**Base design sample and product domentation reviewed**

- |   |                                     |     |                                     |     |                             |
|---|-------------------------------------|-----|-------------------------------------|-----|-----------------------------|
| Base Design Certificate                                     | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/>            | No  |                             |
| Manufacturing reports                                       | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/>            | No  |                             |
| User agreed deviations                                      | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/>            | No  |                             |
| Product supply test report                                  | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/>            | No  |                             |
| Operation and maintenance guidelines                        |                                     |     | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> No |
| Manufacturer's discard & inspection criteria                |                                     |     | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> No |
| Procedure for testing & inspection of retired mooring lines |                                     |     | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> No |

STAMP:



DATE: 7.6.2023

LRQA CERTIFIED  
ISO 9001:2015  
ISO 14001:2015



No 16

DATE PUT IN USE: 20/11/2024

# KATRADIS MARINE ROPES INDUSTRY S.A.

Synthetic Ropes • Steel Wire Ropes • Anodes • Anchors & Studlinks • Anchor chains • World

RECEIVED ZHANGJIANG

16106123

## Mooring Line Certificate as per MEG4

This document certifies that the mooring line as described below is successfully tested and examined for compliance before taken into use, according to MEG4 and latest editions of relevant international standards as mentioned below.

Line Supply Information		Certificate No: 2023/3818-6			
Product Name	IMPROVED MIXED NIKA-STEEL 12 RSB				
Line Construction	12 STRANDS				
Diameter (mm)	72				
Coil Weight (kg)	595	kg	Length (m)	220	m Under Tension
Product code (unique line identifier)	P025843				
Load Bearing Core Material type and grade	NIKA-Steel® fibers (Polyolefin mixture made by Polypropylene, Polyethylene & UV stabilizers) combined with High Tenacity Polyester fibers (75% / 25% respectively) acc to MEG4 §5.6.2				
Over-braided jacket	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Type Of jacket		
Ship Design MBL	83,92	tn			
New Straight Break Force (NSBF)	98,0	tn			
Splice Type	Katradis Type A/B Splice		Eyes Length (m)	1,8	
Eyes chafe protection	PES Tubular Sleeve		Rope Body Chafe Protection		
Rotating Construction	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No			
Melting point	165 oC (NIKA-Steel®) / 265 oC (Polyester)				
Elongation at break	15-18%				
UV stabilized fibers	YES				
Other Characteristics	Floating				
Color	White with Blue & Yellow stripes				
Buyer	MARAN DRY MANAGEMENT	Vessel	MARAN MARINER,4500337834		
Date of shipment	7.6.2023				
PO Number					
Reference Standards	CI 1500B-15 / CI 1500A-15 / CI 1502:2006 / ISO 2307:2019 / ISO 9554:2019 / EN ISO 10556:2009				
Environmental note: All materials used for packaging of the ropes are recyclable & environmentally safe. All new materials used in the production of our ropes are virgin. No recycled/previously used materials are utilised in any production stage. All our products are asbestos-free & environmentally safe.					



# KATRADIS MARINE ROPES INDUSTRY S.A.

Synthetic Ropes • Steel Wire Ropes • Anchors • Anchors & Studlink • Anchor chains • Worldwide Service

Performance indicators						
Line Design Break Force (LDBF)	88,0	tn				
Line Linear Density	2,70	kg/m				
Load Bearing Linear Density	2,70	kg/m				
Line Tenacity	32,54	tn/kg/m	Maximum Line Tenacity	40,3	tn/kg/m	
Tested on a 36mm mooring line						
Angled Break Force (ABF) as % of average NSBF	D/d: 5		D/d: 10			
	240,08%		250,53%			
Angled Endurance (AE) after 17,000cycles as % of average NSBF	114,62%		118,23%			
Tested on a 36mm mooring line						
Axial Compression Resistance (ACR) after 10,000 cycles as % of average NSBF	N/A					
Tested on a 36mm mooring line						
	%LDBF: 10	%LDBF: 20	%LDBF: 30	%LDBF: 40	%LDBF: 50	
Average Immediate Strain (e)	3,22%	5,02%	6,48%	7,59%	8,99%	
Tested on fiber level						
	-20 °C	0 °C	20 °C	40 °C	60 °C	80 °C
Strength at a given temperature as % of Break Force at 20°C	119 (NIKASsteel) / 106 (Polyester)	107,9 (NIKASsteel) / 104,2 (Polyester)	100 (NIKASsteel) / 100 (Polyester)	87,4 (NIKASsteel) / 95 (Polyester)	78,4 (NIKASsteel) / 86,7 (Polyester)	77,4 (NIKASsteel) / 79,1 (Polyester)

Base design sample and product domentation reviewed

- |   |                                     |     |                                     |     |                          |    |
|---|-------------------------------------|-----|-------------------------------------|-----|--------------------------|----|
| Base Design Certificate                                     | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/>            | No  |                          |    |
| Manufacturing reports                                       | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/>            | No  |                          |    |
| User agreed deviations                                      | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/>            | No  |                          |    |
| Product supply test report                                  | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/>            | No  |                          |    |
| Operation and maintenance guidelines                        |                                     |     | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Manufacturer's discard & inspection criteria                |                                     |     | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Procedure for testing & inspection of retired mooring lines |                                     |     | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> | No |

STAMP:



DATE: 7.6.2023

LRQA CERTIFIED  
ISO 9001:2015  
ISO 14001:2015



# KATRADIS MARINE ROPES INDUSTRY S.A.

RECVD AT TIANJIN  
19/07/24

DATE PUT IN USE: 20/11/2024

Synthetic Ropes • Steel Wire Ropes • Anodes • Anchors & Studlink • Anchor chains • Worldwide Service

## Mooring Line Certificate as per MEG4

This document certifies that the mooring line as described below is successfully tested and examined for compliance before taken into use, according to MEG4 and latest editions of relevant international standards as mentioned below.

Line Supply Information				Certificate No:		P029270	
Product Name	IMPROVED 12 RSB						
Line Construction	12 STRANDS						
Diameter (mm)	72						
Coil Weight (kg)	595	kg	Length (m)	220	m	Under Tension	
Product code (unique line identifier)	P029270						
Material type and grade	NIKA-Steel® fibers (Polyolefin mixture made by Polypropylene, Polyethylene & UV stabilizers) combined with High Tenacity Polyester fibers (75% / 25% respectively) acc to MEG4 §5.6.2						
Over-braided jacket	No						
Ship Design MBL	83,92	tn					
New Straight Break Force (NSBF)	98,0	tn					
Splice Type	Katradis Type A/B Splice		End 1 type	Soft Eye with Polyester Protective Webbing Sleeve			
Eyes Length (m)	End 1	End 2	End 2 type	Soft Eye with Polyester Protective Webbing Sleeve			
	1,8	1,8					
Rotating Construction	No		Rope body chafe protection				
Melting point	165 oC (NIKA-Steel®) / 265 oC (Polyester)						
Elongation at break	15-18%						
UV stabilized fibers	YES						
Other Characteristics	Floating						
Color	White with Blue & Yellow stripes						
Buyer	MARAN DRY MANAGEMENT INC			Vessel	MARAN MARINER		
Order No	4500456662						
Type Approval Certificate	LR23124597TA-01			Class society	Lloyd's Register		
Reference Standards	CI 1500B-15 / CI 1500A-15 / CI 1502:2006 / ISO 2307:2019 / ISO 9554:2019 / EN ISO 10556:2009						
<p style="font-size: x-small;">Environmental note: All materials used for packaging of the ropes are recyclable &amp; environmentally safe. All new materials used in the production of our ropes are virgin. No recycled/previously used materials are utilised in any production stage. All our products are asbestos-free &amp; environmentally safe.</p>							



# KATRADIS MARINE ROPES INDUSTRY S.A.

Synthetic Ropes • Steel Wire Ropes • Anodes • Anchors & Studlink • Anchor chains • Worldwide Service

Performance indicators						
Line Design Break Force (LDBF)	88,0	tn				
Line Linear Density	2,70	kg/m				
Load Bearing Linear Density	2,60	kg/m				
Line Tenacity	33,85	tn/kg/m	Maximum Line Tenacity	40,3	tn/kg/m	
<i>Tested on a 36mm mooring line</i>						
	D/d: 5		D/d: 10			
Angled Break Force (ABF) as % of average NSBF	240,08%		250,53%			
Angled Endurance (AE) after 17,000cycles as % of average NSBF	114,62%		118,23%			
<i>Tested on a 36mm mooring line</i>						
Axial Compression Resistance (ACR) after 10,000 cycles as % of average NSBF	Not applicable					
<i>Tested on a 36mm mooring line</i>						
	%LDBF: 10	%LDBF: 20	%LDBF: 30	%LDBF: 40	%LDBF: 50	
Average Immediate Strain (e)	3,22%	5,02%	6,48%	7,59%	8,99%	
<i>Tested on fiber level</i>						
	-20 °C	0 °C	20 °C	40 °C	60 °C	80 °C
Strength at a given temperature as % of Break Force at 20°C	119 (NIKASSteel) / 106 (Polyester)	107,9 (NIKASSteel) / 104,2 (Polyester)	100 (NIKASSteel) / 100 (Polyester)	87,4 (NIKASSteel) / 95 (Polyester)	78,4 (NIKASSteel) / 86,7 (Polyester)	77,4 (NIKASSteel) / 79,1 (Polyester)

**Documentation availability**

- Base Design Certificate  Yes  No
- Manufacturing reports  Yes  No
- User agreed deviations  Yes  No
- Product supply test report  Yes  No
- Operation and maintenance guidelines  Yes  No
- Manufacturer's discard & inspection criteria  Yes  No
- Procedure for testing & inspection of retired mooring lines  Yes  No

SIGNATURE:

DATE: 8/7/2024

CERTIFICATIONS  
ISO 9001:2015  
ISO 14001:2015  
ISO 45001:2018



info@katradis.com • 11 Psaron Street • +30-210 4060 300 • www.katradis.com

№18

# KATRADIS MARINE ROPES INDUSTRY S.A.

REVD AT TIAUSIN  
19/07/24

Synthetic Ropes • Steel Wire Ropes • Anodes • Anchors & Studlink • Anchor chains • Worldwide Service

DATE PUT IN USE: 20/11/2024

## Mooring Line Certificate as per MEG4

This document certifies that the mooring line as described below is successfully tested and examined for compliance before taken into use, according to MEG4 and latest editions of relevant international standards as mentioned below.

Line Supply Information				Certificate No:		P029392	
Product Name	IMPROVED 12 RSB						
Line Construction	12 STRANDS						
Diameter (mm)	72						
Coil Weight (kg)	595	kg	Length (m)	220	m	Under Tension	
Product code (unique line identifier)	P029392						
Material type and grade	NIKA-Steel® fibers (Polyolefin mixture made by Polypropylene, Polyethylene & UV stabilizers) combined with High Tenacity Polyester fibers (75% / 25% respectively) acc to MEG4 §5.6.2						
Over-braided jacket	No						
Ship Design MBL	83,92	tn					
New Straight Break Force (NSBF)	98,0	tn					
Splice Type	Katradis Type A/B Splice		End 1 type	Soft Eye with Polyester Protective Webbing Sleeve			
Eyes Length (m)	End 1	End 2	End 2 type	Soft Eye with Polyester Protective Webbing Sleeve			
	1,8	1,8					
Rotating Construction	No		Rope body chafe protection				
Melting point	165 oC (NIKA-Steel®) / 265 oC (Polyester)						
Elongation at break	15-18%						
UV stabilized fibers	YES						
Other Characteristics	Floating						
Color	White with Blue & Yellow stripes						
Buyer	MARAN DRY MANAGEMENT INC		Vessel	MARAN MARINER			
Order No	4500456662						
Type Approval Certificate	LR23124597TA-01		Class society	Lloyd's Register			
Reference Standards	CI 1500B-15 / CI 1500A-15 / CI 1502:2006 / ISO 2307:2019 / ISO 9554:2019 / EN ISO 10556:2009						
Environmental note: All materials used for packaging of the ropes are recyclable & environmentally safe.							
All new materials used in the production of our ropes are virgin. No recycled/previously used materials are utilised in any production stage.							
All our products are asbestos-free & environmentally safe.							



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# KATRADIS MARINE ROPES INDUSTRY S.A.

Synthetic Ropes • Steel Wire Ropes • Anodes • Anchors & Studlink • Anchor chains • Worldwide Service

Performance indicators						
Line Design Break Force (LDBF)	88,0	tn				
Line Linear Density	2,70	kg/m				
Load Bearing Linear Density	2,60	kg/m				
Line Tenacity	33,85	tn/kg/m	Maximum Line Tenacity	40,3	tn/kg/m	
<i>Tested on a 36mm mooring line</i>						
	D/d: 5		D/d: 10			
Angled Break Force (ABF) as % of average NSBF	240,08%		250,53%			
Angled Endurance (AE) after 17,000cycles as % of average NSBF	114,62%		118,23%			
<i>Tested on a 36mm mooring line</i>						
Axial Compression Resistance (ACR) after 10,000 cycles as % of average NSBF	Not applicable					
<i>Tested on a 36mm mooring line</i>						
	%LDBF: 10	%LDBF: 20	%LDBF: 30	%LDBF: 40	%LDBF: 50	
Average Immediate Strain (e)	3,22%	5,02%	6,48%	7,59%	8,99%	
<i>Tested on fiber level</i>						
	-20 °C	0 °C	20 °C	40 °C	60 °C	80 °C
Strength at a given temperature as % of Break Force at 20°C	119 (NIKASsteel) / 106 (Polyester)	107,9 (NIKASsteel) / 104,2 (Polyester)	100 (NIKASsteel) / 100 (Polyester)	87,4 (NIKASsteel) / 95 (Polyester)	78,4 (NIKASsteel) / 86,7 (Polyester)	77,4 (NIKASsteel) / 79,1 (Polyester)

Documentation availability

- Base Design Certificate  Yes  No
- Manufacturing reports  Yes  No
- User agreed deviations  Yes  No
- Product supply test report  Yes  No
- Operation and maintenance guidelines  Yes  No
- Manufacturer's discard & inspection criteria  Yes  No
- Procedure for testing & inspection of retired mooring lines  Yes  No

SIGNATURE:

DATE: 8/7/2024

CERTIFICATIONS  
ISO 9001:2015  
ISO 14001:2015  
ISO 45001:2018



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