

# TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:  
**MERB000042C**  
Revision No:  
**2**

This Certificate is issued by DNV UK Limited based on authorisation of the Maritime & Coast Guard Agency (MCA) as an UK Approved Body to undertake conformity assessments on marine equipment in accordance with the requirements of the Merchant Shipping (Marine Equipment) Regulations 2016 as amended.

## This is to certify:

**That the Inflatable liferafts**

with type designation(s)

**LR-TO-6, 8, 10, 12, 16, 20 & 25, throw-over-board type, Trade names: OCEAN SOLAS, PLASTIMO**

Issued to

**Ocean Safety Ltd**  
**Southampton, United Kingdom**

is found to comply with the requirements in the following Regulations/Standards:

Regulation **MSN 1874 Amendment 7,**

**item No. UK/1.12. SOLAS 74 as amended, Regulation III/4, III/13, III/21, III/26, III/31, III/34 & X/3, LSA Code I, V, IMO MSC/Circ.811, IMO Res. MSC.481(102), IMO MSC.1/Circ.1630 and 2000 HSC Code 8**

Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2028-08-17**.

Issued at **London** on **2024-03-13**

DNV local unit:  
**UK & Ireland CMC & VMC**



for **DNV UK Ltd.**

Approval Engineer:  
**Tessa Bieber**

Approved Body No.: **0097**

**Mydlak-Röder, Christine**  
**MER Service Responsible**



**Maritime &  
Coastguard  
Agency**

UK Approved Body Authorised  
by the MCA

This certificate will not be valid if the manufacturer makes any changes or modifications to the approved type of equipment, which have not been notified to, and agreed with the approved body named on this certificate.

During the period of validity of this certificate the applicable regulations (international conventions and the relevant resolutions and circulars of the IMO) and testing standards may change, therefore the product conformity may need to be re-assessed by the Approved Body.

"The Mark of Conformity" may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-control phase module (D, E or F) of Schedule 2 of the Merchant Shipping (Marine Equipment) Regulations 2016, as amended is fully complied with and controlled by a written inspection agreement with an approved body. In case limitations of use apply, these should be indicated in the Annex.

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.



## Product description

'LR-TO-6, 8, 10, 12, 16, 20 & 25, throw-over-board type, Trade names: OCEAN SOLAS, PLASTIMO'  
 Are throw overboard inflatable liferaft types, available with SOLAS A and B Pack and a cylindrical or rectangular container.

The product name of the liferaft model with the rectangular container is LR-CO-6, 8, 10, 12 & 16 and is also available as a lightweight version.

Trade names: OCEAN SOLAS, PLASTIMO

## Application/Limitation

### LR-TO Cylindrical Model

Type	Capacity [82.5kg/ person]	Weight [kg]		Bollard pull [kN]		Max. installation height [m]
		SOLAS A	SOLAS B	2 knots	3 knots	
LR-TO-6	6	84	60	0.5	0.8	50
LR-TO-8	8	97	62	0.7	1.1	50
LR-TO-10	10	113	73	0.8	1.3	50
LR-TO-12	12	121	82	1.1	1.4	50
LR-TO-16	16	148	98	1.1	1.6	50
LR-TO-20	20	181	118	1.5	1.8	50
LR-TO-25	25	206	124	1.6	2.1	50

The liferaft is approved for use with a round container type (GRP/MQ-1-WG, GRP/MQ-63-WG, GRP/MQ-2-WG, GRP/MQ-64-WG, GRP/MQ-3-WG or GRP/MQ-4-WG) and is provided with a single gas-cylinder inflation system.

The liferaft LR-TO-25 (SOLAS A pack) has a mass above 185 kg and may not be used for positions where side to side transfer is necessary.

### LR-TO Slimline Cylindrical Model

Type	Capacity [82.5kg/ person]	Weight [kg]		Bollard pull [kN]		Max. installation height [m]
		SOLAS A (18m/40m)	SOLAS B (18m/40m)	2 knots	3 knots	
LR-TO-6	6	80 / 85	69 / 74	0.5	0.8	18 / 40
LR-TO-8	8	85 / 92	70 / 76	0.7	1.1	18 / 40
LR-TO-10	10	95 / 107	75 / 83	0.8	1.3	18 / 40
LR-TO-12	12	108 / 118	84 / 94	1.1	1.4	18 / 40
LR-TO-16	16	135 / 147	103 / 115	1.1	1.6	18 / 40
LR-TO-20	20	173 / 185	133 / 145	1.5	1.8	18 / 40
LR-TO-25	25	185 / 198	135 / 148	1.6	2.1	18 / 40

The liferaft is also approved for use with a slimline round container type (OS-164-GA-6&8, OS-164-GA-10&12 OS-164-GA-16 or OS-164-GA-20&25) manufactured in 2 variants for 18m and 40m stowage height and is provided with a single gas-cylinder inflation system.

The liferaft LR-TO-25 (SOLAS A pack for 40m stowage height) has a mass above 185 kg and may not be used for positions where side to side transfer is necessary.

LR-CO-Rectangular Model

Alternatively, the sizes LR-TO-6/8/10/12/16 can be used with a rectangular container type detailed in drawing range (GRP/MQ-73-00 to GPP/MQ-80-00).

Type	Capacity [82.5kg/ person]	Weight [kg]		Bollard pull [kN]		Max. installation height [m]
		SOLAS A	SOLAS B	2 knots	3 knots	
LR-CO-6	6	72	60	0.5	0.8	18
LR-CO-6 L*		54	48			
LR-CO-8	8	78	62	0.7	1.1	18
LR-CO-8 L*		62	52			
LR-CO-10	10	93	73	0.8	1.3	18
LR-CO-10 L*		71	60			
LR-CO-12	12	106	82	1.1	1.4	18
LR-CO-12 L*		78	65			
LR-CO-16	16	130	98	1.1	1.6	18
LR-CO-16 L*		92	80			

(L\* The rectangular liferaft is also available as a "Lightweight" model utilizing the same liferaft carcass, packed within a carbon fibre container, using a carbon wrapped composite cylinder and a Leafield GIS inflation system.)

The liferaft shall be packed with a SOLAS A PACK or SOLAS B PACK.

Gas cylinders shall be of an approved type.

Components in the gas inflation system should be approved according to ISO 15738:2019.

The liferaft is intended to be installed with external weak link and a hydrostatic release unit. Float free arrangement to be checked upon installation on board.

The design assessment is based on International Life-Saving Appliances (LSA) Code, IMO Res. MSC.48(66) as amended by IMO Res. MSC.218(82) and IMO Res. MSC.293(87).

Production testing shall be carried out according to IMO Res. MSC.81(70) part 2.

**Type Examination documentation**

Test report: MSC/Circ.980 GL SHA dated 2009-08-10, 2011-12-15 and 2014-03-10 (SHA-14-01152), 2014-12-25, 2015-06-04 and 2016-07-23.

The National Supervision and Testing Center of Fishery Machinery and Instrument 2013 YW 004 Technical file with ref. no. 15-008475.

Additional tests for the SMLR-A-12(I) light version liferaft have been witnessed by DNV GL with test report in accordance with MSC/Circ.980 dated 2017-03-31.

Tests for an increase of the stowage height to 50m have been witnessed by DNV GL for the cylindrical model on 2017-08-15.

These liferaft models are technically identical to the liferaft type manufactured by Shanghai Star Rubber (CSM), SMLR-A-XX(I) certified with MEDB00001MK as agreed in the authorization letter dated 2018-02-12 between Ocean Safety and CSM.

**Tests carried out**

Prototype tests and test reports in accordance with the Recommendation on Testing of Life-Saving Appliances, IMO Res. MSC.81(70) part 1, including IMO Res. MSC.226(82), MSC.295(87), MSC.323(89) and IMO Res. MSC.481(102) - Type I and II, have been witnessed and evaluated and found to be in compliance.

Additional tests for the LR-CO-6,-8,-16 lightweight version have been witnessed by DNV GL with verification statement N141KF98 dated 2018-06-27.



Job Id: AA003VYD  
Certificate No: MERB000042C  
Revision No: 2

Additional drop test and weight test for SMLR-A(I) liferaft with slimline cylindrical container have been carried out 2022-03-04 (report: SMLR-A(I)/SYB-2022(I)) and witnessed by DNV.

### **Marking of product**

The product is to be indelibly marked with name and address of manufacturer, type designation, dimensions, date of manufacture and the UK Mark of Conformity (see first page). The marking shall comply with the LSA Code Ch. 4.2.6 and 4.2.7.