



European Union Recognised Organisation (EU RO) Mutual Recognition Type Approval Certificate

in accordance with Article 10.1 of EU Regulation 391/2009

No. **TT/20153/842502/23/MR**

This is to certify to the Manufacturer named below, that the Product referred to herein has been inspected for the Manufacturer, pursuant to the relevant requirements of the European Union Recognised Organisation Mutual Recognition procedure, required by Article 10.1 of EU Regulation 391/2009, and has been found in accordance with those requirements. The most demanding and rigorous standard from all EU ROs has been taken as a reference for the development of the Technical Requirement on which present certificate is based.

Manufacturer **MARINE SERVICE JAROSZEWICZ S.C.**
ul. Bielańska 23
70-703 Szczecin
Poland

Product **Two component polymer material on the base of epoxy EPY®**

(Technical Data - see Appendix)

Technical requirements or other standards reference EU RO Mutual Recognition Type Approval Certificate No. 21.20153.258 issued by Russian Maritime Register of Shipping on June 1, 2021
PRS Publication 102/P - European Union Recognized Organizations Mutual Recognition Procedure for Type Approval (ed. May 2023)
EU RO Mutual Recognition Technical Requirements for Resin Chocks, Version 0.3

Expiration date 2026-06-01

Issued at

Gdańsk, 2023-07-03
Place, date



Signature

When a product is presented with this EU RO MR Type Approval Certificate for given application, its acceptability with regards to the limitations stated in the certificate conditions defined in 1b, 1c and 1d of the applied Technical Requirement will be evaluated by the EU RO in charge of classing the ship or being in charge of the unit/system certification.

In accordance with Article 10 of Regulation (EC) No 391/2009 of the European Parliament and of the Council of 23 April 2009 "on common rules and standards for ship inspection and survey organizations", the following organizations, recognized by the EU on this date, have agreed on the technical and procedural conditions under which they will mutually recognize this certificate:

- American Bureau of Shipping (ABS)
- Bureau Veritas (BV)
- China Classification Society (CCS)
- Croatian Register of Shipping (CRS)
- DNV
- Indian Register of Shipping (IRS)
- Korean Register (KR)
- Lloyd's Register Group Ltd. (LR)
- Nippon Kaiji Kyokai General Incorporated Foundation (ClassNK)
- Polish Register of Shipping (PRS)
- RINA Services S.p.A. (RINA)

The scheme for the mutual recognition of class certificates for materials, equipment and components laid down by Article 10(1) of Regulation (EC) No 391/2009 is only enforceable within the Union in respect of ships flying the flag of a Member State. As far as foreign vessels are concerned, the acceptance of relevant certificates remains at the discretion of relevant non-EU flag States in the exercise of their exclusive jurisdiction, notably under the United Nations Convention on the Law of the Sea (UNCLOS). (In accordance with COMMISSION IMPLEMENTING REGULATION (EU) No 1355/2014 amending Regulation (EC) No 391/2009 – recital (25)).

NOTES

- 1 Refer to the agreed MR Technical Requirements for additional MR TAC information that may be specifically applicable to certain products - <https://www.euomr.org/technical-requirements>.
- 2 List of MR TACs issued by the EU ROs can be found by <https://www.euomr.org/links-to-mr-certificates>.
- 3 As per clause 9 of the Terms & Conditions for Mutual Recognition of Type Approval, the manufacturer will be required to agree that it will fulfil the obligations arising out of its quality assurance scheme as approved during production. The manufacturer certifies it has kept the accredited certification body and the EU RO that issued the MR TAC duly informed of any intended design changes or updating of the production quality assurance scheme for its consideration with regard to the validity of the MR TAC. The manufacturer will apply annually for periodical assessment by the EU RO to show that the production under the MR TAC and the quality assurance scheme are being satisfactory maintained.
- 4 MR TACs are valid for a maximum of 5 years as per clause 10 of the Terms & Conditions for Mutual Recognition of Type Approval.
- 5 For more information on the factors affecting the validity of MR TACs, see clause 11, 12 and 13 of the Terms & Conditions of Mutual Recognition of Type Approval.

Polish Register of Shipping means Polski Rejestr Statków S.A., seated in Gdańsk, al. gen. Józefa Hallera 126, 80-416 Gdańsk, Poland, registered in the Register of Entrepreneurs of the National Court Register, under entry number 0000019880. Polish Register of Shipping, its affiliates and subsidiaries, their respective officers, employees or agents are, individually and collectively, referred to as Polish Register of Shipping or as PRS for short.

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Appendix to the MR Type Approval Certificate No. TM/20153/842502/23/MR

Product:

Two component polymer material on the base of epoxy EPY.
Resin Chocks

Description / technical data:

The chocking compound is approved for foundation chocking of ship's main and auxiliary engines, reduction gears, rudder actuators, stern tubes and bearings, for deck machinery and other auxiliary machinery:

Maximum total surface pressure on pad:

<i>maximum service temperature, °C:</i>	40	50	60	70	80
<i>for equipment that should be aligned, N/mm²</i>	10.0	8.7	7.8	6.4	5.0
<i>for equipment that should not be aligned, N/mm²</i>	30.0	30.0	30.0	15.0	15.0

Maximum specific load on pad due to weight of machinery: 0.9 N/mm²

Minimum pad thickness for installation of stern tubes and brushings: 2 mm

Restrictions / limitations:

1. Each specific installation of cast resin chocks shall normally to be carried out in compliance with installation drawings approved on a case-by-case basis, according to each specific EU RO's Rules. Such specific approval will normally take into account, as a minimum, the following:
 - a. Total deadweight of supported machinery;
 - b. Number, size, arrangement and material of chocks and bolts, complete with relevant detailed (dimensioned) drawings;
 - c. Bolts pre-load and/or elongation, complete with details of tightening procedure;
 - d. Locking arrangement for bolts and calculation of bolt elongation for bolt connection securing;
 - e. Longitudinal and lateral stopping arrangements;
 - f. Sealing arrangement (for installation in stern tube or shaft struts);
 - g. Anti-rotation devices (for shaft bearings and rudder stock bearings/bushes);) Manufacturer's instructions (including instructions for special cases e.g. Thin small chock height or cracks in chocks).
2. The chocks may only be poured by companies authorized by the cast resin manufacturer whilst maintaining the boundary conditions required by the process. Authorization respectively evidence of training the personnel performing the cast resin process by the cast resin manufacturer has to be presented to the local surveyor.

Test Report(s) and Manufacturer's documentation:

As listed in EU RO MR Design Evaluation for Resin Chocks, no TK/IG/842502343/23, dated: 2023-06-01 issued by Polish Register of Shipping.

Documentation: pos. 1-16
Test reports: pos. 17-32
Marking documentation: pos. 33-34

