

Certificate number: 13792/C0 BV File number: ACI 1355/024/001

Product code: 6955H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

POLYCHEM SYSTEMS Sp. z o.o.

POZNAN - POLAND

for the type of product

INSULATION MATERIALS FOR REFRIGERATING PLANTS

Polyurethane Foam type "PUREX WG 2031 E B2", "PUREX WG 1245 NF B2", "PUREX WG 1931 E B2" & "PUREX NG 0440 NF"

Requirements:

- BUREAU VERITAS Rules for the Classification of Steel Ships
- IMO Resolution MSC.307(88)-(2010 FTP Code)

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate is a renewal of certificate N° 13792/B0 BV, which expires on 23/04/2014

This certificate will expire on: 28 Apr 2019

For BUREAU VERITAS,

At BV GDANSK, on 28 Apr 2014, Janusz URBAN

Zlhban



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

"PUREX WG 2031 E B2": Two components polyurethane system designed for the production of rigid polyurethane foam ("pour-in-place" applications). Measured density as per test: 46.2 kg/m3

"PUREX WG 1245 NF B2": Two components polyurethane system designed for the production of rigid polyurethane foam ("pour-in-place" applications). Measured density as per test: 62.4 kg/m3

"PUREX WG 1931 E B2": Two components polyurethane system designed for the production of rigid polyurethane foam ("pour-in-place" applications). Measured density as per test: 40.5 kg/m3

"PUREX NG 0440 NF": Ready blended two components polyurethane system designed for the production of rigid polyurethane foam according to the spray process. Measured density as per test: 77 kg/m3

2. DOCUMENTS AND DRAWINGS

As per the Manufacturer's specifications filed under ACI 1355/024/001.

3. TEST REPORTS

Test report No RO-2004/B-007/E dated 10.02.2004 as per PN-EN ISO 3582: 2000 from Ship Design and Research Centre, Poland.

4. APPLICATION / LIMITATION

- 4.1 May be used on vessels granted with applicable refrigerating additional notations, for insulation of cold stores. The polyurethane foam together with its surface lining shall satisfy low flame spread properties as per 2010 FTP Code, Part 5.
- 4.2 Valid for use when applicable regulations do not require non-combustible material for bulkheading.
- 4.3 Flame spread, smoke characteristics and calorific value of the additional lining, if any, to be as per applicable regulations.
- 4.4 The fitting aboard to be the same as used for the tests.

5. PRODUCTION SURVEY REQUIREMENTS

- 5.1 The products are to be supplied by **POLYCHEM SYSTEMS Sp. z o.o.** in compliance with the type described in this certificate and in compliance with the requirements stated on the front page of this certificate. This type of product is within the category HBV of Bureau Veritas Rule Note NR 320.
- 5.2 **POLYCHEM SYSTEMS Sp. z o.o.** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR 320 for HBV products.
- 5.3 No BUREAU VERITAS certificate is required.

Place of production
POLYCHEM SYSTEMS Sp. z o.o.
ul. Wolczynska 43
60-003 POZNAN
POLAND

6. MARKING OF PRODUCT

The product or packing is to be marked with manufacturer name, type, designation and fire-technical rating.

7. OTHERS

This approval is given on the under standing that **POLYCHEM SYSTEMS Sp z.o.o.** will accept full responsibility for informing shipbuilders or their sub-contractors of the proper method of fitting and general maintenance of the products and of the conditions of this approval.

*** END OF CERTIFICATE ***