

CERTIFICATE NUMBER 17-HS1614680-PDA DATE 09 Nov 2017

ABS TECHNICAL OFFICE Global Engineering

CERTIFICATE OF

DESIGN ASSESSMENT

This is to certify that a representative of this Bureau did, at the request of

ITW POLYMERS ADHESIVES NORTH AMERICA

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product: Synthetic Repair Compounds & Resins

Model: Ceramic Repair Putty (Stock #11700) Ceramic Repair Compound (Stock

#11730) Brushable Ceramic Red (Stock #11760, 11762, 11763) Brushable

Ceramic Blue (Stock #11765, 11767, 11768) Br...

This Product Design Assessment (PDA) Certificate 17-HS1614680-PDA, dated 09/Nov/2017 remains valid until 08/Nov/2022 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

AMERICAN BUREAU OF SHIPPING

Tim Kimble

Engineer/Consultant

ITW POLYMERS ADHESIVES NORTH AMERICA

30 ENDICOTT STREET

DANVERS MA

United States 01923 Telephone: 800-933-8266

Fax: 800-451-4563

Email: dmason@devcon.com Web: www.devcon.com

Tier: 2 - PDA Issued

Product: Synthetic Repair Compounds & Resins Model: Ceramic Repair Putty (Stock #11700)

Ceramic Repair Compound (Stock #11730)

Brushable Ceramic Red (Stock #11760, 11762, 11763) Brushable Ceramic Blue (Stock #11765, 11767, 11768)

Brushable Ceramic White (Stock #11770)

Intended Service:

Marine & Offshore Application - Patching, Sealing, Coating, Rebuilding, and Resurfacing worn Areas. Also for use as a Protective Coating on new Equipment.

Description:

Ceramic Repair Putty / Compound (Stock #11700, 11730): Trowelable, ceramic-filled epoxy for rebuilding worn or damaged equipment.

Brushable Ceramic Red (Stock #11760, 11762, 11763), Brushable Ceramic Blue (Stock #11765, 11767, 11768), Brushable Ceramic White (Stock #11770): A brushable ceramic-filled epoxy for sealing, protecting and repairing surfaces subject to erosion, corrosion and wear.

Typical Mechanical Properties

Ceramic Repair Putty

Adhesive Tensile Shear: 2,000 psi Compressive Strength: 12,700 psi Flexural Strength: 6,475 psi

Ceramic Repair Compound Adhesive Tensile Shear: 2,231 psi Compressive Strength: 10,240 psi Flexural Strength: 5,870 psi

Brushable Ceramic Red / Blue / White Adhesive Tensile Shear: 2,000 psi Compressive Strength: 15,200 psi Flexural Strength: 8,000 psi

Please also see attached "pdf" Technical Data Sheets.

Service Restriction:

Unit Certification is not required for this product. If repair involves any pressure-containing or structural component, or if repairs are extensive, the ABS Surveyor is to be contacted prior to starting preparation in order to obtain the Surveyor's acceptance for the specific application. If the manufacturer or purchaser requests an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

This coating has been type approved as complying with the identified standard. Proper application in accordance with the manufacturer's instruction is needed which should reflect the application of the test cases used to determine compliance. ABS EXPRESSLY DISCLAIMS ALL WARRANTIES WITH RESPECT TO THE COATING AND THÉ DESIGN ASSESSMENT, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. The successful coating is dependent on coating properties (some of which may not have been addressed in the approval standard), proper application (including surface prep, application, curing environment, etc.) and proper maintenance. These aspects are beyond the scope of this type approval.

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The manufacturer has provided a declaration about the control of, or lack of Asbestos in this product.

Notes/Drawing/Documentation:

Drawing No. Declaration of Conformity, Declaration of Conformity, Revision: -, Pages: -

Drawing No. 2780 Data Summary_Customer_rev02, Revision: -, Pages: 1

Drawing No. ASTM D1002 Lap Shear_Brushable Ceramic dated 11 Nov 16, Revision: -, Pages: 1

Drawing No. ASTM D150 and D696_Dielectric Constant and CTE dated 17 May 17, Revision: -, Pages: 3

Drawing No. ASTM D2240 Hardness, Revision: -, Pages: 1

Drawing No. ASTM D695 Compression_Brushable Ceramic, Revision: -, Pages: 2

Drawing No. ASTM D790 Flexural_Brushable Ceramic, Revision: -, Pages: 2
Drawing No. Ceramic Repair Putty Technical Data Sheet dated 26 Jan 12, Revision: -, Pages: 2
Drawing No. Ceramic Repair Putty Safety Data Sheet dated 03 Apr 17, Revision: -, Pages: 14

Drawing No. Ceramic Repair Compound Technical Data Sheet dated 26 Jan 12, Revision: -, Pages: 2

Drawing No. Ceramic Repair Compound Safety Data Sheet dated 03 Apr 17, Revision: -, Pages: 14

Drawing No. Brushable Ceramic Blue/Red Technical Data Sheet dated 16 Mar 12, Revision: -, Pages: 2

Drawing No. Brushable Ceramic Red Safety Data Sheet dated 03 Apr 17, Revision: -, Pages: 13

Drawing No. Brushable Ceramic Blue Safety Data Sheet dated 03 Apr 17, Revision: -, Pages: 13

Drawing No. Brushable Ceramic White Technical Data Sheet dated 26 Jan 12, Revision: -, Pages: 2

Drawing No. Brushable Ceramic White Safety Data Sheet dated 03 Apr 17, Revision: -, Pages: 13

Terms of Validity:

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STANDARDS

ABS Rules:

Rules for Conditions of Classification, Part 1 2017 Steel Vessels Rules 1-1-4/7.7, 1-1-A3; 1-1-A4 Rules for Conditions of Classification, Part 1 2017 Offshore Units and Structures 1-1-4/9.7, 1-1-A2; 1-1-A3, which covers the following: Mobile Offshore Drilling Units 5-1-1/5.21, 5-1-5/5.23

National:

ASTM C177 (2013)

ASTM D149 (2013)

ASTM D150 (2011)

ASTM D638 (2014) ASTM D695 (2015)

ASTM D696 (2016)

ASTM D790 (2015)

ASTM D1002 (2010)

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ASTM D2240 (2015)

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA