



## Confirmation of Product Type Approval

**Company Name:** ITW PERFORMANCE POLYMERS

**Address:** 30 ENDICOTT ST. DANVERS MA 01923 United States

**Product:** Synthetic Repair Compounds & Resins

**Model(s):** Aluminum Liquid (F-2) (Stock #: 10710, 10720) Aluminum Putty (F) (Stock #: 10610, 10620) Bronze Putty (BR) (Stock #10260) Stainless Steel Putty (ST) (Stock #10270) Titanium Putty (Stock #: 10760, 10770)

**Endorsements:**

| Certificate Type                | Certificate Number | Issue Date  | Expiry Date |
|---------------------------------|--------------------|-------------|-------------|
| Product Design Assessment (PDA) | 23-2403107-PDA     | 25-MAY-2023 | 24-MAY-2028 |
| Manufacturing Assessment (MA)   | 20-4300268         | 05-JUN-2020 | 04-JUN-2025 |
| Product Quality Assurance (PQA) | NA                 | NA          | NA          |

### Tier

3 - Type Approved, unit certification not required

### Intended Service

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

### Description

Aluminum Liquid (F-2) is an aluminum-filled, pourable epoxy that cures at room temperature.

Aluminum Putty (F) is an aluminum-filled, epoxy putty that cures at room temperature.

Bronze Putty (BR) is a bronze-filled, epoxy putty that cures at room temperature.

Stainless Steel Putty (ST) is a stainless steel-filled, epoxy putty that cures at room temperature.

Titanium Putty is a titanium-reinforced epoxy putty that cures at room temperature.

Please also see the attached "pdf" Technical Data Sheets.

### Ratings

Aluminum Liquid (F-2)

Adhesive Tensile Shear: 2,700 psi

Compressive Strength: 9,820 psi

Cure Hardness: 85D

Flexural Strength: 7,180 psi

Aluminum Putty (F)

Adhesive Tensile Shear: 2,600 psi

Compressive Strength: 8,420 psi

Cure Hardness: 85D

Flexural Strength: 6,760 psi

Bronze Putty (BR)

Adhesive Tensile Shear: 2,680 psi

Compressive Strength: 8,540 psi

Cure Hardness: 85D

Flexural Strength: 6,180 psi

Stainless Steel Putty (ST)

Adhesive Tensile Shear: 2,385 psi

Compressive Strength: 8,400 psi

Cure Hardness: 85D

Flexural Strength: 5,280 psi

Titanium Putty

Adhesive Tensile Shear: 2,000 psi

Compressive Strength: 15,200 psi

Cure Hardness: 87D

Flexural Strength: 7,700 psi

Please also see the attached "pdf" Technical Data Sheets.

### **Service Restrictions**

- 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.

### **Comments**

- The manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- Prior to each repair, a reconditioning plan is to be prepared and discussed with the attending ABS Surveyor. The repair plan is to include as minimum the material to be removed from the affected machinery part, the cleaning and inspection methodology, the thickness of the epoxy resin applied, any curing taken place, etc. When required, calculations showing that the manufacturer's specified minimum allowable strength and corresponding thickness/ diameter are maintained, are to also be carried out.
- This coating has been type approved as complying with the identified standards.
- 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 the design assessment, including warranties of merchantability and fitness for a particular purpose. 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.

### **Notes, Drawings and Documentation**

Drawing No. 10260, Technical Data Sheet, Revision: -, Pages: -

Drawing No. 10270, Technical Data Sheet, Revision: -, Pages: -

Drawing No. 10610, 10620, Technical Data Sheet, Revision: -, Pages: -

Drawing No. 10710, 10720, Technical Data Sheet, Revision: -, Pages: -

Drawing No. 10760, 10770, Technical Data Sheet, Revision: -, Pages: -

Testing documents included from task T1749223

Drawing No. ITW Performance Polymers Test Report MTL2857 ABS Certification of Multiple Metal Filled Epoxies dated 10 Jul 17. Revision: -, Pages: 1

### **Term of Validity**

This Product Design Assessment (PDA) Certificate remains valid until 24/May/2028 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

### **ABS Rules**

2023 Rules for Conditions of Classification - Ships 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

Rules for Building and Classing Marine Vessel Rules: Part 4-1-1/3.3

Rules for Building and Classing Steel Vessels for Service on Rivers and Intracoastal Waterways: Part 4-1-1/3.3

Guide for Building and Classing Yachts: Part 4-1-1/3.3

### **International Standards**

NA

**EU-MED Standards**

NA

**National Standards**

ASTM C177 (2019)

ASTM D149 (2020)

ASTM D150 (2018)

ASTM D638 (2014)

ASTM D695 (2015)

ASTM D696 (2016)

ASTM D790 (2017)

ASTM D1002 (2019)

ASTM D2240 (2021)

**Government Standards**

NA

**Other Standards**

NA



A handwritten signature in dark ink, appearing to read "Joseph W. Wilson".

Corporate ABS Programs  
American Bureau of Shipping  
Print Date and Time: 23-Oct-2024 1:14

ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.