

# PRODUCT SPECIFICATION SHEET: REPFL0 2202 Ceramic Coating

## PRODUCT DESCRIPTION

REPLFLO 2202 Ceramic Coating is an erosion-corrosion resistant coating for use principally in fluid flow situations. The material can be applied directly to abrasive blasted steel or to surfaces previously rebuilt with REPCO 1101 Engineering Grade Paste or REPFL0 2201 Ceramic Paste.

## TYPICAL APPLICATIONS

Suitable for emergency repairs or part of planned maintenance to equipment such as –

- Kort Nozzles
- Worn or cavitated Impellers
- corroded pump or valve casings
- corroded tube sheets and water boxes
- process equipment
- pulsation dampeners
- hydro turbines
- hydro cyclones
- Bow Thrusters
- Rudders

## GENERAL PRODUCT INFORMATION

### Appearance

Base: Dark Grey or Light grey paste  
Activator: Amber Liquid  
Mixed: Thixotropic dark grey or light grey liquid

### Mixing Ratio

By weight: 8:1  
By volume: 3:1

### Density

Base: 2.65  
Activator: 1.0  
Mixed: 2.24

### Volume Capacity

446cc/Kg

### Solids content

100%

### Slump Resistance

Nil at 400 microns

### Working life

Working life will vary with temperature. Increases in temperature will reduce the working life of the product. As a guide the usable life of the material is:

10°C 45-60 minutes  
20°C 20-30 minutes  
30°C 15-20 minutes

### Cure Times

At 20°C (68F°) the applied materials should be allowed to harden for the times indicated below before being subjected to the conditions indicated. Times will be extended at lower temperatures and reduced at higher temperatures as a general rule these times will be doubled at 10°C and halved at 30°C.

Temperature	Movement without load or immersion	Machining and light loading	Full mechanical Loading	Full Immersion
10°C/50F°	6 Hours	12 Hours	2 Days	4 Days
20°C/68F°	3 Hours	6 Hours	1 Day	2 Days
30°C/86F°	1½ Hours	3 Hours	16 Hours	1 Days
40°C/104F°	45 Mins	90 Mins	8 Hours	16 Hours

### Coverage Rate

Application should be carried out in two coats, at 250 microns per coat. For calculating product 1Kg (2.2lb) of fully mixed product will give the following coverage rates–

1.784m<sup>2</sup> at 250 microns    17.5ft<sup>2</sup> at 10mil  
1.485m<sup>2</sup> at 300 microns    16ft<sup>2</sup> at 12mil  
1.271m<sup>2</sup> at 350 microns    13.55ft<sup>2</sup> at 14mil

*Please note that the coverage rates quoted are theoretical and do not take into consideration the profile or condition of the surface being repaired.*

### Storage life

The shelf life of the product is typically 5 years if unopened and stored in cool dry conditions (15-30°C/ 60-86F°). Once opened replace the lid firmly and store as above.

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**MECHANICAL PROPERTIES**

Testing is typically done under laboratory conditions at a temperature of 20°C unless otherwise specified.

**Abrasion Resistance**

Taber CS17 Wheels/1 Kg load 145mg loss/1000 cycles  
0.065cc loss/1000 cycles

**Adhesion**

**Tensile Shear** when tested in accordance with ASTM D1002 on abrasive blasted mild steel with a 75 micron profile will typically be:

202kg/cm<sup>2</sup>      2,875 psi      19.8 MPa

**Compressive strength**

When tested in accordance with ASTM D 695, typical values will be:

960kg/cm<sup>2</sup>      13,650psi      94.5 MPa

**Corrosion Resistance**

When tested in accordance with ASTM B117 the material shows no sign of corrosion after:

Minimum 5000 hours Exposure

**Flexural Strength**

When tested in accordance with ASTM D790 typical values will be:

635kg/cm<sup>2</sup>      9,000psi      62.0 MPa

**Hardness**

**Rockwell R**

Tested to ASTM D785 typical value will be: 100

**Shore D**

Tested to ASTM D2240 typical value will be: 86

**Food Contact**

USDA compliant for incidental food contact.

**Approvals**

Approved by BUREAU VERITAS for Surface Protection and Cold Repair Products applied to Marine Vessels.

**CHEMICAL RESISTANCE**

Once fully cured the product resists attack by a wide variety of inorganic acids, alkalies, salts (salt water) and organic media. The product is also resistant to mineral oils, lubricating oil and a wide range of hydrocarbons. For further information please refer to the chemical resistant chart or a technical representative.

**HEAT RESISTANCE**

**Heat Distortion Temperature (HDT)**

Tested to ASTM D648 (264 psi fibre stress), typical values are:

Cure Temperature	HDT
20°C Cure	48°C
100°C Cure	95°C

**Heat Resistance**

Suitable for long term water immersion at temperatures up to 70°C and intermittent contact with pressurised steam up to 120°.

Resistant to dry heat in excess of 200°C dependant on load.

**TECHNICAL SUPPORT**

Zoom Corrosion Technology offer complete technical support and assistance, from discussing application requirements to training approved local contractors. For further information please contact a REPCO representative or your nearest REPCO authorised dealer.

**HEALTH AND SAFETY**

Please refer to the product safety data sheet for detailed information on handling, storage, shipping and disposal.

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