Product Specification

205 CERAMIC HT FLUID

205 Ceramic HT Fluid is designed to protect equipment operating in contact with water, pressurized steam and aqueous hydrocarbon mixtures against erosion/corrosion at elevated temperatures. The coating once fully cured is capable of withstanding temperatures up to 130°C in continuous immersion.

Typical applications

condensate extraction pumps return tanks, calorifiers, distillation unit, evaporators, heat exchangers, scrubber units, filters, process vessels

Characteristics

Appearance

Base: Dark Grey or Light Grey Paste
Activator: Amber liquid
Mixed: Grey viscous liquid

Mixing Ratio

By weight: 10:1
By volume: 4:1

Density

Base: 2.48
Activator: 0.99
Mixed: 2.46

Volume Capacity

459cc/Kg

Solids content

100%

Sag Resistance

Nil at 1000 microns

Coverage

1kg (2.2lb) of fully mixed product will give the following coverage rates –

0.918m² at 500 microns
9.86ft² at 20mil
0.610m² at 750 microns
6.56ft² at 30mil
0.459m² at 1000 microns
4.93ft² at 40mil

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

Cure Times

The applied material should be allowed to harden for the times indicated below before being subjected to the conditions indicated:

Usable life

10°C 70 minutes
20°C 35 minutes
30°C 17 minutes
40˚C 8.5 minutes

Minimum overcoating

10°C 8 hours
20°C 4 hours
30°C 2 hour
40˚C 1 hour

Maximum overcoating time

10°C 24 hours
20°C 24 hours
30°C/ 50% or less humidity 24 hours
30°C/ 50% + humidity 18 hours
40°C/ 50% or less humidity 18hours
40°C/ 50% + humidity 8 hours

Full Cure

10°C 6 days
20°C 3 days
30°C 1.5 days
40˚C 18 hours

Storage life

5 years if unopened and stored in normal dry conditions (15-30°C)

Mechanical Properties

Abrasion Resistance

Taber CS17 Wheels/1 Kg load
28mm³ loss/1000 cycles

Adhesion

Tensile Shear to ASTM D1002 on abrasive blasted mild steel with 75 micron profile
245kg/ cm² (3480psi)

Pull off Adhesion to ASTM D4541 on abrasive blasted mild steel with 75 micron profile
348kg/ cm² (4950psi)

Compressive strength

Tested to ASTM D695
1046kg/cm² (14880psi)

Corrosion Resistance

Tested to ASTM B117
Minimum 5000 hours

Flexural Strength

Tested to ASTM D790
614kg/cm² (8710psi)

Impact Resistance

Tested to ASTM D256
32J/m

Hardness

Shore D to ASTM D2240

20°C 82
100°C 87
150°C 86
200°C 82
240°C 78

Heat Distortion

Tested to ASTM D648 at 264psi fibre stress.

20°C Cure 53°C
100°C Cure 141°C
150°C Cure 172°C

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Heat Resistance

Full immersion resistance
Tested water/ hydrocarbon immersion to 130°C
Pass (no blisters)

Steam out resistance
Tested at 220°C 100hrs exposure
Pass (no blisters)

Dry heat resistance
Tested to ASTM D2485
Pass 240°C

Atlas cell testing

NACE TM0714 A
Tested to ASTM D714
Rating 10
Tested to ASTM D610
Rating 10

Explosive decompression

Tested to NACE TM0185
Pass

Thermal cycling

Tested to NACE TM0304
Pass (no blisters)

Food Contact

USDA compliant for incidental food contact.

Approvals

Approved by BUREAU VERITAS for Surface Protection and Cold Repair Products applied to Marine Vessels.
Certificate No: 55258/AO BV
Expiry: 24th March 2024

Chemical Resistance

The product resists attack by a wide variety of inorganic acids, alkalies, salts and organic media.
For more detailed information refer to the Resimac Technical Centre for advice.

Quality

All Resimac Products are supplied under the scope of the company's fully documented quality system.

Warranty

Resimac warrants that the performance of the product supplied will conform to the typical descriptions quoted within this specification provided material is stored correctly and used according to the procedures detailed in the Technical Data Sheet for the material.

Health and safety

Please ensure good practice is observed at all times during the mixing and application of this product. Protective gloves and other recommended personal protective equipment must be worn during the mixing and application of this product. Before mixing and applying the material please ensure you have read and fully understood the detailed Material Safety Data Sheet

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