# 207 CERAMIC XHT FLUID

**207 Ceramic XHT Fluid** is designed to protect equipment operating in contact with water, pressurised steam and aqueous hydrocarbon mixtures against erosion/corrosion at elevated temperatures. The coating once fully cured is capable of withstanding temperatures up to 180°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: Grey paste
Activator: Amber liquid
Mixed: Grey viscous liquid

### *Mixing Ratio*

By weight: 4.8: 1
By volume: 3.3: 1

### *Density*

Base: 1.45
Activator: 0.99
Mixed: 1.34

### *Volume Capacity*

746cc/Kg

### *Solids content*

100%

### *Sag Resistance*

Nil at 350 microns

### *Coverage*

1kg (2.2lb) of fully mixed product will give the following coverage rates –
2.48m² at 300 microns
26.7ft² at 6mil
*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 120 minutes
20°C 90 minutes
30°C 45 minutes
40˚C 20 minutes

**Minimum overcoating**

10°C 6 hours
20°C 3 hours
30°C 2 hour
40˚C 1 hour

**Maximum overcoating time**

10°C 24 hours
20°C 24 hours
30°C 18 hours
40°C 8 hours

**Full Cure**

Resimetal 207 Ceramic XHT is designed for elevated temperature applications and requires heat cure to develop its ultimate strength and heat resistance. Refer to Resimetal 207 Ceramic XHT Fluid Technical Data Sheet for detailed guidance.

### *Storage life*

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

## Mechanical Properties

### *Abrasion Resistance*

**Taber Abrasion** after 100ºC cure**,** CS17 Wheels /1 Kg load
15mm³, 20mg loss/1000 cycles

### *Adhesion*

**Tensile Shear** to ASTM D1002 on abrasive blasted mild steel with 75 micron profile after 100ºC cure
12.76 MPa (1,851psi)

### *Compressive strength and Modulus*

Tested to ASTM D695 after cure at 100°C:
Compressive strength
113.5MPa (16,462psi)
Compressive modulus
1303MPa (1.89 x $10^5$ psi)

### *Flexural Strength and Modulus*

Tested to ASTM D790 after cure at 100°C:
Flexural strength
71.65MPa (10,392psi)
Flexural Modulus
5295MPa (7.82 x $10^5$ psi)

### *Impact Resistance*

Tested to ASTM D256 after cure at 100°C
Notched: 3.3kJ/m²
Reverse notched: 8.64 kJ/m²

### *Hardness*

Shore D to ASTM D2240

20ºC 83
100°C 84
180°C 83

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# Product Specification

### *Heat Distortion*
Tested to ASTM D648 at 264psi fibre stress after cure at:

| | |
|---|---|
| 100°C | 161°C |
| 160°C | 267°C |

### *Heat Resistance*
**Autoclave test**
Water/Carbon Dioxide immersion to 180°C
Pass (no blisters or cracking) after 3 months

**Steam out resistance**
220°C for 100hrs
Pass (no blisters or cracking)

### *Tensile Strength, Tensile modulus and Elongation at Break*
To ASTM D638 after cure at 100ºC
Tensile strength
28.94MPa (4,197psi)
Tensile modulus
3,133MPa (4.54 x $10^5$ psi)
Elongation at break
1.34%

## Chemical Resistance
The product resists attack by a wide variety of alkalis, 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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