

## RESIMETAL 207 Ceramic XHT Fluid – solvent free epoxy novolac coating for high temperature immersion

Resimac 207 Ceramic XHT Fluid is designed to upgrade the performance of conventional materials of construction and in particular to protect equipment operating in contact with water and aqueous/hydrocarbon mixtures against erosion/corrosion at elevated temperatures. The coating once fully cured is capable of withstanding temperatures up to 180°C (356°F) in continuous immersion in water, salt water and crude Oil (these temperatures are dependent on operating environment).

- Apply to abrasive blast cleaned surfaces
- High mechanical adhesion to metal substrates
- Resists 180°C/ 356°F chemical immersion temperatures

### Typical Applications

condensate extraction pumps  
distillation units  
scrubber units

return tanks  
evaporators  
filters

calorifiers  
heat exchangers  
process vessels

### Surface Preparation

#### Metallic Substrates – Abrasive blast cleaning

1. All oil and grease must be removed from the surface using an appropriate cleaner such as MEK.
2. Where equipment has been subject to salt contamination, eg. immersion in sea water, situated in coastal environments, pressure wash repeatedly with water to remove the contamination.
3. All surfaces must be abrasive blasted to **ISO 8501/4 Standard SA2.5 (SSPC SP10/ NACE 2)** minimum blast profile of 75 microns (3mil) using an angular abrasive.
4. Once blast cleaned, the surface must be degreased and cleaned using MEK or similar type material.
5. All surfaces must be coated before gingering or oxidation occurs.

**PLEASE NOTE:** For elevated temperature applications it is essential that any salt contamination at the surface of the substrate is less than 20mg/cm<sup>2</sup> immediately prior to application of Resimetal 207 Ceramic XHT.

### Mixing

Prior to mixing please ensure the following:

1. The base component is at a temperature between 15-25°C (60-77°F).
2. The ambient & surface temperature is above 10°C (50°F).
3. The ambient & surface temperatures are not less than 3°C (6°F) above the dew point.

Once these 3 checks have been met, please proceed with mixing the product.

1. Transfer approximately one third of the contents of the Activator unit into the Base container and mix until incorporated using the spatula provided.
2. Add the remainder of the Activator and mix until a uniform material free of any streaks is achieved.
3. From the commencement of mixing the whole of the material should be used within 90 minutes at 20°C (68°F).

### Application

1. Stripe coat all edges, corners and equipment. Apply the coating at 200 microns (8mil) WFT using a short bristle brush.
2. Allow the stripe coat to cure for 3 hours at 20°C (68°F).
3. The first coat of material should be applied at a target thickness of 250-300 microns (10-12mil) using a short bristle brush.
4. Ensure the coating is forced into the blast profile.
5. Special attention should be paid to detailed areas such as edges, corners and welds where brush application by stippling may be required.
6. Once the 1<sup>st</sup> coat has cured to a dimensionally stable state apply a 2<sup>nd</sup> coat of material at a target thickness of 250-300 microns (10-12mil).
7. Under no circumstances exceed the maximum overcoating times (see below) or apply in excess of 1000 microns (40mil) including stripe coat.

## Overcoating times

Minimum - the applied material can be over-coated as soon as it is dimensionally stable (typically 4 hours at 20°C).

Maximum - the over-coating time is dependent on cure °temperature.

20°C 24 hours

30°C 18 hours

40°C 8 hours

Where the maximum over-coating time is exceeded, the material should be allowed to harden before being abraded or flash blasted.

## Coverage Rates

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

2.48m<sup>2</sup> at 300 microns                      26.7ft<sup>2</sup> at 12mil

*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

Resimetal 207 Ceramic XHT is designed for elevated temperature applications and requires heat cure to develop its strength and heat resistance. In most situations heat cure can be achieved in service however but if a faster return to service is required, post-curing is advantageous. Post-curing should be carried out between 60 and 100°C for between 2 and 8 hours either dry or wet.

The following cure times apply at 20°C (68°F) and will be longer at lower temperatures and shorter at higher temperatures:

Usable life    90 mins

Hard dry for inspection                          20 hours

Minimum time until post-cure dry              20 hours

Minimum time until post-cure wet              40 hours

Normal in-service cure time                    3 days

Note: where material is being cured wet, either as part of post-cure or return to service the temperature increase should be limited to no more than 30°C (54°F) per hour.

## Pack Sizes

This product is available in 1kg (2.2lb), 3kg (6.6lb) pack sizes.

## Colour

Mixed material – grey liquid

Base component – grey paste

Activator component – amber liquid

## Storage Life

3 years if unopened and stored in normal dry conditions (15-30°C/ 60-86°F)

## Other Technical Documents

Safety Data Sheets	-	Base & Activator components
Product Specification Sheet	-	Technical Performance Information

## Health and Safety

Please ensure good practice is observed at all times. Protective gloves, goggles and a disposable coverall must be worn during the mixing and application of this product. Before mixing and applying the material ensure you have read the fully detailed Safety Data Sheet.

## Legal Notice:

The data contained within this Technical Data Sheet is furnished for information only and is believed to be reliable at the time of issue. We cannot assume responsibility for results obtained by others over whose methods we have no control. It is the responsibility of the customer to determine if the product is suitable for use. Resimac accepts no liability arising out of the use of this information or the product described herein.

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