



INSTA Coating Technology

Improve your environmental footprint through reduced transportation and packaging waste



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Delivering high quality coatings whilst reducing environmental footprint

Background

Refractory coatings are a critical part of the foundry process by ensuring defect-free cast surfaces and reducing scrap and re-work costs.

The use of premium coatings can help reduce the environmental footprint of the foundry with:

- + Lower consumption rates
- + Reduced drying energy requirements
- + Reduced scrap and re-work
- + Improved cast component operating efficiency and lifespan

However, customers have raised concerns regarding environmental issues related to:

- + Packaging – specifically the use of non-returnable drums and buckets
- + Transport – specifically the transportation of water that can account for up to 50% of the product

Development of INSTA technology

To address the two issues of packaging waste and transportation, Foseco have developed a powder-based coating system that can be reconstituted within the foundry, prior to use:

- + The supply of INSTA coating instead of a pre-prepared slurry eliminates the use of plastic buckets or drums.
- + The volume of INSTA coating is approximately half that of a slurry, reducing transport costs proportionally.

In addition, INSTA coatings have an increased storage shelf-life and are not affected by climatic temperature variations (both hot and cold). Therefore, they can be beneficial in hard winter conditions.

INSTA Coatings

Product application and development

Product Application

To ensure product quality when reconstituted at the customer, Foseco have developed a dedicated INSTA Mixer:

- + Mixer Capacity – 250 litres
- + Emergency Alarm (motor overload)
- + Timer for adjusting mixing time
- + Cut off limit switch for vessel cover.
- + Interlocking between vessel top cover and top surface for closed chamber mixing
- + RPM regulator

INSTA coatings for reconstitution at the foundry:

HOLCOTE INSTA

- Coating precursor to be reconstituted with water
- + For brush or flow coating applications
- + For iron or steel

Versions available with selected refractory fillers for iron or steel

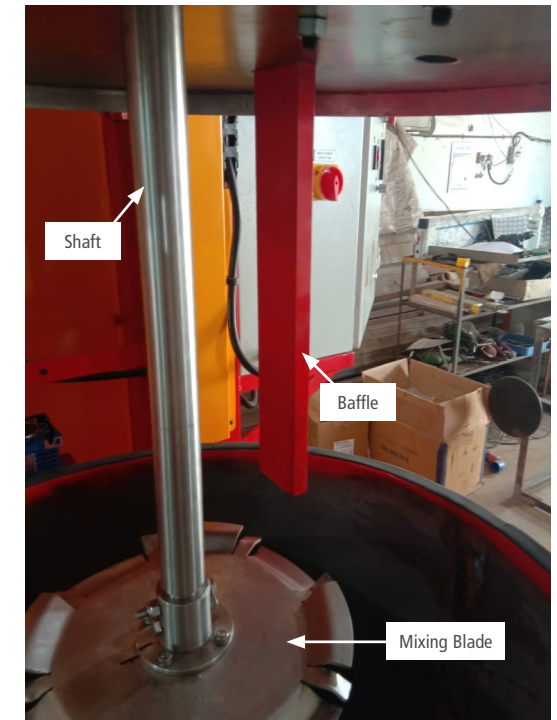
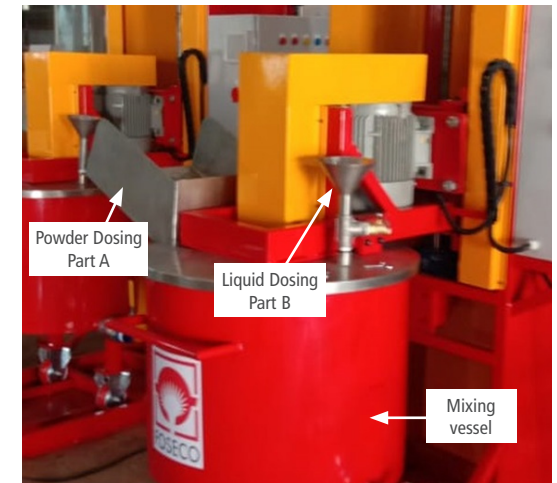
RHEOTEC INSTA

- Coating precursor to be reconstituted with water
- + For dipping applications
- + For grey or ductile iron

Due to the complex rheological requirements of coatings for dipping, it is not possible to deliver all recipe components in dry form

- + RHEOTEC INSTA Part A – dry components
- + RHEOTEC INSTA Part B – supplementary liquid component to be added during re-constitution (5% addition based on part A). Part B addition rates will vary from coating to coating as they are not fixed.

Versions available with selected refractory fillers for grey and ductile iron



Application engineering support

Dipping (Recommended) - Repeatability and good coverage for small and medium sized cores. Good for robotic applications

Flood Coating (Recommended) - Good where large areas are to be coated quickly and accurately especially moulds. Can be used with a manipulator.

Spraying, the traditional way of coating large areas. Requires a higher degree of operator skill to apply correct wet layer thickness

Brushing - Good for coating small parts or areas of mould or core that are difficult to access.

Swabbing - A very traditional coating method, good for coating deep pockets when no flood coating available.

Product supply

To ensure product quality when reconstituted at the customer the product is supplied in pre-weighed bags. For example*:

4 x 25kg bags of RHEOTEC INSTA pt A
+
2 x 2.5kg buckets of RHEOTEC INSTA pt B
=
240kg Ready to use RHEOTEC INSTA coating

*Final output is dependant on recipe and customer dilution requirement

Palletised delivery



Dipping



Flood coating



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