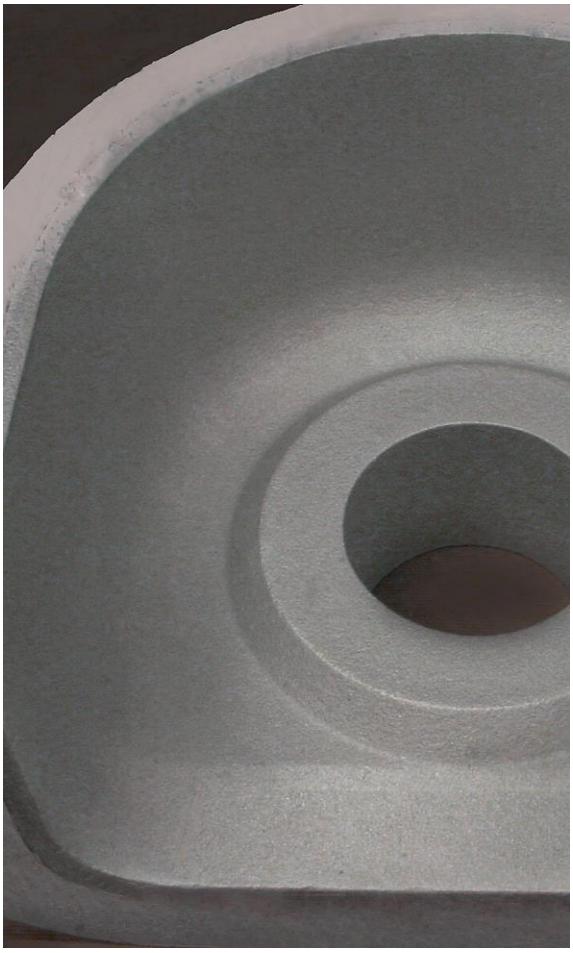
Johnson Matthey
Noble Metals

NOBLE METALS



Spout bowl, ACT® coated with platinum

ACT® Feeder Consumable Set

Orifice Ring, Stirrer Tube, Plunger and Spout Bowl

ACT® Platinum Coated Ceramics for the Glass Industry

Dimensional stability and durability are two of the key requirements placed upon the feeder consumable set used in an automated feeding process. Performance of consumable ceramics has improved, but regular adjustments are still needed to allow for ceramic deformation and wear.

ACT® platinum coated ceramics consist of a thin layer of platinum or 10% rhodium/platinum applied to the surface of the ceramic. Thickness varies between 200 and 400 microns. The coating gives complete corrosion resistance against attack of molten glass. It provides 100% shape retention of the substrate for the lifetime of the coating, thus stabilising the forming process, allowing reduced raw material and energy costs.

Sintered ceramics such as zircon mullite and sillimanite are coated using a mix of flame and plasma deposition. They can be supplied as single items, or sets of feeder consumables. For maximum quality and durability, Johnson Matthey recommends the ACT® feeder consumable set, which includes an ACT® orifice ring, ACT® stirrer tube, ACT® plunger(s) and ACT® spout bowl. This is of particular importance when producing high quality glass.

The coating process is flexible, enabling manufacturers to consider the use of complex shapes. Different coating configurations are available, providing protection at the glass line and against corrosive vapour condensates. Electrical suppression, as well as integrated thermocouples, is available on demand.

This technology applies to all types of glass including soda lime, crystal, borosilicate and opal.

Johnson Matthey offers full precious metal recovery with typical metal returns of greater than 95%** for all ACT® coatings.

ACT® Feeder Consumable Set	
Glass type	All types
	Soda lime
	Crystal
	Borosilicate
	Opal
Benefits	100% shape retention for the lifetime of the coating
Typical Service Life	
Orifice rings	6/12 months*
Tubes	15/25 months*
Plungers	20/30 months*
Spout Bowls	12/25 months*
Design	
Full coating	Extending above the glass line to cover the complete glass contact area
Coating thickness	Between 200 & 400 microns
Alloys	Platinum (up to 1350°C) 10%RhPt (up to 1600°C)
Typical metal return	Greater than 95%**

* Depending on the glass * * Based on estimated returned weight

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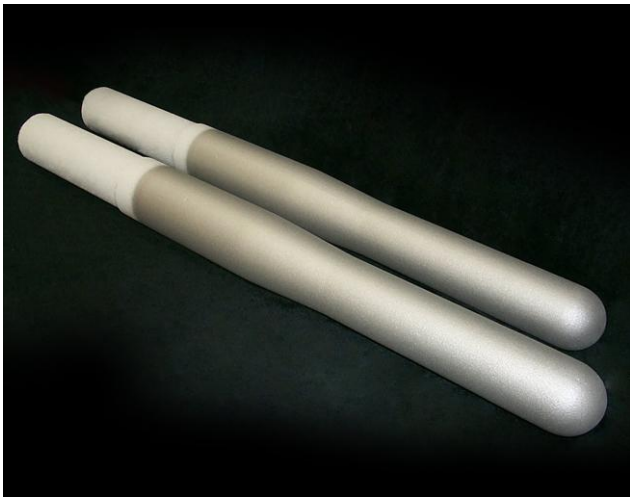
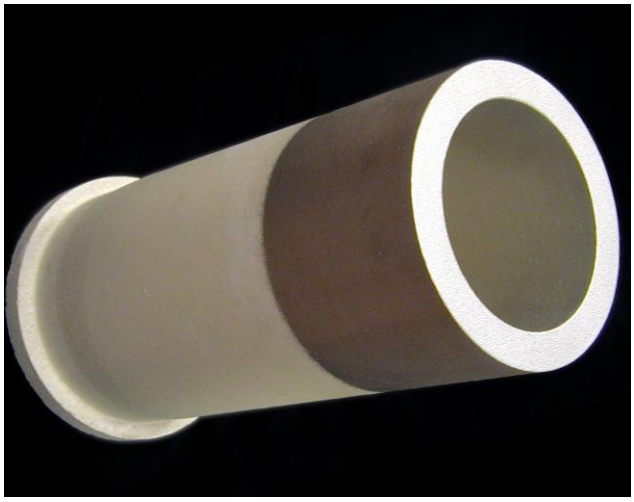
ACT® Feeder Consumable Set

Orifice Ring, Stirrer Tube, Plunger and Spout Bowl



Plunger, ACT® coated with a platinum/rhodium alloy



Stirrer tube, ACT® coated with a platinum/rhodium alloy

Orifice ring, ACT® coated with a platinum/rhodium alloy

If you require more information on Johnson Matthey Noble Metals products please contact our technical support team.

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