



OVER 40 YEARS OF PERFORMANCE DESIGNED SOLUTIONS

## Selecting A Steel Coreless Lining

URC works hard to match the steel coreless lining and patching products to a customer's conditions and expectations.

*The selection process includes the following steps:*

### 1 PROVEN PERFORMERS

Around the world, both **UNI-RAM VR-788A** and **UNI-RAM VR-790A** have been proven performers. Therefore, our selection criteria begins with how these products fit with the customer's needs and conditions.

	UNI-RAM VR-788A	UNI-RAM VR-790A
Furnace size	<1 ton	>1 ton
Depth of sinter	Lower	Higher
Manganese levels in melt	Higher	Lower
Al <sub>2</sub> O <sub>3</sub>	86.4	85.8
MgO	12.9	12.8
SiO <sub>2</sub>	0.2	0.7

### 2 CUSTOMIZED COMPOSITIONS

Because every foundry is different, a customized lining composition based on the success of **UNI-RAM VR-788A** and **UNI-RAM VR-790A** products is sometimes required to deliver the best cost-effective performance.

In addition to evaluating a furnace's history, operating parameters and postmortem sample studies, **URC** will leverage its experience and address one or more of the following variables with a product that **DELIVERS** Performance:

- Melt chemistries
- Lower permeability/improved penetration resistance
- Unique sinter depth
- Cost demands



Contact your **URC** representative for further details!

### 3 TOP CAP SOLUTIONS

Based on a shop's experience and culture, the **TOP CAP** is approached with various materials. Overall, the following options are performance leaders:

RATING	PRODUCT	TYPE	FEATURES
Best	<b>UNI-RAM VR-797A</b>	Dry Vibratable Top Cap	<ul style="list-style-type: none"> <li>• Compatible with thermal expansion rates of lining</li> <li>• Excellent purity and refractoriness</li> </ul>
	<b>UNI-PLAS 90HS</b>	Phos-bonded formable plastic Molded Spout	<ul style="list-style-type: none"> <li>• High strength, high alumina composition</li> <li>• Best choice for ramming</li> </ul>
Good	<b>UNI-PLAS 90HS</b>	Phos-bonded formable plastic Top Cap and Molded Spout	<ul style="list-style-type: none"> <li>• High strength, high alumina composition</li> <li>• Best choice for ramming</li> </ul>

### 4 PATCHING PRODUCTS

The choice of patching products is usually dictated by the shop's experience and culture. The following products serve a wide array of chemical and workability needs, with the final selection based on the exact conditions of the furnace and installer preference.

PRODUCT	TYPE	FEATURES
<b>UNI-RAM 9SP PLASTER</b>	High purity alumina/spinel composition	<ul style="list-style-type: none"> <li>• Compatible with lining</li> <li>• Tamp or trowel repairs</li> </ul>
<b>UNI-RAM 87</b>	Bauxite-based plastic	<ul style="list-style-type: none"> <li>• Cost effective ramming plastic for large or small cracks</li> </ul>
<b>UNI-RAM BLU FINE</b>	Mullite-based plastic	<ul style="list-style-type: none"> <li>• Very cost effective, fine grained ram mix</li> </ul>
<b>UNI-RAM 85AS</b>	Phos-free 85% alumina patch	<ul style="list-style-type: none"> <li>• Excellent for units that need a phos and sulphur free approach</li> </ul>

Contact your **URC** representative for many more product and workability options.

