

## UNI-GUN HP 110

UNI-GUN HP 110 is a gunning refractory designed for use in hydrocarbon processing applications. It is well suited for areas requiring a mid-weight density, low thermal conductivity, and excellent abrasion resistance.

<b>Service Temperature:</b>	2600°F	1425°C
<b>Material Required:</b>	112 lbs/ft <sup>3</sup>	1794 kg/m <sup>3</sup>
<b>Abrasion Resistance - ASTM C704:</b>	<14 cc (typically 10-12)	<14 cc (typically 10-12)
<b>Hand Packing Water:</b>	12 - 13%	12 - 13%
<b>Pre-Dampening Water for Gunning:</b>	1.5 to 3 quarts per 100#	1.42 to 2.84 liters per 45.36 kg

### TYPICAL CHEMICAL ANALYSIS, %

Al <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	CaO	Fe <sub>2</sub> O <sub>3</sub>	Alkalies
56.9	29.9	10.3	1.2	1.7

### TYPICAL PHYSICAL PROPERTIES

Pre-Fired To		Bulk Density		Cold Compressive Strength		Cold Modulus of Rupture		Total Linear Change
°F	°C	lbs/ft <sup>3</sup>	kg/m <sup>3</sup>	psi	MPa	psi	MPa	%
220	105	125	2000	8,500	59	1,500	10	-0.1
1500	815	112	1790	7,500	52	1,300	9	-0.3
2000	1095	113	1810	6,000	41	1,500	10	-0.4
2550	1400	105	1680	5,500	38	1,500	10	1.7

### K-values (BTU-in/hr/ft<sup>2</sup>/°F)

400°F	800°F	1200°F	1600°F	2000°F	2400°F
5.38	5.47	5.56	5.66	5.78	5.87

For best gunning results use air pressure of at least 60 psi and use a nozzle with the water ring set back at least 9 inches from the nozzle tip.

Creation date: 7/24/2024 - Check with your URC sales rep to determine if you have the current sheet