

# MILBRO REFRACTORIES, INC.

## MILRAM 90 PB

A high purity, high alumina, chemically bonded ramming mix. High hot strengths, volume stability and thermal shock resistance are just some of its exceptional properties. Applications include, aluminum melting and holding furnaces, channel induction furnaces, and delta sections of electric arc furnaces.

<b>Service Temperature</b>	<b>3300° F</b>
<b>Melting Point</b>	<b>3350° F</b>
<b>Material Required for Estimating</b>	<b>185 lbs./ft<sup>3</sup></b>

### TYPICAL CHEMICAL ANALYSIS

Al <sub>2</sub> O <sub>3</sub>	89.7
SiO <sub>2</sub>	5.5
Fe <sub>2</sub> O <sub>3</sub>	0.2
TiO <sub>2</sub>	0.2
MgO	0.1
CaO	0.5
P <sub>2</sub> O <sub>5</sub>	3.5

### TYPICAL PHYSICAL PROPERTIES

Temperature °F	Modulus of Rupture, psi	Cold Crushing Strength, psi	Linear change %
220°F	1500-2000	4800-5400	0.1 S
1500°F	2200-2600	6700-7100	0.2 S
2000°F	3300-3700	8500-8900	0.1 S
2500°F	4500-5000	13500-14200	0.4 S
3000°F	2400-2800	7100-7500	0.2 S

All data shown is based on average of standard ASTM procedures, unless otherwise indicated. Results are subject to reasonable deviation and should not be used for specification purposes.