

**NARCOGUN SiC-80 AR**Classification: Silicon Carbide Gun Mix

<u>Physical Properties: (Typical)</u>	<u>English Units</u>	<u>SI Units</u>
Maximum Recommended Temperature	3000°F	1649°C
Material Required	$\frac{\text{lb/ft}^3}{147}$	$\frac{\text{g/cm}^3}{2.35}$
Rebound, %		15%
Water Required to Predampen, qts. per 100 lbs.		2 quarts
Abrasion Test		
At 1500°F (816°C)		6 cc
At 2400°F (1316°C)		3 cc
Bulk Density	$\frac{\text{lb/ft}^3}{}$	$\frac{\text{g/cm}^3}{}$
After 230°F (110°C)	152	2.44
After 1500°F (816°C)	146	2.34
After 2000°F (1093°C)	148	2.37
Permanent Linear Change - %		
After 230°F (110°C)		-0.1%
After 1500°F (816°C)		-0.3
After 2000°F (1093°C)		-0.5
Modulus of Rupture	$\frac{\text{lb/in}^2}{}$	$\frac{\text{MPa}}{}$
After 230°F (110°C)	2200	15.5
After 1500°F (816°C)	2400	16.9
After 2000°F (1093°C)	2800	19.7
Crushing Strength		
After 230°F (110°C)	8300	58.4
After 1500°F (816°C)	10,000	70.4
After 2000°F (1093°C)	11,000	77.5
Thermal Conductivity		
At a Mean Temperature of	$\frac{\text{Btu}\cdot\text{in/hr}\cdot\text{ft}^2\cdot^\circ\text{F}}{}$	$\frac{\text{W/m}\cdot^\circ\text{C}}{}$
392°F (200°C)	51.0	7.35
752°F (400°C)	45.0	6.49
1112°F (600°C)	44.0	6.34
1472°F (800°C)	47.0	6.78

(Continued)



Experimental Data

NARCOGUN SiC-80 AR (Continued)

Chemical Analysis: (Approximately)
(As Received)

Silicon Carbide	(SiC)	79.7%
Alumina	(Al ₂ O ₃)	14.2
Silica	(SiO ₂)	2.7
Lime	(CaO)	2.5
Magnesia	(MgO)	0.1
Iron Oxide	(Fe ₂ O ₃)	0.2
Loss on Ignition		0.1
Titania	(TiO ₂)	0.1
Carbon	(C)	0.4

The test data shown are based on average results on production samples and are subject to normal variation on individual tests. Accordingly, test data cannot be taken as establishing maximum or minimum specifications. ASTM test procedures used when applicable.

10/98 Dev.