

Comparison of Carbon-Based Ultralow
Cement Castable, Gel-Bond Gunning and
Spray/Gunning Composition

Chemical Composition, %	Castable	Gunning Gel-Bond	Spray/Gunning Gel-Bond
Al ₂ O ₃	71.6	64.0	68.6
SiO ₂	4.8	13.0	6.8
TiO ₂	1.6	1.7	1.6
Fe ₂ O ₃	1.4	0.5	0.6
CaO	0.5	–	1.4
SiC + C	21.4	20.9	20.7
Apparent porosity, %			
After firing to			
110°C	15.6	–	18.5
815°C	19.7	31.1	19.8
1370°C	18.5	26.9	21.0
Cold MOR, kg/cm ²			
After firing to			
110°C	32	32	63
815°C	38	25	49
1370°C	120	55	93
Cold crushing strength, kg/cm ²			
After firing to			
110°C	91	220	418
815°C	125	462	151
1370°C	492	950	335
Permanent linear change, %			
After heating at			
815°C	-0.05	-0.1	-0.2
1370°C	+0.02	+0.2	+0.1

Source: UNITECR '97 Proceedings.