

CASTABLES for MINERAL PROCESSING

CEMENT, LIME, ORE

CONVENTIONAL CEMENT

| Products | Chemistry (%) | | Density (815°C, 1500°F) | | C.C.S. (815°C, 1500°F) | | Temp. Limit | | Installation Method |
|----------------|--------------------------------|------------------|-------------------------|--------------------|------------------------|--------|-------------|------|----------------------|
| | Al ₂ O ₃ | SiO ₂ | g/cm ³ | lb/ft ³ | Mpa | psi | °C | °F | |
| TUFFLOOR | 34.1 | 44.5 | 2.11 | 132 | 48.92 | 7,100 | 649 | 1200 | Cast |
| TUFFCRETE 2800 | 44.4 | 48 | 2.27 | 142 | 82.68 | 12,000 | 1538 | 2800 | Vib Cast, Pump, Shot |
| CAST 3400 | 95.3 | 0.1 | 2.77 | 173 | 75.79 | 11,000 | 1871 | 3400 | Cast |

ULTRA LOW CEMENT

| Products | Chemistry (%) | | Density (815°C, 1500°F) | | C.C.S (815°C, 1500°F) | | Temp. Limit | | Installation Method |
|--------------------|--------------------------------|------------------|-------------------------|--------------------|-----------------------|--------|-------------|------|----------------------|
| | Al ₂ O ₃ | SiO ₂ | g/cm ³ | lb/ft ³ | Mpa | Psi | °C | °F | |
| TUFFCRETE 61 A ULC | 61 | 35.5 | 2.61 | 163 | 70.28 | 10,200 | 1704 | 3100 | Vib Cast, Pump, Shot |
| TUFFCRETE 90 | 90.4 | 8.2 | 2.98 | 186 | 62.01 | 9,000 | 1871 | 3400 | Vib Cast |
| ULTRACON 34 C | 92.8 | 6.2 | 3.03 | 189 | 73.03 | 10,600 | 1760 | 3200 | Vib Cast |
| ULTRACON 95 | 94.4 | 5 | 2.98 | 186 | - | - | 1871 | 3400 | Vib Cast |

HIGH STAINLESS FIBER CONTENT

| Products | Chemistry (%) | | | | Density (815°C, 1500°F) | | C.C.S. (815°C, 1500°F) | | Temp. Limit | | Installation Method |
|---------------------|--------------------------------|------------------|------------------|------|-------------------------|--------------------|------------------------|--------|-------------|------|----------------------|
| | Al ₂ O ₃ | SiO ₂ | ZrO ₂ | SiC | g/cm ³ | lb/ft ³ | Mpa | psi | °C | °F | |
| ARMORMAX® 28 SiC | 45.4 | 21.8 | 1.00 | 27.3 | 2.69 | 168 | 82.68 | 12,000 | 1427 | 2600 | Vib Cast, Pump, Shot |
| ARMORMAX® 608 | 59.9 | 27.1 | - | 8.2 | 2.63 | 164 | 103.96 | 15,089 | 1316 | 2400 | Vib Cast, Pump, Shot |
| ARMORMAX® 70 SR | 70.1 | 25.5 | - | - | 2.66 | 166 | 117.13 | 17,000 | 1427 | 2600 | Vib Cast, Pump, Shot |
| ARMORMAX® NRSA | 82.4 | 11.9 | - | - | 3.00 | 187 | 185.34 | 26,900 | 1427 | 2600 | Vib Cast, Pump, Shot |
| ARMORMAX® 85 | 84.4 | 10.5 | - | - | 2.92 | 182 | 175.70 | 25,500 | 1427 | 2600 | Vib Cast, Pump, Shot |
| ARMORAX® 90 SR | 89.2 | 7.8 | - | - | 3.00 | 187 | 113.69 | 16,500 | 1427 | 2600 | Vib Cast, Pump, Shot |
| ARMORMAX® AZS 5 HZR | 40.9 | 28.7 | 26.8 | - | 3.16 | 197 | 112.72 | 16,360 | 1316 | 2400 | Vib Cast, Pump, Shot |

LOW CEMENT

| Products | Chemistry (%) | | | | Density (815°C, 1500°F) | | C.C.S. (815°C, 1500°F) | | Temp. Limit | | Installation Method |
|------------------------|--------------------------------|------------------|------------------|------|----------------------------|--------------------|---------------------------|--------|----------------|------|-------------------------|
| | Al ₂ O ₃ | SiO ₂ | ZrO ₂ | SiC | g/cm ³ | lb/ft ³ | Mpa | psi | °C | °F | |
| LCF 798 P | 61.5 | 35 | - | - | 2.74 | 171 | 59.94 | 8,700 | 1704 | 3100 | Vib Cast, Pump |
| DURACON® 28 | 46.2 | 48.1 | - | - | 2.23 | 139 | 53.74 | 7,800 | 1538 | 2800 | Vib Cast |
| DURACON® 30 | 47.2 | 46.3 | - | - | 2.34 | 146 | 68.80 | 9,985 | 1649 | 3000 | Vib Cast |
| DURACON® 32 | 63.1 | 31.6 | - | - | 2.55 | 159 | 106.17 | 15,410 | 1760 | 3200 | Vib Cast |
| DURACON® 70 C | 69.2 | 25.6 | - | - | 2.71 | 169 | 113.69 | 16,500 | 1760 | 3200 | Vib Cast |
| DURACON® NRSA | 77 | 18.1 | - | - | 2.77 | 173 | 87.16 | 12,650 | 1760 | 3200 | Vib Cast |
| DURACON® 86 | 87 | 8.7 | - | - | 2.93 | 183 | 109.55 | 15,900 | 1788 | 3250 | Vib Cast |
| TUFF-FLO FSM | 34.8 | 61.3 | - | - | 2.18 | 136 | 54.29 | 7,880 | 1204 | 2200 | Vib Cast, Pump |
| TUFFCRETE® FS | 15.6 | 81.8 | - | - | 2.00 | 125 | 82.68 | 12,000 | 1204 | 2200 | Vib Cast, Pump, Shot |
| TUFFCRETE® 47 | 47.1 | 46.5 | - | - | 2.21 | 138 | 82.68 | 12,000 | 1538 | 2800 | Vib Cast, Pump, Shot |
| TUFFCRETE® ARZ | 43.9 | 44.3 | 1.1 | 4.9 | 2.32 | 145 | 89.57 | 13,000 | 1649 | 3000 | Vib Cast, Pump, Shot |
| TUFFCRETE® 60 A SR | 59.6 | 36.2 | - | - | 2.58 | 161 | 104.73 | 15,200 | 1704 | 3100 | Vib Cast, Pump, Shot |
| TUFFCRETE® 60 M | 60.5 | 34.3 | - | - | 2.52 | 157 | 106.80 | 15,500 | 1704 | 3100 | Vib Cast, Pump, Shot |
| TUFFCRETE® 60 MZ | 58.1 | 34.1 | 2.7 | - | 2.56 | 160 | 75.79 | 11,000 | 1704 | 3100 | Vib Cast, Pump, Shot |
| TUFFCRETE® 604 Z | 59.5 | 32.3 | 3.6 | - | 2.52 | 157 | 82.68 | 12,000 | 1649 | 3000 | Vib Cast, Pump, Shot |
| TUFFCRETE® 60 M ARZ | 54.5 | 33.8 | 1.1 | 5.0 | 2.58 | 161 | 146.76 | 21,300 | 1704 | 3100 | Vib Cast, Pump, Shot |
| TUFFCRETE® 60 X | 60.3 | 33.9 | - | - | 2.48 | 155 | 92.33 | 13,400 | 1649 | 3000 | Vib Cast, Pump, Shot |
| TUFFCRETE® 60 SiC | 21.3 | 12.1 | - | 63.6 | 2.60 | 162 | 113.69 | 16,500 | 1649 | 3000 | Vib Cast, Pump, Shot |
| TUFFCRETE® 28 SiC Z | 44.4 | 21.5 | 1.1 | 28.3 | 2.63 | 164 | 126.09 | 18,300 | 1704 | 3100 | Vib Cast, Pump, Shot |
| TUFFCRETE® 63 X | 62.4 | 31.4 | - | - | 2.53 | 158 | 103.35 | 15,000 | 1649 | 3000 | Vib Cast, Pump, Shot |
| TUFFCRETE® 65 M | 64.8 | 30.5 | - | - | 2.61 | 163 | 138.39 | 20,085 | 1704 | 3100 | Vib Cast, Pump, Shot |
| TUFFCRETE® 66 M | 64.5 | 30.2 | - | - | 2.58 | 161 | 78.55 | 11,400 | 1704 | 3100 | Vib Cast, Pump, Shot |
| TUFFCRETE® 70 ABR | 69.6 | 24.8 | - | - | 2.69 | 168 | 144.69 | 21,000 | 1760 | 3200 | Vib Cast, Pump, Shot |
| TUFFCRETE® 70 M | 71.3 | 23.6 | - | - | 2.66 | 166 | 158.47 | 23,000 | 1760 | 3200 | Vib Cast, Pump, Shot |
| TUFFCRETE® 70 X | 68 | 25.8 | - | - | 2.58 | 161 | 98.53 | 14,300 | 1649 | 3000 | Vib Cast, Pump, Shot |
| TUFFCRETE® 72 M | 71.5 | 22.6 | - | - | 2.60 | 162 | 112.31 | 16,300 | 1704 | 3100 | Vib Cast, Pump, Shot |
| TUFFCRETE® 733 | 65 | 24.5 | - | - | 2.58 | 161 | 83.37 | 12,100 | 1566 | 2850 | Vib Cast, Pump, Shot |
| TUFFCRETE® 74 | 74.3 | 20.2 | - | - | 2.69 | 168 | 67.18 | 9,750 | 1760 | 3200 | Vib Cast, Pump, Shot |

NO CEMENT

| Products | Chemistry (%) | | | | Density (815°C 1500°F) | | C.C.S. (815°C,1500°F) | | Temp. Limit | | Installation Method |
|----------------------|--------------------------------|------------------|------------------|------|------------------------|--------------------|-----------------------|--------|-------------|------|----------------------|
| | Al ₂ O ₃ | SiO ₂ | ZrO ₂ | SiC | g/cm ³ | lb/ft ³ | Mpa | psi | °C | °F | |
| NANO-TEK® FS P | 0.2 | 99.5 | - | - | 1.84 | 115 | 31.69 | 4,600 | 1204 | 2200 | Vib Cast, Pump, Shot |
| NANO-TEK® 61 HS | 61.4 | 35.2 | - | - | 2.45 | 153 | 97.84 | 14,200 | 1704 | 3100 | Vib Cast, Pump, Shot |
| NANO-TEK® 60 Z HS | 58.4 | 35.5 | 2.8 | - | 2.52 | 157 | 99.28 | 14,410 | 1704 | 3100 | Vib Cast, Pump, Shot |
| NANO-TEK® 55 A SR HS | 56 | 36.3 | 1.3 | 4.9 | 2.53 | 158 | 62.35 | 9,050 | 1704 | 3100 | Vib Cast, Pump, Shot |
| NANO-TEK® 805 ARZ | 48.4 | 34.7 | 5.7 | 8.1 | 2.50 | 156 | 84.23 | 12,225 | 1704 | 3100 | Vib Cast, Pump, Shot |
| NANO-TEK® 90 | 89.6 | 9.3 | - | - | 2.90 | 181 | 30.32 | 4,400 | 1704 | 3100 | Vib Cast, Pump, Shot |
| NANO-TEK® 75 SiC | 17.1 | 5.2 | - | 74.9 | 2.66 | 166 | 35.66 | 5,175 | 1649 | 3000 | Vib Cast, Pump, Shot |
| QUICK-FIRE 55 | 55.4 | 36.7 | - | - | 2.32 | 145 | 15.36 | 2,230 | 1593 | 2900 | Vib Cast |
| QUICK-FIRE 88 | 88.2 | 3.9 | - | - | 2.74 | 171 | 18.95 | 2,750 | 1649 | 3000 | Vib Cast |
| QUICK-FIRE 90 | 89.1 | 2.1 | - | - | | | 36.93 | 5,360 | 1704 | 3100 | Vib Cast |
| STACKLINE B PC | 98.1 | 0.2 | - | - | 2.18 | 136 | 58.57 | 8,500 | 816 | 1500 | Vib Cast, Pump, Shot |

HIGH STAINLESS FIBER CONTENT

| Products | Chemistry (%) | | | | Density (815°C,1500°F) | | C.C.S. (815°C,1500°F) | | Temp. Limit | | Installation Method |
|---------------------|--------------------------------|------------------|------------------|------|------------------------|--------------------|-----------------------|--------|-------------|------|----------------------|
| | Al ₂ O ₃ | SiO ₂ | ZrO ₂ | SiC | g/cm ³ | lb/ft ³ | Mpa | psi | °C | °F | |
| ARMORMAX® 28 SiC | 45.4 | 21.8 | 1.00 | 27.3 | 2.69 | 168 | 82.68 | 12,000 | 1427 | 2600 | Vib Cast, Pump, Shot |
| ARMORMAX® 608 | 59.9 | 27.1 | - | 8.2 | 2.63 | 164 | 103.96 | 15,089 | 1316 | 2400 | Vib Cast, Pump, Shot |
| ARMORMAX® 70 SR | 70.1 | 25.5 | - | - | 2.66 | 166 | 117.13 | 17,000 | 1427 | 2600 | Vib Cast, Pump, Shot |
| ARMORMAX® NRSA | 82.4 | 11.9 | - | - | 3.00 | 187 | 185.34 | 26,900 | 1427 | 2600 | Vib Cast, Pump, Shot |
| ARMORMAX® 85 | 84.4 | 10.5 | - | - | 2.92 | 182 | 175.70 | 25,500 | 1427 | 2600 | Vib Cast, Pump, Shot |
| ARMOMAX® 90 SR | 89.2 | 7.8 | - | - | 3.00 | 187 | 113.69 | 16,500 | 1427 | 2600 | Vib Cast, Pump, Shot |
| ARMORMAX® AZS 5 HZR | 40.9 | 28.7 | 26.8 | - | 3.16 | 197 | 112.72 | 16,360 | 1316 | 2400 | Vib Cast, Pump, Shot |



INSULATING MIXES

| Products | Chemistry (%) | | Density (815°C, 1500°F) | | C.C.S. (815°C, 1500°F) | | Temp. Limit | | Installation Method |
|-------------------|--------------------------------|------------------|-------------------------|--------------------|------------------------|-----------|-------------|------|---------------------|
| | Al ₂ O ₃ | SiO ₂ | g/cm ³ | lb/ft ³ | Mpa | psi | °C | °F | |
| INSULITE® 2025 | 15.4 | 38.3 | 0.32-0.48 | 20-30 | 0.4-0.7 | 60-100 | 1090 | 2000 | Cast, Gun |
| INSULITE® 2570 | 41.3 | 42.1 | 1.09-1.15 | 68-72 | 2.8-6.9 | 400-1000 | 1370 | 2500 | Cast, Gun |
| INSULITE® 2035 LI | 37.9 | 42.3 | 0.6 | 36 | 1.0-1.7 | 150-250 | 1100 | 2000 | Cast, Gun |
| INSULITE® 2350 | 38.2 | 39.9 | 0.80 | 50 | 1.4-2.8 | 200-400 | 1260 | 2300 | Cast, Gun |
| INSULITE® 2570 | 41.3 | 42.1 | 1.09-1.15 | 68-72 | 2.8-6.9 | 400-1000 | 1370 | 2500 | Cast, Gun |
| INSULITE® 2460 LI | 43.8 | 36.0 | 1.0 | 62 | 4.8 | 600-800 | 1315 | 2400 | Cast, Gun |
| INSULITE® 25 HS | 29.0 | 50.6 | 1.47 | 92 | 17.2-20.7 | 2500-3000 | 1371 | 2500 | Cast, Gun |
| INSULITE® 2690 LI | 42.5 | 46.3 | 1.44 | 90 | 6.2-9.0 | 900-1300 | 1425 | 2600 | Cast, Gun |
| PUMPLITE 60 LI | 39.7 | 47.6 | 1.02 | 64 | 4.1-5.5 | 600-800 | 1370 | 2500 | Pump, Shot |
| PUMPLITE 80 LI | 42.2 | 46.7 | 1.28 | 80 | 6.2-9.7 | 900-1400 | 1425 | 2600 | Pump, Shot |

