



TDS - Red Firebricks

1. Chemical Composition

| Na ₂ O | MgO | Al ₂ O ₃ | SiO ₂ | SO ₃ | K ₂ O | CaO | TiO ₂ | MnO | Fe ₂ O ₃ | NiO | CuO |
|-------------------|-----|--------------------------------|------------------|-----------------|------------------|------|------------------|-----|--------------------------------|-----|-----|
| 1,0 | 0,7 | 12,2 | 55,3 | 1,2 | 3,6 | 20,2 | 0,7 | 0,3 | 4,0 | 0,3 | 0,4 |

2. Physical & Mechanical Properties

| | |
|----------------------------------|------------------------|
| Apparent Density: | 2.16 g/cm ³ |
| Real Density: | 2.67 g/cm ³ |
| Open Porosity: | 19.16 % p.v. |
| Water Absorption: | 8.98 % p.w. |
| Cold Crushing Strength | 42.15 Mpa |
| Flexural Strength (M.O.R) | 9.65 Mpa |

3. Thermal Properties

| | |
|--------------------------------------|--------------------------|
| Refractoriness: | >1150°C |
| Permanent Linear Change: | <1% |
| Thermal Conductivity @ 200°C: | 1.32 W/m·K |
| Thermal Conductivity @ 400°C: | 1.20 W/m·K |
| Heat Capacity: | 0.74 J/g·K |
| Thermal Diffusivity @ 200°C | 8·10 ⁻⁷ m/s |
| Thermal Diffusivity @ 300°C | 7.3·10 ⁻⁷ m/s |