



Kerman Momtazan Cement Co.

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Doc No.: La-F-027-03

Product Specifications

| Portland Cement | Standard |
|--|-------------|
| CEM I 42.5 R | BS EN 197-1 |
| Type III (Moderate Sulfate Resistance) | ASTM C150 |
| ۴۲/۵ .۳ پ | INSO 389 |

Cement Chemical Composition, %wt

| Components | KMCC Range | Common Requirement, INSO 389 |
|-------------------------------------|------------|------------------------------|
| SiO ₂ | 20.2 Min | - |
| Al ₂ O ₃ | 5.6 Max | - |
| Fe ₂ O ₃ | 5.5 Max | - |
| CaO | 62.0 Min | - |
| MgO | 2.0 Max | 6.0 Max |
| SO ₃ | 2.9 Max | 3.5 Max |
| Total Alkali | 1.2 Max | - |
| Loss of Ignition (LOI) | 2.0 Max | 3.0 Max |
| Insoluble Residue (IR) | 0.6 Max | 1.5 Max |
| Lime Saturation Factor (LSF) | 91.0 Min | - |
| Tricalcium Silicate (C3S) | 53.0 Min | - |
| Dicalcium Silicate (C2S) | 24.0 Max | - |
| Tricalcium Aluminate (C3A) | 8.0 Max | 15.0 Max |
| Tetracalcium Alumino Ferrite (C4AF) | 10.0 Min | - |

Cement Physical and Mechanical Specifications

| | | |
|--|----------|----------------------|
| Specification Surface (Blaine), m ² /kg | 300 Min | - |
| Residue on Sieve 45 μm, % | 15.0 Max | - |
| Autoclave Expansion, % | 0.4 Max | 0.8 Max |
| Soundness | | |
| Le Chatelier Expansion, (mm) | - | 10 Max |
| Initial Setting Time, minutes | 90 Min | 45 Min |
| Final Setting Time, minutes | 210 Max | 375 Max |
| Compressive Strength, Kg/cm ² | | |
| 1 days | 12.0 Min | - |
| 2 days | 22.0 Min | 20.0 Min |
| 7 days | - | - |
| 28 days | 45.0 Min | 42.5 Min 62.5 Max |

- Calculation of potential cement phase composition, statistical conformity criteria and uncertainties are according to ASTM & EN standards.

Q.C Manager:

