

Weekly Cement Test Certificate**Ordinary Portland Cement (OPC)**

From: 03-Dec-10 To: 09-Dec-10

Reporting Date: 23-Jan-11

| Test Details | Results Obtained | Requirements as Per SASO 143 | | |
|---|---------------------|--|----------|---------|
| Chemical Analysis | | | | |
| Loss on Ignition % | 1.58 | 4 % Max. | | |
| SiO ₂ % | 20.27 | | | |
| Al ₂ O ₃ % | 5.04 | | | |
| Fe ₂ O ₃ % | 3.91 | | | |
| CaO % | 63.46 | | | |
| MgO % | 1.23 | 4 % Max. | | |
| SO ₃ % | 2.37 | 2.5 % Max.(C ₃ A < 7 %) 3.0 % Max.(C ₃ A > 7 %) | | |
| LSF % | 94.73 | Between 66 to 102 | | |
| C ₃ A % | 6.75 | | | |
| Total Alkalies Equivalent % | 0.50 | | | |
| Physical Tests | | | | |
| Fineness (Cm² / Gram) | | | | |
| Sp. Surface Area (Blaine) | 3437 | 2250 Min. | | |
| Setting Time Vicat test (Minutes) | | | | |
| Initial | 106 | 45 Min. | | |
| Final | 174 | 600 Max. | | |
| Soundness | | | | |
| LeChatelier Expansion (mm) | 1.3 | 10mm Max. | | |
| Autoclave Expansion % | 0.09 | 0.8 % Max. | | |
| Compressive Strength, Prism Specimen, SASO | | | | |
| | PSI | MPa | PSI | MPa |
| 2 Days | 3470 | 24.2 | | |
| 3 Days | 4350 | 30.3 | 2175 Min | 15 Min. |
| 7 Days | 5899 | 40.9 | 3335 Min | 23 Min. |
| 28 Days | 8226 | 57.0 | 5075 Min | 35 Min. |

We certify that the above described cement, at the time of shipment, meets the chemical and physical requirements of SASO 143:1979 and EN 197-1:2000 cement class CEM 1, 52.5 N LA.



Manager Quality Control



شركة إسمنت الرياض
Riyadh Cement Co.
C.R. 1010210405
س.ت. ١٠١٠٢١٠٤٠٥ / فاكس: ٢١٦٩٧٩٧



Plant Director

Weekly Cement Test Certificate

Ordinary Portland Cement (OPC)

From: 24-Dec-10 To: 30-Dec-10

Reporting Date: 23-Jan-11

| Test Details | Results Obtained | Requirements as Per SASO 143 | | |
|---|------------------|--|----------|---------|
| Chemical Analysis | | | | |
| Loss on Ignition % | 1.55 | 4 % Max. | | |
| SiO ₂ % | 20.19 | | | |
| Al ₂ O ₃ % | 5.29 | | | |
| Fe ₂ O ₃ % | 3.74 | | | |
| CaO % | 63.28 | | | |
| MgO % | 1.30 | 4 % Max. | | |
| SO ₃ % | 2.35 | 2.5 % Max.(C ₃ A < 7 %) 3.0 % Max.(C ₃ A > 7 %) | | |
| LSF % | 94.51 | Between 66 to 102 | | |
| C ₃ A % | 7.7 | | | |
| Total Alkalies Equivalent % | 0.50 | | | |
| Physical Tests | | | | |
| Fineness (Cm² / Gram) | | | | |
| Sp. Surface Area (Blaine) | 3427 | 2250 Min. | | |
| Setting Time Vicat test (Minutes) | | | | |
| Initial | 114 | 45 Min. | | |
| Final | 169 | 600 Max. | | |
| Soundness | | | | |
| LeChatelier Expansion (mm) | 0.5 | 10mm Max. | | |
| Autoclave Expansion % | 0.08 | 0.8 % Max. | | |
| Compressive Strength, Prism Specimen, SASO | | | | |
| | PSI | MPa | PSI | MPa |
| 2 Days | 3549 | 24.7 | | |
| 3 Days | 4252 | 29.6 | 2175 Min | 15 Min. |
| 7 Days | 5742 | 39.8 | 3335 Min | 23 Min. |

We certify that the above described cement, at the time of shipment, meets the chemical and physical requirements of SASO 143:1979 and EN 197-1:2000 cement class CEM 1, 52.5 N LA.


Manager Quality Control


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