

SPECIFICATIONS FOR RAW MATERIALS

ISSUE	: 05
SECTION	: 34.0
REV	: 00
DATE	: JUN 2009
PAGE	: 1 OF 1

ORDINARY PORTLAND CEMENT

1. General : This specification governs the Requirements of Ordinary Portland Cement
2. Visual Appearance : Should be free from moisture or water and should not have any nodules formed due to moisture.
3. Physical Properties : Optimum water content: $29.5 \pm 2.0\%$
Initial setting time: 2 to 4.0 Hours
Final Setting time : 3 to 5 Hours
Flow value : 200 ± 5 mm
4. Chemical Composition : a) CaO $62 \pm 3.0 \%$
b) MgO $1.5 \pm 0.5 \%$
c) SO₃ $2.2 \pm 0.6 \%$
d) L.O.I Less than 5 %
5. Mechanical Strength : Tensile strength :Min 40Kg/cm²
or
Compressive strength :Min 700kg/cm²
6. Autoclave Expansion : $\leq 0.12 \%$

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SECTION	: 53.0
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PAGE	: 1 OF 1

SPECIAL PORTLAND CEMENT

1. General : This Specification governs the requirements of special Portland cement.
2. Visual Appearance : Should be free from moisture or Water and should not have any Nodules formed due to moisture.
3. Physical Properties : Optimum water content : Max. 22 %
Initial Setting Time :
80 Minutes to 200 Minutes
Final Setting Time :
135 Minutes to 240 Minutes
4. Mechanical Strength : Tensile Strength : Min 40 kg/cm²
(After 6 days Hot water curing)
or
Compressive Strength: Min 700kg/cm²
5. Autoclave Expansion : $\leq 0.12\%$

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PAGE	: 1 OF 1

CALUNDUM CEMENT

1. General : This Specification governs the requirement of Calundum Cement.
2. Visual Appearance : Should be free from moisture or water and should not have any nodules formed due to moisture.
3. Application : To serve as a binder in the assembly of Ceralin in MS bends.
4. Physical Properties :
 1. Minimum compressive strength of 3:1 (cement:water) vibrated mortar using graded standard sand.
At 1 day : Minimum 300 kgs/cm²
At 3 days: Minimum 350 kgs/cm²
 2. Setting time :
Initial(min): 15 to 45 minutes.
Final(max) : 180 minutes
5. Chemical Composition :
 - a) Al₂O₃ > 46 %
 - b) Fe₂O₃ < 5 %

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