

## CEM I

Portland Cement, Strength Class 42.5 N and 52.5 N – *Complying with SS EN 197-1: 2014*

### SPECIFICATIONS

EnGro Portland Cement meets or exceeds all applicable chemical and physical requirements of SS EN 197-1:2014. Certificate of Analysis is available upon request.

EnGro Portland Cement is used in concrete, precast, and masonry products for a multitude of construction projects including high-rise office buildings, roadway bridges and pavements, residential foundations and driveways, water collection and treatment facilities, and airport structures.

It consists of Portland cement clinker finely ground together with calcium sulfate compound, which is needed as a setting regulator. The optimized production process ensures a high degree of uniformity of the cement.

### USE AND LIMITATIONS

EnGro products are all in accordance with strict quality control procedures to ensure optimum product performance and uniformity. However, there are many variables that affect concrete performance that are beyond the control of EnGro. Skilled persons should use these products with special attention given to formwork, batching, mixing, placing, finishing and curing. In most applications, quality aggregates, admixtures and additives should be utilized. For detailed information, contact your EnGro sales office.

Typical Composition, %	EnGro CEM I
SiO <sub>2</sub>	20.0 - 25.0
Al <sub>2</sub> O <sub>3</sub>	5.0 - 6.0
Fe <sub>2</sub> O <sub>3</sub>	2.0 - 4.0
CaO	60.0 - 65.0
MgO	1.0 - 4.0
Na <sub>2</sub> O	0.1 - 0.4
K <sub>2</sub> O	0.2 - 0.5
Free Lime as CaO	0.5 - 1.0
C <sub>3</sub> A	5.0 - 10.0

Chemical Analysis	SS EN 197-1 Requirements (42.5N, 52.5N)		EnGro CEM I
% Loss on Ignition	≤ 5.0 %		2.0 - 4.0
% Insoluble Residue	≤ 5.0 %		0.1 - 0.5
% Sulphate as SO3	≤ 3.5 %		1.5 - 2.5
% Chloride as Cl <sup>-</sup>	≤ 0.1 %		0.01 - 0.02
BCA Recommendation			
% Alkali	Max 0.6		0.3 - 0.6
Compressive Strength	SS EN 197-1 Requirements		EnGro CEM I
	(42.5 N)	(52.5N)	
2 Days	≥ 10	≥ 20	25 - 35
28 Days	≥ 42.5 ≤ 62.5	≥ 52.5	53 - 63

### PACKAGING

EnGro CEM I is available in bag (50-kg) and bulk forms.

### PRECAUTIONS

Freshly mixed cement, mortar, grout or concrete may cause minor skin irritations. Avoid direct contact with skin and eyes and if contacted, wash exposed areas promptly with water. Refer to the applicable EnGro product SDS prior to use which may be obtained by contacting EnGro sales office.

### STORAGE

EnGro CEM I is sensitive to moisture and should be stored in a dry place. The product may be stored for up to 12 months with proper storage and protected from moisture.