

Technical Data Sheet

SD-CAC 60

1. General Description:

SD-CAC 60 is a hydraulic binder based on calcium aluminate composition. Dirgodaz Amol Industries Co. produces SD-CAC 60 with alumina content of ($\geq 57\%$ wt.) and according to the quality requirement standards.

2. Features and Application:

This cement is characterized by good refractoriness, stable rheological performance, normal setting and hardening behavior, good resistance to chemical corrosion, good wear and abrasion resistance and good thermal shock resistance. Also low Fe_2O_3 content of ($\leq 2\%$ wt), is suitable for resistance to carbon monoxide and other reducing atmospheres.

SD-CAC 60 has higher alumina content ($\geq 57\%$ wt) and less impurities than SD-CAC 50, which leads to higher thermal and chemical stability. This cement does not contain any additives and is compatible with most organic and mineral additives to achieve appropriate working time, flow ability and strength development for different type of deflocculated castables. This cement is preferred for medium duty refractory application and can be used for production of refractory mix castable (casting/gunning) and any monolithic refractories.

3. Technical Specification:

The following data represents typical values of each quality characteristic.

3.1. Chemical composition:

The following data represents typical values of each quality characteristic.

Specification limit (%wt)			
Al_2O_3	CaO	SiO_2	Fe_2O_3
≥ 57	≤ 35	≤ 6	≤ 2

3.2. Mineralogical composition

Main phase	CA
Secondary phases	CA_2 , C_2AS , C_{12}A_7

3.3. Physical and mechanical properties- Cement:

Property	Unit	Value
Refractoriness (neat cement)	$^{\circ}\text{C}$	1450
Grain size residue at 90 micron	%	≤ 5
Specific gravity	g/cm^3	2.9-3.05
Bulk density	g/cm^3	1-1.15
Specific surface area (Blaine)	cm^2/gr	3800-4500

3.4. Physical and mechanical properties- Sand mortar:

These tests are performed by using the sand mortar with a workable consistency. Sand mortar mixture (EN-196-1) containing of 1350g standard sand, 500g cement and 210g water is considered.

Property	Unit	Value
Flow (30 min)	% (ASTM C1437)	30
Final set	min (EN 196-3)	≤ 450
CCS (24h)	kg/cm^2 (EN 196-1)	≥ 400

4. Packaging & Shelf Life:

SD-CAC60 is packed in 25 kg bag or 1000kg big bag. This cement has a shelf-life of six months from production date, with a properly storage in adequate dry conditions. In most cases, its properties will be retained for over one year. This cement should not be placed in outdoors, humid condition or in direct contact with the ground.