

Technical Data Sheet

SD-CAC 71

1. General Descriptions

SD-CAC 71 is a hydraulic binder based on calcium aluminate composition, which has good refractoriness, normal setting and rapid hardening characteristics. This cement does not contain any additives and is compatible with most organic and mineral additives to achieve appropriate workability, flow ability and strength development in different type of deflocculated castables.

DirgodazAmol Industries Co. produces calcium aluminate cement with 71 weight percent alumina content, with appropriate manufacturing processes and using high purity grade alumina and limestone as raw materials. This product is manufactured according to the quality requirement standards.

2. Features and Application:

SD-CAC 71 is preferred for high duty refractory application. This cement is characterized with stable rheological and hardening performance, good resistance to chemical corrosion, good wear and abrasion resistance, and good thermal shock resistance. Also low content of impurities is suitable for high temperature performance and resistance to carbon monoxide and other reducing atmospheres. SD-CAC 71 is mainly used for production of refractory mix castable (casting/gunning) and any monolithic refractories for high temperature industrial applications such as steel and petrochemical units.

3. Technical specification:

The following data represents typical values of each quality characteristic.

3.1. Chemical composition:

Principal chemical components of SD-CAC 71 are shown in the below table.

Specification limit (%wt)			
Al ₂ O ₃	CaO	SiO ₂	Fe ₂ O ₃
≥68	≤31	≤1	≤0.60

3.2. Mineralogical composition:

Main phases	CA, CA ₂
Secondary phases	C ₁₂ A ₇ , Aα

3.3. Physical and mechanical properties- Cement:

Property	Unit	Value
Refractoriness (neat cement)	°C	1550
Grain size residue at 90 micron	%	≤5
Specific gravity	g/cm ³	2.90-3.05
Bulk density	g/cm ³	1.05-1.20
Specific surface area (Blaine)	cm ² /gr	3900-4300

3.4. Physical and mechanical properties- Sand mortar:

These tests are performed using the sand mortar with a workable consistency. Sand mortar mixture (EN-196-1) containing 1350g standard sand, 450g cement and 210g water is considered.

Property	Unit	Value
Flow (30 min)	% (ASTM C230)	40
Final set	min (EN 196-3)	≤450
CCS (24h)	kg/cm ² (EN 196-1)	≥350

4. Packaging & Shelf Life:

SD-CAC 71 is packed in 25 kg bag or 1000 kg 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.