

Product Data Sheet

CastAid CEM 820

Nov-2025, Ver. 01.01



Quality-Enhancing Grinding Aid and Pack-Set Inhibitor for Portland and Blended Cements

DESCRIPTION

CastAid CEM 820 is a grinding aid and pack-set inhibitor designed for the production of superior Portland and blended hydraulic cements. It is formulated to enhance cement productivity, compressive strength and overall quality, and is suitable for use in ball mills and vertical mills.

TYPICAL USES

CastAid CEM 820 is recommended for the production of Ordinary Portland Cements (OPC) and blended cements using fly ash, GGBFS and other pozzolanic materials.

ADVANTAGES

Key advantages:

- Increased productivity – boosts mill productivity, reducing cement grinding costs and specific energy consumption
- Agglomeration reduction – minimizes agglomeration during grinding and the pack-set index (PSI) in silos, reducing blockages and cake formation
- Enhanced efficiency – optimizes separator and classifier efficiency for a more streamlined production process
- Flowability optimization – improves flowability of the cement transportation system for seamless handling
- Powder flowability – improves powder flowability in storage silos, optimizing bulk dispatch and handling
- PSD enhancement – refines particle size distribution, improving workability and compressive strength

STANDARDS

CastAid CEM 820 meets the requirements of ASTM C465-85.

TYPICAL PROPERTIES

Typical properties at 25°C:

Component	Single
Form	Liquid
Colour	Brownish
Specific Gravity (ASTM D1475)	1.04 – 1.10
Chloride Content (EN 480-10)	< 0.10%

APPLICATION

CastAid CEM 820 is a ready-to-use liquid additive. Industrial trials are recommended to determine the ideal dosage for specific requirements.

It can be introduced directly into the mill or onto the feed

conveyor belt. For continuous processes, dose with a volumetric dosing pump to ensure a consistent output and precise application.

DOSAGE

Typical dosage rates of **CastAid CEM 820** are between 0.20 – 1.0 kg per tonne of cement (0.02 – 0.10% by weight of cement). Dosage may vary depending on clinker type, type of cement mill, desired mill output and cement performance.

The optimum dosage rate should be determined during full-scale cement mill tests and actual plant use to meet the desired requirement.

COMPATIBILITY

CastAid CEM 820 is compatible with all types of Portland cement and blended cement replacement materials such as GGBS, PFA and limestone, and with all CasTech range concrete admixtures.

PRECAUTIONS

Do not mix with other products without advice from the manufacturer. Should the product freeze, some crystals may appear, which will disappear on agitation or when the temperature rises above freezing.

PACKAGING

CastAid CEM 820 is available in IBC, 200 kg drums and bulk tanks upon request.

STORAGE AND SHELF LIFE

12 months from date of manufacture when stored under warehouse conditions in original unopened packing. Extreme temperature/humidity may reduce shelf life.

HEALTH AND SAFETY

PPE: Suitable protective goggles, gloves and mask must be worn.

Precautions: In case of contact with eyes, rinse immediately with plenty of water; in case of contact with skin, wash off immediately with soap and water. If swallowed, seek medical attention immediately.

Hazard: Regarded as non-hazardous for transportation.

Disposal: Do not reuse containers. Dispose of as per local rules and regulations.

Additional information: Refer to MSDS (available on request).

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TECHNICAL SUPPORT

CasTech provides on-site assistance and consulting services on projects when requested. Technical data sheets on

other CasTech products and guidance on their use are available on request.

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