

CEMTEC N

HIGH RANGE WATER REDUCER -SUPER PLASTICIZER [ASTM-C 494 TYPE A & F]



DESCRIPTION

CEMTEC N is a high range water - reducing admixture. It may be added to the concrete at the job site or at the ready mix concrete plant. No chlorides are used in the formulation; consequently, it is suitable for prestressed concrete. It is also compatible with air-entraining agents, water proofing agents, and all other types of admixtures; however, each material should be added to the concrete separately.

FEATURES & BENEFITS

- Will produce high early strengths when used in precast work with Type I cement.
- Produces low water content and low water/cement ratio concrete allowing higher strength.
- Produces flowing concrete with better than normal strength.
- Aids in concrete placement and reduces labor cost.

BASIC USES

- Precast concrete
- High performance concrete
- General ready mix concrete
- Heavily reinforced concrete
- Flatwork and mass concrete
- Minimum water content concrete
- Low water/cement ratio concrete
- High slump, flowable concrete

SPECIFICATIONS/COMPLIANCES

Fully complies with the requirements of ASTM C-494 type A & F admixtures.

TECHNICAL INFORMATION:

Typical Engineering Data

The following results were developed under laboratory conditions.

Compressive Strength

Age	Specification (% of Control)	Control	Cemtec - N mix (% of control)
7 days	Min 115	100	145
28 days	Min 110	100	155

RATE OF SLUMP LOSS

Concrete treated with **CEMTEC N** retains its plastic consistency for 30 to 60 minutes after dosing depending on the initial/final slumps and dosage rate. **CEMTEC N** can be added at the ready mix plant or at the job site from field dispensers.

Use **CEMTEC 310 RSP** as replacement for **CEMTEC N** when placing concrete in hot weather (32° C and above).

Typical Slump Loss 21° C

Initial Slump	220 mm
Slump after 30 minutes	142 mm

APPEARANCE

CEMTEC N is a dark brown, free flowing liquid which when added to concrete, does not change the concrete's natural appearances.

DIRECTIONS FOR USE

Add **CEMTEC N** to the sand and water. It should not come into contact with dry cement.

High Strength Concrete Dosage

Charge all concrete material in the proper order into the mixer with about 70% of the mixing water and mix five (5) minutes or 70 revolutions. Add additional water carefully to obtain the required slump and mix for three (3) additional minutes. Use **CEMTEC N** at the rate of 0.6 ltr. - 1.5 ltr/100 kg of cement.

These low water/cement ratio mixes can be placed at slumps of 152-229 mm.

Placeable concrete

Charge all concrete material in the proper order into the mixer and mix five (5) minutes or 70 revolutions for a typical 76 mm slump mix. Add **CEMTEC N** and mix an additional one (1) minute. Dosage: Use at the rate 375-500 ml/100 kg of cement.

The Initial slump is generally 51-76 mm. These

COVERAGE	Contact CMCI Technical Department
PACKAGING	CEMTEC N is packaged in bulk, 10,000 ltr. tanks, 1000 ltrs. containers and 210 ltr drums.
COLOR	Contact CMCI Technical Department

mixes with a water/cement ratio of 0.45 to 0.50 are often used in floor and slab mixes to minimize water content, shrinkage and cracking.

FLOWABLE CONCRETE

Charge all concrete material in the proper order into the mixer and mix five (5) minutes or 70 revolutions for a typical 7.6 cm slump mix. Add **CEMTEC N** and mix an additional three (3) minutes.

Dosage: Use **CEMTEC N** at the rate of 0.6 ltrs - 1.5 ltrs/100 kg of cement on conventional 76 mm slump concrete to achieve a flowable mix. The mix design must be proportioned on the bases of temperature, type of cement, and rate of slump loss required. The following table shows approximate quantities to be added for flowable concrete.

Control mix Slump In mm	Dosage ml/100 kg Cement
100	500-750
75	750-1000
50	1000-1250
30	1250-1500

When designing mixes for use with **CEMTEC N** follow recommendations in ACI 211.1 and 211.2 Adjust sand aggregate ratio to maintain homogeneity.

Placement: Concrete treated with **CEMTEC N** may be placed in the same fashion as conventional concrete.

Formwork: Forms for walls or narrow sections must be watertight, strong and have good bracing. During the "flowing period", when the concrete is at a slump of 178 -229 mm, the concrete will exert a higher pressure at the base of the form than conventional concrete. Formwork for a slab is the same as for conventional concrete.

Curing and Sealing: Proper curing procedures are important to ensure the durability and quality of concrete. To prevent surface cracking, cure flatwork with a high solid curing compound, such as **KURECOTE 75 VOX** or **CEMTEC KURENSEAL**.

CLEAN-UP

Clean tools and equipment with water before the material hardens.

SHELF LIFE

1 years in unopened pack when stored properly

PRECAUTIONS/ LIMITATIONS

- Test batches/mix designs/sample slabs may be required due to variations in local cement and aggregates.
- **CEMTEC N** is used in many different mix designs. Technical Service Department of CMCI should be consulted whenever a question on usage or compatibility with other admixtures is raised. Many successful mix designs are on file and can be an excellent reference when preparing a project mix design.
- Add **CEMTEC N** to concrete mix independent of other admixtures.

Quality Statement

CMCI manufactures its products at their manufacturing facility in Saudi Arabia as per the Quality Procedures certified to conform with quality Management System described in ISO 9000 series

CMCI provides a comprehensive technical support system for its full range of high performance construction products CMCI also offers full technical field support to consultants, Architects, contractors, applicators and End Users.

The Technical Specification information and recommendations given are based on the current technical knowledge and the user or his representative is recommended to check the suitability of the product CMCI reserves the right to amend the technical characteristic of the product as part of ongoing research and development. As the work execution is beyond the direct and continuous control of CMCI no warranty and or responsibility is assumed on the performance of work completion executed with use of our products.

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