CONCRETE SETTING TIMES

NON-CHLORIDE ACCELERATING ADMIXTURE

Non-Chloride Accelerators increase concrete setting time and ultimate strengths across a wide range of ambient temperatures (hot, mild, cold and subfreezing). Unlike traditional Calcium Chloride based Accelerators, Non-Chloride Accelerators do not promote rust or corrosion to reinforcing steel, meaning they are permitted in commercial work and structurally reinforced concrete.

Features of accelerators

- Accelerated setting time
- Especially effective for concrete placement at ambient temperatures as low as -7 °C
- Superior workability
- Increased early and ultimate concrete strengths
- Superior finishing characteristics for flatwork and cast surfaces

Benefits of accelerators

- Earlier finishing of concrete slabs - reduced labor costs
- Reduced heating and protection time in cold weather
- Earlier stripping and reuse of concrete forms

Recommended uses

- Concrete being placed in subfreezing ambient conditions
- Reinforced, precast, pumped, flowable, lightweight or normal weight concrete and shotcrete (wet mix)
- Concrete placed on galvanized steel floor and roof systems
- Prestressed concrete
- Fast-track concrete construction
- Concrete subject to chloride ion limitations

TOMLINSON READY MIX NON-CHLORIDE ACCELERATORS:

Level 1*	10 to 8 degrees Celsius
Level 2*	7 to 5 degrees Celsius
Level 3*	4 to -1 degrees Celsius
Level 4*	-2 to -7 degrees Celsius

*Proper protection from the elements required.

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CONCRETE SETTING TIMES

SET RETARDING CONCRETE ADMIXTURE

Concrete Retarders produce a more uniform and predictable quality concrete. Since this admixture retards setting time it also facilitates placing and finishing requirements. Typical Retarders start at 1 hour and can go up to 4 hours. Longer retarding set times are also possible, especially for long bridge deck pours.

Features of set retarders

- Reduced water content required for a given workability
- Retarded setting characteristics
- Controlled retardation – depending on the addition rate
- Full-form deflection can take place (before concrete sets) in extended pours for bridge decks, cantilevers, non-shored structural elements, etc.

Benefits of set retarders

- Improved workability
- Reduced segregation
- Superior finishing characteristics for flatwork and cast surfaces
- Flexibility in scheduling of placing and finishing operations
- Offsets effects of early concrete stiffening during extended delays between mixing and placing
- Helps eliminate cold joints
- Peak temperature and/or rate of temperature rise in mass concrete lowered thereby reducing thermal cracking
- Increased compressive and flexural strengths

Recommended uses

- Pre-stressed concrete
- Reinforced concrete
- Shotcrete
- Lightweight concrete
- Pumped concrete
- Self-consolidating concrete

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