



CHRONOLIA

FAST TRACK WITH CONCRETE



LAFARGE

bringing materials to *life*



Chronolia™ concrete uses advanced technology allowing for easier placement than that of conventional concrete.* Workability ranges from 90 to 120 minutes from batching with the benefit of high early strength which enables improved turnaround time and productivity.

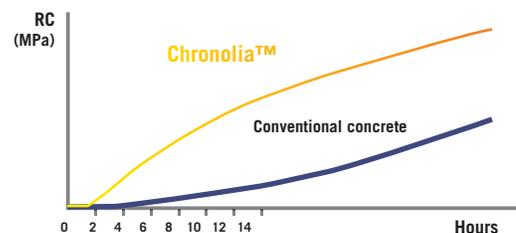
Applications:

Chronolia™ is a ready mix concrete designed for use in:

- › The construction of walls, columns and beams.
- › Flatwork applications where a fast track construction process is required.
- › Civil engineering projects where quick turn around time is required.

Advantages:

- › Chronolia's™ rapid strength gain allows quicker removal of formwork for concrete at a temperature greater than +10° C and ambient air temperatures as low as those experienced in extreme winter conditions.**
- › Chronolia™ concrete is characteristically easier to place than conventional concrete.*
- › Flexibility of construction schedules, in relation to the rotation of formwork. Chronolia™ can double the number of daily rotations for walls, columns, slabs on grade and grade beams.
- › Chronolia™ 24 hour and 48 hour accelerates fly form construction of elevated slabs to two and three day cycles



*Chronolia™ is flowable up to 90 minutes after batching. It is not a self consolidating concrete (SCC).

**Strength gains may depend on local conditions and materials available.

Applications:

Chronolia™ concrete achieves early strength gains in ambient temperatures as low as those experienced in extreme winter conditions.*

- › Chronolia™ gains sufficient strength within the structure to support its own weight 2 to 3 hours after placement (up to 4 hours after the concrete is batched). Therefore, after appropriate on site checks the formwork can be removed, providing the structure is not exposed to lateral stresses. These strengths are dependent on the concrete temperature being at +10° C and ambient air temperatures as low as those experienced in extreme winter weather conditions.*
- › Many other applications are possible, including floors, beams, columns and onsite precast operations, allowing acceleration of formwork rotation and the lifting of load bearing concrete elements. Key information is required when ordering Chronolia™ including:
 - strength gain criteria (including time frame strength is required)
 - the workability period
 - type of construction
- › For floor repair applications, Chronolia™ allows foot traffic approximately 6 hours after placement and light vehicle traffic after 24 hours. Heavy weight traffic is allowed once the concrete achieves acceptable structural levels.

Characteristics:

- › Chronolia™ is fully compliant with **{CSA Standards (A23.1.04)}**.
- › Chronolia™ complies with the above CSA standards regarding:
 - compressive strength
 - exposure class
 - slump retention
 - aggregates specification
- › Compressive strengths achieved (depending on intended use) range from:
 - 4H -> 20 - 35 MPa in 24 hours**
 - 24H -> 20 - 25 MPa in 24 hours**
 - 48H -> 20 - 35 MPa in 48 hours**
- › Flowable up to 90 minutes after batch: Slump Flow **450 mm to 600 mm**.
- › Consistency of conventional concrete after 90 minutes: Slump consistency **100 mm to 200 mm**.

Chronolia's™ design gives 2 hours of slump retention followed by rapid strength gain.



RECOMMENDATIONS

ORDERING

Indicate, when ordering:

- › Compressive strength
- › Class of exposure
- › Slump
- › Exact volumes required
- › Application

TRANSPORT

- › Confirm site access is suitable for truck deliveries.
- › For sites with access difficulties, the use of a concrete pump should be considered.
- › Ensure there are no height restrictions that hinder access.

USE

- › **Never add water or any other additive to Chronolia™ on the job site.**
- › Concrete should not be poured outside the temperature ranges mentioned above.
- › It is recommended that all health and safety regulations be adhered to when handling concrete. The wearing of goggles, hard hats, gloves, boots and reflective clothing is recommended.
- › Chronolia™ has a working life of 90 – 120 minutes from time of batching indicated on the delivery ticket; this limit must not be exceeded. Delays in the pouring process and the use of a pump must be factored into this time period.

PLACING

- › Chronolia™ can be placed by all conventional methods.
- › Placing Chronolia™ follows guidelines CSA A23.1.04.
- › Appropriate curing agents need to be used on horizontal slab applications.
- › Typical vibration procedures required.



CHRONOLIA™ | DATA SHEET

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