DATA SHEET

CHRONOLIA
FAST TRACK WITH CONCRETE

HIGH EARLY STRENGTH CONCRETE

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.

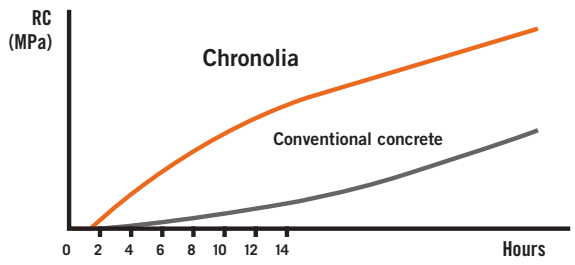
Applications

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.*
- Chronolia allows for flexibility of construction schedules in relation to the rotation of formwork. Contractors can double the number of daily rotations for walls, columns, slabs-on-grade and grade beams.



*Chronolia is flowable up to 120 minutes after batching, depending on application. It is not a self consolidating concrete (SCC).
**Strength gains may depend on local conditions and materials available. Concrete curing conditions must be compliant to CSA A23.1.14.

Applications

- 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 applications are possible with Chronolia, including floors, beams, columns and onsite precast operations. In these applications, Chronolia allows for acceleration of formwork rotation and the lifting of load bearing concrete elements.
- Key information is required when ordering Chronolia, including:
  - Strength gain criteria (including timeframe strength is required)
  - The workability period
  - Type of construction
- For floor repair applications, Chronolia allows for 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.

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Characteristics

- Chronolia is fully compliant with CSA Standards A23.1.14
- 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 25 MPa to 35 MPa within 24-48 hours
- In some mixes, Chronolia is flowable up to 120 minutes after batching, achieving slump flow of 450 mm to 600 mm.*
- In some mixes, conventional concrete slump consistency of 100 mm to 200 mm after 120 minutes can be achieved.*
- Chronolia's design gives 2 hours of slump retention followed by rapid strength gain.

*Slump flow and retention is dependent on the mix design.

RECOMMENDATIONS

ORDERING

When ordering Chronolia, please indicate the required:

- Compressive strength
- Class of exposure
- Slump
- Exact volume
- Application

TRANSPORT

Before arranging for transportation and delivery of Chronolia, please:

- Confirm site access is suitable for truck deliveries
- Consider the use of a concrete pump for sites with access difficulties
- Ensure concrete pump is ready prior to batching
- Confirm there are no height restrictions that could hinder site 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 reccomended.
- Chronolia has a working life of 90 – 120 minutes from time of batching indicated on the delivery ticket. This limit must not be exceeded.
- Site meeting prior to use is strongly recommended

PLACING

- Chronolia can be placed by all conventional methods
- Placing Chronolia follows CSA A23.1.14 guidelines
- Appropriate curing agents need to be used on horizontal slab applications
- Typical vibration procedures required

LAFARGE