HOPE
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HOPE™ Flow FINE

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This highly fluid expert performance concrete has design properties that can be uniquely tailored to the client's placing techniques and strength requirements. The self-compacting product will intelligently align to the underlying formwork to match the design precisely. HOPEFlow Fine™ delivers a first-class finish typically used by design architects.

HOPEFlow Fine™ is able to flow and consolidate on its own. At the same time it is cohesive enough to fill spaces of almost any size and shape without segregation or bleeding. This makes HOPEFlow Fine™ particularly useful wherever placing is difficult, such as in heavily reinforced concrete members or in complicated formwork.

HOPEFlow Fine™ is highly flowable, non-segregating concrete that can spread into place under its own weight to fill formwork and encapsulate extremely congested reinforcing steel, with no mechanical vibration.

HOPEFlow Fine™ has unique properties which give it significant economic, constructability and aesthetic performance on conventional construction projects. HOPEFlow Fine™ allows for rapid concrete placement with significantly reduced labour requirements, consolidation and finishing. The outstanding flow characteristics of HOPEFlow Fine™ can also result in dramatically improved surface finishes. Its use for architectural applications is increasing significantly.

Uses

- Bespoke finishes
- Walls
- Columns
- All types of building with vertical construction

Benefits

- Outstanding quality finish
- Intelligent design alignment that matches the shape and texture of formwork
- No need for compaction or vibration

The key architectural benefits that HOPEFlow Fine™ mixes provide over conventional concretes include:

- More uniform colour.
- Provides very sharp edges with the use of the correct formwork.
- Significant reduction in the number of bugholes with the use of proper form release agents and formwork quality.
- Eliminates air pockets under horizontal formwork elements when the concrete is properly placed.
- Higher quality of surface finish.

HOPEFlow Fine™ – an architectural grade for very high quality finishes

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Formwork design considerations

A structural engineer completing the formwork design must design for a full liquid head condition.

HOPEFlow Fine™ allows for exceptional concrete placement rates, however the formwork has to be able to take the resulting pressures that are generated. As a result, pour rate must be controlled.

Concrete placement by pump from the bottom of the formwork is often performed because of the reduced chance of air bubbles being trapped up against the formwork.

Surface quality of the formwork material

One of the major benefits to HOPEFlow Fine™ is the fact that it produces an outstanding concrete surface finish. HOPEFlow Fine™ will perfectly mirror the quality of the formwork that it is cast against.

Formwork Release Agents

The proper selection of form release agents for HOPEFlow Fine™ projects is a critical activity for the formwork contractor since they can have a dramatic effect on the quality of the formed concrete finish. Greater care must also be taken when applying these materials since excess form release agents can result in staining and retention of air bubbles at the formed surface.

Testing HOPEFlow Fine™

Slump Flow – This test method evaluates the ability of the SCC to flow under its own weight in an unconfined condition. This test method involves filling an inverted slump cone full of concrete without consolidating the material on a non-absorbent rigid surface, lifting the slump cone and measuring the diameter of the resulting concrete that is formed.

Engineering properties of HOPEFlow Fine™

Self-Consolidating Concrete and conventional concrete that is vibrated to properly consolidate have similar compressive strength and performance properties. While compressive strength is the most common property used in concrete evaluations, there are other important material properties that need to be considered. The typical performance properties include:

Compressive Strength – HOPEFlow Fine™ will typically have a slightly higher compressive strength when compared to a conventional concrete of similar w/c ratio. This is due to the improved interface between the aggregate and the hardened paste.

Tensile Strength – For a given concrete strength and maturity the tensile strength can normally be assumed to be the same as conventional concrete. This is due to the fact that the paste volume has no significant impact on tensile strength.

SPECIFICATION OVERVIEW	
Maintenance of fluidity	= bespoke to customer application
Compressive strength at 28 days	= >35N/mm^2

Britain's leading independent concrete supplier

Hope Construction Materials Limited is a company registered in England and Wales

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