Optima COATINGS

DATA SHEET

JOINT SEALANTS, GROUTING & BONDING

Duraflow 620

Optima Coatings Duraflow 620 is a powder blend for the easy production of a cementitious grout with high flowability and non-shrink characteristics, easily formed by the addition of potable water only.

Colours: Grey

PRODUCT USES

- Structural columns.
- Machine bases.
- Holding down bolts.
- Dowel and starter bars.
- Bridge bearings.
- Underpinning and repairs.
- Filling cavities in concrete or steel sections.

ADVANTAGES

- Excellent initial and retained fluidity.
- Cohesion and suspension of aggregates.
- Excellent strength development.
- Corrosion inhibition (non-chloride).
- Controlled expansion and shrinkage compensation mechanisms.
- Exceptional tortuous path flow.
- Non bleeding, void free bearing surface.

COVERAGE

- 76 to 80 pockets (1900 to 2000 kg), mixed to a flowable grout, per m^3.

SURFACE PREPARATION

- All areas to be grouted must be free of grease or dirt and the concrete must be well soaked for several hours prior to grouting.
- Failure to do this will result in migration of grout mix water to the dry adjacent concrete.

APPLICATION

- Shuttering: All fluid flow grouting should be by provision of a suitable head box, pouring board and receiving reservoir to allow the flow of grout to expel entrapped air.
- Selection of Consistency: Where access is easy (more than 50mm clearance), and flow path short (up to 500mm) a flowable or pourable mix may be used. The minimum clearance for flowable applications is 30mm. For restricted access (less than 50mm clearance), or flow of half to three metres, a fluid grout will be required. The minimum clearance for fluid applications is 15mm.
- Mixing: The following water addition rates, per 25kg of grout powder, will produce the consistency indicated:
    - 2½ - 2¾ litres Plastic
    - 3 - 3½ litres Flowable
    - 4 - 4½ litres Fluid (very flowable)

  The use of a mechanical mortar mixer is recommended, in particular for large pours, but an agitator attached to a drill or a spade and wheelbarrow can be successful. Add two thirds of the required water to the mixer or wheelbarrow first and add the grout powder to the water. For fluid grouts, mix to a thick plastic consistency first to break lumps then add final amounts of water to achieve consistency required.
- Placing: Grout should be flowed across the shortest dimension possible. The depth of the pouring headboard should be not less than 100mm above the top level of the gap to be grouted. This will suffice for most applications, but a 200mm pouring head may be needed for tortuous paths and or flow distances of 2 - 3 metres.
- Optima Coatings Duraflow 620 may be placed with a diaphragm or other conventional fluid transfer pumps. The principles of self-levelling of fluids apply to placement of Optima Coatings Duraflow 620. All blind cavities must be vented and fresh grout must be added continuously to the pouring head to maintain hydraulic pressure and avoid entry of air.
- Do not use vibrators, but chain agitation or strapping techniques are effective in breaking any tension head that might prevent free flow.

CLEANING

- Clean all equipment immediately after use with Optima Coatings Xylene.

IMPORTANT

- Do not apply Optima Coatings Duraflow 620 when the temperature falls below 5ºC.
- If Duraflow 620 is to be placed in 100mm or more lifts, ensure that temperatures do not exceed 35 - 40ºC.
- Cool mix water or cover steel with wetted Hessian to reduce heat if necessary.
- Take precautions when the maximum lift exceeds 150mm.

SAFETY PRECAUTIONS

- As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs.
- Treat splashes to eyes and skin immediately.
- If accidentally ingested, seek medical attention.
- Reseal containers after use.
- Use in well ventilated areas and avoid inhalation..

TECHNICAL DATA

Pack size	25 kilogram polylined bags	
Physical Properties - Fresh State:		
Mixed 25kg Duraflow 620: 4.5 litres of water	Initial set	4 - 6 hours
	Final set	7 - 8 hours
	Wet density	2190 kg/m³
Physical Properties – Hardened State:		
Flexural Strength	2MPa	1 day
	6MPa	7 days
	8MPa	28 days
Expansion Phases	Plastic	Up to initial set
	Hardened	Up to 7 days
Free Expansion	Plastic	Up to 0.5% (linear)
	Hardened	Up to 0.05%

Technical details above are provided in good faith. We are an ISO 9001: 2008 registered company and our products are manufactured to the highest standards using raw materials of superior quality. Consequently we believe in the quality of our products and will willingly replace any product in the unlikely event of a quality related performance failure. Whilst we are confident in guaranteeing the quality of our products, we cannot however accept any liability for performance failure due to the incorrect application of our products. Correct application is critical to the successful performance of our products and as this process falls outside of our control we are unable to cover the application under our product performance warranty. Where there are doubts, it is recommended that the user conduct their own suitability tests before use. To retain sheen and colour consistency of your paint, always make sure that the batch numbers are the same on all paint containers that you purchase.

Updated: March 2013 (this supercedes all previous publications)