13 April 2017

YOUR SMART ADVANTAGES

- Dual expansion compensates for shrinkage in the plastic and hardened state
- Rapid strength gain facilitates for rapid installation and operation of plant within matter of 2 hours
- Ready to use, pre-mixed, requires only the addition of water
- Can be mixed for stiff, plastic, flowable or fluid application
- No metallic iron content to cause staining
- Lower water/cement ratio reduces drying shrinkage, increases durability and reduces permeability

USES

Bostik Techflow Grout HES is a high performance, high early strength, rapid setting non-shrink (Class C) cementitious construction grout. Bostik Techflow Grout HES can be used for:
- Cementitious grouting where particular application requires rapid setting
- Critical equipment base plates
- Heavy duty support beneath machine base plates
- Bridge bearing and crane rails
- Anchoring bolts, bars and fittings
- Underpinning
- Applications subject to continuous vibrations and dynamic loads

PRODUCT CHARACTERISTICS

Colour Grey
Viscosity Plastic / flowable
Composition Powder
Pouring temperature 20°C
Product code 20kg bag 30840123

TYPICAL PERFORMANCE DATA (approx.)

Specification
ASTM C191-08
ASTM C1107/C1107-11
ASTM C940-98a
AS 1478.2-2005
AS/NZS 2350.11

<table>
<thead>
<tr>
<th>Application thickness</th>
<th>10 to 90mm</th>
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<tbody>
<tr>
<td>Initial set time*</td>
<td></td>
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<tr>
<td>Plastic</td>
<td></td>
</tr>
<tr>
<td>Flowable</td>
<td></td>
</tr>
<tr>
<td>20 minutes</td>
<td></td>
</tr>
<tr>
<td>30 minutes</td>
<td></td>
</tr>
<tr>
<td>Final set time*</td>
<td></td>
</tr>
<tr>
<td>Plastic</td>
<td></td>
</tr>
<tr>
<td>Flowable</td>
<td></td>
</tr>
<tr>
<td>30 minutes</td>
<td></td>
</tr>
<tr>
<td>60 minutes</td>
<td></td>
</tr>
<tr>
<td>Consistency*</td>
<td></td>
</tr>
<tr>
<td>Plastic</td>
<td>2.2 to 2.5 litres with the addition of water</td>
</tr>
<tr>
<td>Flowable</td>
<td>2.5 to 2.8 litres with the addition of water</td>
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<tr>
<td>Expansion time*</td>
<td>&lt; 10 minutes</td>
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<tr>
<td>Start</td>
<td>&lt; 20 minutes</td>
</tr>
<tr>
<td>Finish</td>
<td></td>
</tr>
<tr>
<td>Coverage</td>
<td></td>
</tr>
<tr>
<td>Plastic</td>
<td>10 to 10.5 litres / 20kg</td>
</tr>
<tr>
<td>Flowable</td>
<td>10.5 to 11 litres / 20kg</td>
</tr>
<tr>
<td>Fresh wet density</td>
<td>2,300 Kg per m³ depending on actual consistency used</td>
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<tr>
<td>Bags per m³</td>
<td>80 to 90 bags depending on actual consistency used</td>
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</table>

Compressive strength*

<table>
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<tr>
<th>CONSISTENCY</th>
<th>WATER ADD.</th>
<th>2 hours</th>
<th>4 hours</th>
<th>24 hours</th>
<th>28 days</th>
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</thead>
<tbody>
<tr>
<td>Plastic</td>
<td>2.2–2.6</td>
<td>≥ 20</td>
<td>≥ 30</td>
<td>≥ 50</td>
<td>≥ 70</td>
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<tr>
<td>Flowable</td>
<td>2.5–2.8</td>
<td>≥ 15</td>
<td>≥ 25</td>
<td>≥ 40</td>
<td>≥ 50</td>
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DIRECTIONS FOR USE

Read and understand the Safety Data Sheet before using this product. SDS can be acquired by visiting www.bostik.com.au or by scanning the relevant QR code on pack.
BOSTIK TECHFLOW GROUT HES

APPLICATION INSTRUCTIONS

SUBSTRATE & SURFACE PREPARATION

The substrate must be clean, sound and free from oil, grease, curing compound or any loose materials. It must be mechanically abraded back to a sound concrete. Bolts or anchor holes must be clean and free from dust or loose material. This can be achieved by blowing clean the hole. Base plates must be cleared of all rust, oil or grease. It is essential to provide air pressure relief holes for venting.

Pre Soaking

It is essential to pre-soak the concrete substrate prior to application of Bostik Techflow Grout HES. Pre-soak the substrate with water for a minimum of 6 hours prior to grouting. Immediately before pouring, excess water should be removed. In the case of bolt/anchor holes, the holes must be blown out to ensure no traces of free water are present whilst grouting.

Formwork

Formwork must be constructed to facilitate rapid and continuous filling, whilst remaining leak proof and water tight. Foam rubber strips or suitable sealants underneath the formwork are recommended.

Unrestrained Surfaces

As Bostik Techflow Grout HES is an expanding grout, it is advisable not to have any unrestrained areas.

Low Temperature Working

At temperatures below 5ºC the cure rate and strength development rate will be dramatically reduced. If early strength is required, it is advisable to use heated water and condition Bostik Techflow Grout HES to 25ºC. Do not exceed this temperature.

High Temperature Working

At temperatures above 30ºC, it is advisable to use water below 20ºC when mixing grout. All materials must be kept cool and away from direct sunlight. If practical, the installation area should be shaded by erecting shade screens. If ambient temperatures are excessive, grouting should be scheduled for early morning or late afternoon.

Mixing

Bostik Techflow Grout HES requires between 2.2 – 2.8 litres of water per 20kg bag, depending on the desired consistency. For optimum results, use a cage or impeller style mixing stirrer powered by a heavy duty electric mixing drill. Care is to be taken while mixing to avoid the formation of air bubbles. Add pre-measured water to a clean mixing bucket. Gradually add powder into the water whilst continuously mixing the contents of the bucket. When the entire contents of the bags have been added to the water, mix for a further 2 – 5 minutes to achieve maximum results. Mix product must be smooth, lump free and homogenous consistency.

It is essential that the grouting operation is continuous hence ensure sufficient labour and mixing capacity is available.

Pouring

The desired ambient temperature for pouring is approximately 20ºC. At this temperature it is essential the grout is placed within 25 minutes of mixing as this will ensure the expansion process is maximised. Ensure the entire area to be grouted is completely filled. We advise the following:

- Use a suitable head box to ensure continuous flow of grout
- Place/ pour grout from one side, minimizing the likelihood of trapped air
- The grout head must be maintained at all times so that a continuous grout front is achieved
- Do not use mechanical vibrators to assist in flow as this will cause segregation of aggregate
- Discard any material that shows signs of stiffening

Curing

On completion of grouting the exposed area should be covered with wet hessian, plastic sheeting or Bostik Bond ‘N’ Cure to prevent excessive moisture loss. At ambient temperature, formwork should be removed no sooner than 24 hours after completion of grouting. The covering should stay in place for a further 6 days. Lack of sufficient curing could result in plastic cracking and drying shrinkage on the surface.

LIMITATIONS

- Do not mix by hand
- Do not add additional water
- Do not use mechanical vibrators to assist in flow as this will cause segregation of aggregate.
- Discard any unused grout that has stiffened or hardened
- Do not retemper

CLEANING

Bostik Techflow Grout HES should be removed from tools and equipment with clean water immediately after use.

STORAGE AND SHELF LIFE

Must be stored in a cool, dry elevated place and protected from high humidity. Shelf life is 6 months in unopened bag.

DISPOSAL

Empty bags may be disposed via local landfill. Dispose of according to local authority regulations. Do not dispose of down drains or into local waterways.

VOC INFORMATION

1g/litre

SAFETY DIRECTIONS

Keep out of reach of children. Read label before use. Do not breathe dust, fume, gas, mist, vapours or spray. Wash hands, face and all exposed skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective clothing, gloves, eye/face protection and suitable respirator.

CAUSES SKIN IRRITATION. CAUSES SERIOUS EYE DAMAGE. MAY CAUSE RESPIRATORY IRRITATION. MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.

FIRST AID

Swallowed: If swallowed, do NOT induce vomiting. Give a glass of water.
Skin: If skin contact occurs, remove contaminated clothing and wash skin thoroughly.
Inhaled: Remove from contaminated area. Apply...
artificial respiration if not breathing. **Eyes:** If in eyes, hold eyes open, flood with water for at least 15 minutes.

For emergency information contact the Poisons Information Centre, phone 131 126 or the Emergency Response Service, phone 1800 033 111.