

Synergy Konstrukt Grout GP

8th Jan 2020

PRODUCT ADVANTAGES

- Pre-hardening volume-adjusting. Controlled gaseous expansion system compensates for shrinkage and settlement before hardening occurs.
- Ready to use, pre mixed, requires only the addition of water
- Can be pumped, trowelled, rammed or flowed to areas where normal grouting methods do not suffice.
- 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

DESCRIPTION

Synergy Konstrukt Grout GP is a general purpose non-shrink (Class A) cementitious grout ideal for most void filling grouting jobs.

USES

- All general purpose grouting
- Precast and pre stressed panels
- Grouting in column bases
- Filling core holes, rod holes and defects in concrete
- Filling for hollow block walls
- Caulking of joints and pipes

PRODUCT INFORMATION

| | |
|--------------|----------------------------------|
| Colour | Grey |
| Viscosity | Stiff, Plastic, Flowable, Liquid |
| Composition | Powder |
| Pouring Temp | 20 °C |
| Product Code | |
| 20kg bag | 30615391 |

TYPICAL PERFORMANCE DATA (approx.)

| | |
|-----------------------|--|
| Specification | ASTM C191-08 ASTM C1107/C1107-11 ASTM C940-98a AS 1478.2-2005 AS/NZS 2350.11 |
| Application Thickness | 10 to 120mm |

Initial set time*

| | |
|----------|-----------|
| Stiff | 2.5 hours |
| Flowable | 4 hours |
| Plastic | 4.5 hours |
| Liquid | 5 hours |

* Tested in accordance to ASTM C191-08

Final set time*

| | |
|----------|-----------|
| Stiff | 3.5 hours |
| Flowable | 5 hours |
| Plastic | 7 hours |
| Liquid | 8 hours |

* Tested in accordance to ASTM C191-08

Consistency*

| | |
|----------|--|
| Stiff | 3 litres with the addition of water |
| Plastic | 3.1 to 3.6 litres with the addition of water |
| Flowable | 3.6 to 4.0 litres with the addition of water |
| Liquid | 4.0 to 4.4 litres with the addition of water |

* Consistency is in accordance to ASTM C1107/C1107-11 & AS 1478.2:2005

Expansion Time*

| | |
|--------|-----------|
| Start | 15 mins |
| Finish | 2-3 hours |

* Tested in accordance to ASTM C940-98a (re-approved 2003)

Coverage

| | |
|----------|-------------------------|
| Stiff | 10.5 to 11 litres/ 20kg |
| Flowable | 10.5 to 11 litres/20kg |
| Plastic | 11 to 11.5 litres/20kg |
| Liquid | 11 to 11.5 litres/20kg |

| | |
|-------------------|--|
| Fresh wet density | 2,100 Kg per m ³ depending on actual consistency used |
|-------------------|--|

| | |
|-------------------------|---|
| Bags per m ³ | 85 to 95 bags depending on consistency used |
|-------------------------|---|

Synergy KonstruKt Grout GP

Compressive strength*

| CONSISTENCY | WATER ADD. | MPa | | |
|-----------------|------------|----------|--------|---------|
| | Litres | 24 hours | 7 days | 28 days |
| Stiff | 3 | 30-40 | 60-75 | 75-85 |
| Plastic | 3.1-3.6 | 25-30 | 50-60 | 65-75 |
| Flowable | 3.6-4.0 | 20-25 | 35-40 | 50-60 |
| Liquid | 4.0-4.4 | 15-20 | 30-40 | 40-50 |

*Tested in accordance to AS/NZS 2350.11

DIRECTIONS FOR USE

Read and understand the Safety Data Sheet before using this product. SDS can be acquired by visiting www.synergysystems.com.au.

APPLICATION INSTRUCTIONS

SUBSTRATE & SURFACE PREPARATION

The substrate surface 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 surface. 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 Synergy KonstruKt Grout GP. Pre-soak substrate with water for a minimum of 6 hours prior to grouting. Immediately before pouring, the 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 Surface

As Synergy KonstruKt Grout GP is an expanding grout, it is advisable not to have any unrestrained areas.

Low Temperature Working

At temperatures below 5°C 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 Synergy KonstruKt Grout GP to 25°C. Do not exceed this temperature.

High Temperature Working

At temperatures above 30°C, it is advisable to use water below 20°C 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

Synergy KonstruKt Grout GP requires between 3 - 4.4 litres of potable water per 20kg bag, depending on the desired consistency. For optimum results, mixing **should be performed using a forced action high shear**

stirrer powered by a heavy duty electric mixing drill. 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 3 - 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 20°C. 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

Synergy KonstruKt Grout GP 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 12 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.

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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.

PRECAUTIONS IN USE

Complete details on each of the products mentioned are available on the product Safety Data Sheets. To ensure no harm is caused to persons using Synergy products, it is recommended that all concerned read the appropriate Safety Data Sheets. Visit www.synergysystems.com.au

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