

PRODUCT DATA SHEET

Feb[®] Febgrout[®] Universal

A high-precision flowable grout

PRODUCT DESCRIPTION

Feb[®] Febgrout[®] Universal is a ready-to-use, high-precision flowable grout that can be used as fluid or plastic consistencies for grouting of equipment and machinery, bearing pads, bridge bearings, rails and anchoring. Fills gaps in concrete from 10mm to 100mm wide.

USES

- Grouting bearing pads and plinths
- Grouting under machinery base plates, stanchion bases and crane rails
- Anchoring bolts, reinforcing bars and rods
- Underpinning

CHARACTERISTICS / ADVANTAGES

- Non-shrink for effective contact and support
- High early strength for rapid installation and use of plant
- Durable, uniform dense structure
- Good workability into gap widths down to 10mm for up to 1 hour at 20°C

Gap Width (minimum and max)	10mm - 100mm
Joint Depth (minimum and max)	5mm - 75mm
Minimum application temperature	+5°C (when mixed as directed below)
Early Expansion	0.25-0.5%
Workability @ 20°C	approx 2 hours
Final set @ 20°C (traffic-able)	approx 12 hours

APPROVALS / STANDARDS

Meets the requirements of Class R4 BS EN 1504-3 and BS EN 1504-6

PRODUCT INFORMATION

Packaging	25kg bag
Appearance / Colour	Grey powder
Shelf Life	9 months from date of manufacture when stored as directed.
Storage Conditions	Store in cool (5°C - 25°C) dry conditions away from direct sunlight and at ambient temperatures.
Density	Dry - ca. 1250kg/m ³ Wet - ca. 2200kg/m ³
Soluble Chloride Ion Content	<0.05% w/w

TECHNICAL INFORMATION

Compressive Strength	Time After Placement	Compressive Strength (N/mm ²)
	1 day	~ 18 - 20
	7 days	~ 40 - 45
	28 days	~ 50 - 55

APPLICATION INFORMATION

Mixing Ratio	25kg powder to 2.3-3.9 litres (depending on required consistency)
Consumption	2.2kg/m ² /mm
Yield	13.4 litres (approx)
Setting Time	approx 8 hours (initial)

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

All surfaces must be structurally sound and free from contaminants such as dust, paint, grease and oil. Ab-rade concrete to provide a good key. Remove rust, paint and scale from metal. Removable metal shims must be oiled for easy removal. Pre-soak area with clean water for a minimum of 4 hours prior to placing. Remove excess (surface) water with airline immediately prior to placing, paying special attention to recesses and anchor pockets. Do not allow surface to dry before placement. Shuttering must be securely anchored, totally sealed and strong enough to withstand the load. Shuttering should be treated with a mold-release agent such as Febstrike to minimise blow holes and avoid damage to grout when removing.

MIXING

Mix by slow-speed drill fitted with a paddle attachment or specialist machines such as force action grout mixers or shear vane mixers. Always add powder to water in the ratio of 25kg powder to 2.3-3.9 litres (depending on required consistency) of water to achieve a flowable mix. A maximum total of 3.9ltrs of water may be used. **DO NOT USE EXCESS WATER AS THIS WILL CONSIDERABLY REDUCE STRENGTH.** Mix for 5 minutes until a smooth lump-free mix is obtained.

APPLICATION

Ensure sufficient labour, material and storage facilities are available to complete the work in one continuous fill. Pour/pump from one side only to avoid air entrainment, keeping a continuous head on the grout feed to maintain flow. After placement, apply a suitable spray-curing compound to assist cure. Maintain temperature at above 5°C during application and cure (ca. 8hrs). This may be achieved at temps of +5°C or below by mixing with warm (ca. 40°C) water to accelerate cure. Note: at these temperatures use a flowable (stiffer) mix only and maintain formwork in position for at least 36 hours. Do not use this product at temperatures below 0°C.

CLEANING OF TOOLS

Clean tools and equipment with water immediately after use.

LIMITATIONS

- Always mix with clean fresh water.
- Do not use to fill gaps less than 10mm in width or depth.
- Do not use colloidal impeller mixers (risk of air entrainment/strength reduction).
- Setting times/strengths are indicative and set may be accelerated at higher temperatures or retarded at lower temperatures.
- Never exceed the quantity of water stated. This will dramatically reduce strength and may cause failure.
- Good concreting practice with regard to placing and curing must be observed especially under winter conditions and in hot weather.
- Do not use on painted surfaces. Remove paint first.
- When used externally, do not apply when rain is imminent and protect from rain for at least 8 hours.
- As the manufacturer cannot know all the uses their products may be put to, it is the user's responsibility to determine suitability for use. If in doubt, contact Technical Services Department.

VALUE BASE

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

EVERBUILD BUILDING PRODUCTS LTD

Site 41, Knowsthorpe Way
Cross Green Industrial Estate
Leeds, LS9 0SW
Tel: 0113 240 3456
Web: www.everbuild.co.uk
Twitter: @everbuild

SIKA LIMITED

Watchmead
Welwyn Garden City
Hertfordshire, AL7 1BQ
Tel: 01707 394444
Web: www.sika.co.uk
Twitter: @SikaLimited

Product Data Sheet

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