



HES Grout

High Early Strength Grout

Westbuild 20kg HES Grout is a general purpose cementitious, Class C construction grout based on Portland cement and specially graded aggregates. High performance and fast setting, HES Grout is ideal for a wide range of applications where rapid strength and return to service is required.

Westbuild HES Grout is engineered for an adjustable consistency and can be pumped, poured or dry packed depending on the type of placement.

Advantages

Class C	
Fast Setting	
Rapid Strength Gain	
Non-Corrosive	
Adjustable Consistency	Pump, pour or dry-pack
Ready to Use	Just add water
Colour	Concrete grey
Single Application	Grout from 10mm – 150mm in a single application



Product Attributes

Uses

Recommended For **A wide range of applications where rapid strength and return to service is required.**

- Grouting around anchor bolts, starter bars and precast panels
- Filling voids, recesses and core holes
- Filling voids in hollow blocks
- Filling joints between tilt slab and precast panels

For more information on suitable uses or uses that are not listed above, please contact a Westbuild representative.

Performance Civil, Commercial and Industrial.

Yield The approximate yields are obtained if mixed in accordance with the recommended procedures and accurately measured water content.

A 20kg bag of HES Grout with 4.5 litres of water will yield approximately 11.5 litres.



<u>Colour</u>	Concrete Grey
<u>Packaging</u>	20kg Westbuild Rainproof (PE) Packaging (50 bags per tonne). 56 bags / pallet.
<u>Shelf Life & Storage</u>	Westbuild Construction Grout is packaged in Westbuild Rainproof™, (PE) packaging and has an extended shelf life. The product can be stored outdoors in the original, unopened packaging.

Technical Data

Product Identity

<i>Form</i>	Powder
<i>Colour</i>	Grey

Expansion Time

<i>Start</i>	< 10 minutes
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Shrinkage – Positive Expansion

0.88mm / metre

Compressive Strength

Age	Consistency: Litres of Water/20kg HES Grout				
	Fluid	Flowable		Trowelable	
	3.8L per 20kg	3.6L per 20kg	3.2L per 20kg	2.8L per 20kg	2.6L per 20kg
Compressive Strength 24 Hours (MPa)	19	22	31	38	40
Compressive Strength 7 Days (MPa)	54	55	65	70	75
Compressive Strength 28 Days (MPa)	65	70	75	83	90

All values are approximate. Tested in accordance with AS1478.2 at 23°C in laboratory conditions.

Installation

Surface Preparation All surfaces must be clean, free from contaminants including dust, oil, grease and curing compounds. Base plates must be cleared of all rust, oil or grease and all bolt or anchor holes should be free from dust and debris and thoroughly cleaned using high pressure air.

Pre Soaking

It is essential to pre-soak the prepared substrate with water overnight, and only remove the excess water just before grout placement, ensuring there are no traces of water present while grouting, including free water in anchor holes. Water in anchor or bolt holes must be blown out - this can be achieved using air pressure.

A properly prepared substrate is essential prior to grout placement to achieve optimum and maximum performance.

Formwork

Formwork needs to be constructed to allow rapid and continuous grout placement. A header box must be constructed on one side of the formwork to ensure the grout head is maintained during grouting works.

The construction of formwork should allow positive gravity flow of grout around the base plate and foundation, and constructed to be leak proof and water tight.



Mixing

DO NOT MIX Westbuild HES Grout by hand.

Always add the measured quantity of water to the mixing vessel first, slowly adding powder and mixing only with a mechanical forced action mixer with a high shear stirrer.

Mixing time should be no less than 3 ½ minutes and until a uniform, homogenous consistency is obtained.

Discard any unused grout that has stiffened or hardened and do not add more water than the recommended amount as this may cause segregation and will compromise the final strength and performance of the product.

Note: When mixing - in all cases HES Grout must be added to water.

Application

NOTE: Sufficient preparation, labor and grout must be present to ensure continuous placement within a single pour.

Consistency and Layer Thickness

Westbuild HES Grout can be pumped, poured or dry packed. Consistency can be adjusted depending upon the type of placement.

Layer thickness should be minimum of 10mm and must not exceed the maximum Layer Thickness within a single pour.

If the final thickness required is greater than stated, the grout should be completed in layers.

	Stiff/Dry Pack	Plastic	Flowable
Water Addition <i>Per 20kg Bag</i>	2.6 – 2.8 litres	3.2 – 3.6 litres	3.8 litres
Layer Thickness *	Min:10mm Max: 150mm	Min:10mm Max: 150mm	Min:10mm Max: 150mm

Pot Life

10 minutes (@ 20°C ambient temperature). The time the product can be placed depends on the product temperature and the amount of mixing water added.

The pot life above should be regarded as a guideline. The lower the temperature the longer the setting time, the less water added the shorter the setting time.

The addition of water to the grout after it has started to stiffen is not recommended and the product should be discarded.

Application Temperature

Temperature	Minimum	5°C
	Maximum	35°C

Low Temperature Application	High Temperature Application
In cold conditions down to 5°C, normal precautions for winter working with cementitious materials should be adopted. The material should not be applied when the substrates or air temperature is below 5°C.	At temperatures above 35°C, the material should not be used as this will cause premature setting and may make pouring and applying the product difficult.



Curing

Excessive moisture loss should be prevented whilst curing. It is important to cover the grout with wet hessian or plastic sheeting to keep the newly poured grout fully protected from drying winds and direct sunlight.

Continue this process for a minimum of 7 days as it is vital for the curing process in order to achieve optimum strength development.

Cleaning

Product should be removed from tools, mixing vessels and all equipment whilst the material is still wet.

Attention

Do not mix by hand

Do not mix more than can be used within the working time of the product. Setting will begin after approximately 15 minutes.

Do not add additional water if the mixed product has begun to stiffen, and do not mix more water than specified. Water should be accurately measured, and discard any unused grout that has stiffened or hardened.

Do not apply in layers less than 10mm in depth

Excessive moisture loss should be prevented whilst curing.

Plan ahead to ensure continuous placement within a single pour.

In lower temperatures, the cure rate will be dramatically reduced.

In high temperatures, it is advisable to use water below 20°C when mixing and the product should be kept away from direct sunlight with the installation area to be temporarily shaded.

Risk

All cement-based products are alkaline and can cause irritation. This product is considered hazardous according to criteria of Work Safe Australia. A dust mask should be worn when handling the material in its dry form. Continuous or extended contact with this product may cause irritation, as well as respiratory issues such as bronchitis or silicosis. Contact with the eyes and repeated and prolonged skin contact should be avoided. Refer to the product SDS for full product details, available on the Westbuild website.

Safety Precautions

A dust mask should be worn when handling the material. Contact with the eyes and repeated and prolonged skin contact should be avoided.

Technical/Safety Data

TECHNICAL DATA SHEETS (TDS) AND SAFETY DATA SHEETS (SDS) are available on request and should always be referenced before handling this product and before the commencement of any works. A WESTBUILD Representative is always available should you require further information. Visit our website for further information on the use of this product and suitability for your application.



Related Products

Fairing Mortar – concrete repair up to 3mm
Construction Grout 20kg Rainproof Bag
HES Grout 8kg
Ultra Light Weight (ULW) Repair Mortar
Level It - Self Smoothing, Self Levelling Underlay

It is the responsibility of the user to ensure that products are used in accordance with the Westbuild Products Pty Ltd instructions for use, and Australian Standard procedures in applications for which they are intended. Westbuild Products Pty Ltd and its associated companies cannot guarantee and are not liable for the use of their products outside of Australian Standards guidelines and the Westbuild Products Pty Ltd instructions for use. The technical details and recommendations contained in this data sheet are given in good faith and represent the best of our knowledge at time of printing. Freedom from patent restrictions should not be assumed.

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