

Product Data Sheet

CasTech Grout HES

Nov-2025, Ver. 01.01



High Early Strength Non-Shrink Cementitious Grout

DESCRIPTION

CasTech Grout HES is a high early strength, non-metallic, non-shrink, highly fluid grout for high early strength requirements. It contains Portland cement, graded silica sand, micro silica, graded aggregates, fillers and chemical additives, and is applicable for grout gap thicknesses of 10 – 100 mm.

TYPICAL USES

- General grouting for steel structure installation
- Grouting of bolt pockets
- Gaps between base plates and concrete, such as bridge bearings, machinery base plates, stanchion base plates, rails and anchor bolts
- Fixing of heavy steel frames
- Fixing, jointing and anchoring of precast concrete panels

ADVANTAGES

Key advantages:

- Ready to use, only requires addition of water
- Adjustable consistency
- High bond strength to steel and concrete
- Excellent workability retention
- Shrinkage compensated in both the plastic and hardened states
- Early strength development even at fluid consistency
- Controlled expansion

STANDARD

ASTM C 1107.

TYPICAL PROPERTIES

Properties at 25°C with W/P ratio of 0.12:

Form	Grey Powder
Fresh Wet Density (BS EN 12350-6)	2.30 ± 0.05 kg/L
Compressive Strength (ASTM C 109) - 1 day	40 N/mm ²
Compressive Strength (ASTM C 109) - 7 days	65 N/mm ²
Compressive Strength (ASTM C 109) - 28 days	80 N/mm ²
Flexural Strength (BS 6319-3) - 28 days	> 8 N/mm ²
Expansion, plastic state (ASTM C 827)	Up to 2% positive
Expansion, hardened state (ASTM C 1090)	0 – 0.3%
Setting Time (ASTM C 191)	Initial > 4 hrs Final < 8 hrs

SURFACE PREPARATION

Surfaces to be grouted should be clean and free from all contaminants such as oil, grease, laitance, paint or corrosion products. Remove any contamination by mechanical means to produce a sound substrate. Keep bond surfaces wet for at least 3 – 4 hours prior to pouring the grout.

MIXING

Mix **CasTech Grout HES** with 3.0 to 3.5 litres of water per bag to obtain the required consistency using a suitable mechanical grout mixer. For small volumes use a drill fitted with a paddle; larger quantities require a high shear vane mixer. Always add **CasTech Grout HES** to clean water. Keep the mixed grout temperature within 10 – 30°C by using cold water in hot weather and warm water in cold weather; keep storing, mixing and placing shaded at all times.

APPLICATION

Place the mixed grout within 15 minutes of mixing to gain the full benefit of the expansion process. **CasTech Grout HES** can be placed at 10 mm up to 100 mm thickness in a single pour as an underplate grout. For thicknesses above 100 mm, it can be mixed with hard, clean, SSD graded 10 mm aggregate in the ratio 1:1 or 1:0.5 by weight depending on the consistency required.

Grout any bolt pockets before grouting between the substrate and base plate. Continuous grout flow is essential: have enough grout ready before starting, pour from one side of the formwork to prevent entrapped air, pour across the shortest distance of travel and maintain a continuous grout head. A heavy-duty diaphragm pump is recommended for large volumes.

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CURING

To prevent rapid surface drying, cure exposed grout surfaces with wet burlap or moist hessian, or with a suitable curing compound from the CasTech Cure range.

YIELD

12.5 litres per 25 kg bag at W/P of 0.14.

PACKAGING

CasTech Grout HES is supplied in 25 kg bags.

SHELF LIFE AND STORAGE

12 months when stored in original bags in a shaded area at temperatures between 2°C and 35°C.

HEALTH AND SAFETY

CasTech Grout HES is alkaline and non-hazardous. It should not be swallowed or allowed to come into contact with skin or eyes. Suitable protective goggles and gloves should be worn. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of skin contact, wash off immediately with soap and water. If swallowed, seek medical attention immediately; do not induce vomiting.

TECHNICAL SUPPORT

CasTech provides on-site assistance and consulting services on projects when requested. Technical data sheets on other CasTech products and guidance on their use are available on request.

CasTech MIDDLE EAST FZE

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