



R-GROUT UHS

PRODUCT CODE : 713

SHRINKAGE COMPENSATED HIGH STRENGTH CEMENTITIOUS GROUT

DESCRIPTION

R-GROUT UHS is a non-shrink, cementitious precision grout powered by ViscoCrete technology. **R-GROUT UHS** is designed to achieve high early strength and exceptional ultimate strengths at a fluid consistency. It is non-metallic and contains no chlorides.

USES

R-GROUT UHS is ideal for many types of structural grouting applications where high early age and long term compressive strengths are required. It can be mixed to different stages of fluidity to produce the desired level of Workability. Add the required amount of water for :-

Trowel applied medium flow mortar.

Pourable grout / Flowable grout.

Typical applications for **R-GROUT UHS** are:-

Under machine foundations and base plates.

Reinforcement ducts in the connection detail between precast columns and beams.

ADVANTAGES

R-GROUT UHS offers the following advantages:-

- High early age strength development
- Controlled bleeding and segregation while plastic
- Increased resistance to aggressive liquid penetration when hardened
- Very high final strengths
- Adjustable consistency
- High flow characteristics
- Non corrosive, non toxic
- Impact and vibration resistant
- Positive shrinkage compensation.

TECHNICAL INFORMATION

Compressive Strength	Ambient temperature: + 30°C	(According to ASTM C 109, 70mm Cube)
Curing Time	1 day	40 N/mm ²
	3 days	60 N/mm ²
	7 days	70 N/mm ²
	28 days	85 N/mm ²
Modulus of Elasticity in Compression	E-Modulus : ~ 37'000 N/mm ²	
Tensile Strength in Flexure	Ambient temperature: +30°C	(According to ASTM C 293-79)
	7 days	10 N/mm ²
	28 days	12 N/mm ²
Tensile Adhesion Strength	Bond Strength : 10 N/mm ² at water: powder ratio 0.12 at 0.025mm slip at 28 days (Used 12mm dia TMT bar) (According to S:2770 (Part-1)-1967)	
Consumption	~2200 kg/m ³ At water: powder ratio 0.12	
Layer Thickness	20 mm min. / 100 mm max.	
Ambient Air Temperature	+5°C min/+ 40°C max	
Substrate Temperature	+5°C min/+ 40 °C max	
Pot Life	~ 20 minutes at +30°C	
Density	Bulk Density : ~1.25 kg/l (of fresh grout)	

APPLICATION

Pour grout immediately after mixing into the prepared openings. Ensure that air displaced by the grout can easily escape; otherwise entrapped air will prevent full contact grouting. Wet porous substrates to saturated surface dry condition.

When grouting base plates etc., ensure that a continuous and sufficient head of pressure is maintained to keep the grout flowing. To make optimum use of the products expansion properties, apply the grout as quickly as possible (within max. 15 minutes).

PRE-TREATMENT

Substrate Quality

Concrete, grout, stone: Surfaces must be sound, clean, free from ice, oils, grease, standing water and any loose or friable particles and any other surface contaminants. The concrete "pull off" (tensile) strength should be > 1.0 MPa.

Steel, iron: Clean, free from oil or grease, rust and scale etc.

Substrate Preparation

The substrate should be prepared by suitable mechanical preparation techniques such as high pressure water jetting, breakers, blast cleaning, scrabbles, etc. The concrete substrates should be pre-soaked with clean water continuously for 2 - 6 hours to ensure a saturated surface dry condition throughout the operation. Immediately before pouring remove all excess or standing water from within any formwork.

MIXING

Mixing :	For Flowable Water: Powder = 0.13 to 0.14 by weight (3.9 to 4.2 water per 30 kg bag).
	For Pourable Water: Powder = 0.12 by weight (3.6 l water per 30 kg bag).
Mixing Time	3-5 minutes minimum
Mixing Tool	Mixing equipment shall be power operated general concrete mixer or paddle mixer for large grout quantity and for small application a hand held heavy duty slow speed drilling machine fitted with mixing paddle shall be used for mixing a maximum of 50 kg of grout at a time. Put around 80 to 90% of required water in the mixing drum, followed by R-GROUT UHS then add the balance water. R-GROUT UHS is best mixed in forced action mixer. Powder is gradually added to the pre-measured water and mixed mechanically with a slow speed drill (400 – 500 rpm) attached with a paddle type mixer, until a smooth and even consistency is achieved. Dependent on the desired consistency and flow properties, the mixing ratio can be adjusted. Do not mix more grout, which cannot be used within Pot life. DO NOT ADD EXTRA WATER.

CURING TREATMENT

Keep any visible, exposed grout surfaces as small as possible and protect from premature drying out by suitable measures (keep moist, cover with wet Hessian etc.).

PRODUCT INFORMATION

Chemical Base	Cement, micro silica, selected fillers, aggregates and special additives
Colour	Grey powder
Shelf Life	6 months from date of production
Packaging	30kg bag
Storage Conditions	Store properly in dry condition in undamaged and unopened original sealed packaging.

CLEANING OF TOOLS

Clean all tools and application equipment with water immediately after use. Hardened/cured material can only be mechanically removed.

BASIS OF PRODUCT DATA

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

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

LEGAL NOTES

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