



ULTRACHEM

For Construction Chemicals

Ultra - Grout HS

High strength cementitious bearing grout
for use at a wide variety of applications

ألترا جراوت إتش إس

جراوت أسمنتي عالي الجودة
للإستخدام في مجموعة واسعة من التطبيقات.

Epoxy & Cementitious Grout



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Uses

Ultra - Grout HS is an exceptionally high strength grout designed for grouting beneath bridge bearings, parapet posts and flanged lighting columns, heavy stanchion bases and base plates for reciprocating machines, it's can used in:

- Anchorage of bolts or iron bars in concrete.
- Precision grouting for industrial equipments, subject to shocks and vibrations.
- Grouting of railway rails or traveling crane tracks.
- Beam keying or bridge springier support construction.
- Grouting for turbines, alternators, compressors, generators, machine tools.
- Assembly of metal reinforced concrete or prestressed concrete prefabricated elements.

Advantages

- Non - shrink.
- High early and ultimate compressive strengths.
- Good flow, particularly at low temperatures.
- Low permeability ensures durability.
- Can be poured or pumped.
- Is chloride free and contains no metal particles.
- Chloride free and contains no metal particles.
- It has a unique 2-stage shrinkage compensating system, with a very special blend of shrinkage and water reducing, plasticizing agents, offering the following beneficial properties.
- High mechanical compressive and bending resistances.
- Adheres to concrete, mortar and steel, ensuring a monolithic bond.
- Can be pumped, injected, vibrated or compacted.
- It's not altered by large humidity or temp. variations.

Standard Compliance

Ultra - Grout HS complies with ASTM C579 and ASTM C580

Description

Ultra - Grout HS is a ready to use dry powder supplied in 25 kg moisture resistant bags. **Ultra - Grout HS** has been formulated specifically for grouting of bridge bearings and parapet post base plates. The addition of a controlled amount of clean water produces a free - flowing grout with high early and ultimate strengths as well as long term durability, suitable for use in section thicknesses 10 mm to 100 mm. Thicker sections can be achieved by incorporating clean, dry 10 mm aggregate.



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Properties

The following results were obtained at a water: powder ratio of 0.15 and temperature of 25°C.

Form	: Grey cement powder	
Density	: 2 ± 0.1 kg/L	
Test method	Typical result	
Compressive strength		
BS 1881:part 116 1983	10 N/mm ² @ 8 hours	
	35 N/mm ² @ 16 hours	
	45 N/mm ² @ 24 hours	
	60 N/mm ² @ 36 hours	
	70 N/mm ² @ 3 days	
	85 N/mm ² @ 7 days	
	102 N/mm ² @ 28 days	
Expansion	0.25% - 1.0%	
ASTMC827-87	:	
Elastic stability (compressive strain)	<1%	
Dtp SHW 1991 Clause 2601 (viii)	:	
Total chloride ion content (as % of mass of cement)	<1%	
Rapid chloride permeability AASHTOT 277	Very Low	
Water permeability DIN 1048 Pt .5: 1991	< 2 mm	
Total acid soluble sulphate So ₃ (as % of mass of cement)	< 4 %	
Setting Time (at 25°C)		
	Plastic	Flowable
Initial set	1.40 hrs	5.00 hrs
Final set	3.10 hrs	8.30 hrs

Specification

Supplier specification

All grouting of bridge bearings and parapet post base plates must be carried out using **Ultra - Grout HS** non-shrink cementitious grout manufactured by **U.n.c.** Storage, mixing, placing and curing shall be in accordance with the suppliers current technical data sheet.

Performance specification

All high strength grouting (specify details and areas of Application) must be carried out with a pre-packaged cement based product which is mixed with a measured amount of water at a water: powder ratio of 0.15. The compressive strength of the grout must exceed.
40 N/mm²@24 hours, 55N/mm²@ 36 hours, 80 N/mm² @7 days and 95N/mm²@28 days.



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Instructions for use

Preparation

Concrete surfaces

The substrate surface must be free from oil, grease or any loosely adherent material. If the concrete surface is defective or has laitance, it must be cut back to a sound base. Bolt holes and fixing pockets must be blown clean of any dirt or debris.

Pre - soaking

For a minimum of 2 hours prior to grouting, the area of cleaned substrate should be flooded with fresh water. Immediately before grouting takes place, any free water should be removed. Particular care should be taken to blow out all bolt holes and pockets.

Bearing plate/parapet post baseplate

It is essential that this area is clean and free from oil, grease or scale. Air pressure relief holes should be provided to allow venting of any isolated high spots.

Levelling shims

If these are to be removed after the grout has hardened, they should be treated with a thin layer of grease.

Form-work

The form work should be constructed to be leakproof as **Ultra - Grout HS** is a free flowing grout. This can be achieved by using foam rubber strip or mastic sealant beneath the constructed form work and between joints. In some cases it is practical to use a sacrificial semi - drys and cement form work. The form work should include out lets for the pre-soaking water.

Unrestrained surface area

This must be kept to a minimum. Generally the gap width between the perimeter form work and the plate edge should not exceed 75 mm on the pouring side and 25 mm on the opposite side. There should be no gap at the flank sides.

Mixing

For best results a mechanically powered grout mixer should be used. For quantities up to 20 kg a slow speed drill fitted With **U.n.c.** Mixing Paddle (Mr3) should be used Larger quantities will require a high shear vane mixer. Do not use a colloidal impeller mixer. It is essential that machine mixing capacity and labour availability is adequate to enable the grouting operation to be carried out continuously. This may require the use of a holding tank with provision for gentle agitation to maintain fluidity.



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Water addition

Add 3.5 litres of water to each 25 kg bag of **Ultra - Grout HS** to produce a fluid grout. The water should be accurately measured into the mixer. Slowly add the total contents of the **Ultra - Grout HS** bag, mix continuously for 5 minutes on high shear/speed, ensuring a smooth, even consistency is obtained.

Note: For the first two to three minutes of mixing the mixture will be of a stiff consistency.

Placing

Immediately prior to placement, the mixed grout should be briefly agitated to release any surface tension. Place the grout within 15 minutes of mixing to gain the full benefit of the expansion process. **Ultra - Grout HS** can be placed in thicknesses up to 100mm in a single pour. For thicker sections (above 100 mm) it will be necessary to fill out **Ultra - Grout HS** with well graded 10mm, silt free aggregate to minimise exotherm. If bulking with aggregate is used the ratio shall not exceed 1 : 1. Contact **U.n.C.** for details of pre-bagged supply. The properties of a bulked grout will differ from those published in this data sheet. Any bolt pockets must be grouted prior to grouting between the substrate and the base plate. Continuous grout flow during the grouting operation is essential. The mixed grout should be poured only from one side of the void to eliminate the entrapment of air or surplus pre - soaking water. This is best achieved by pouring the grout across the shortest distance of travel. The grout head must be maintained at all times so that a continuous grout front is achieved. Where large volumes have to be placed **Ultra - Grout HS** may be pumped. A heavy duty diaphragm pump is recommended for this purpose. Screw feed and piston pumps may also be suitable.

Curing

On completion of the grouting operation, exposed areas should be thoroughly cured. This should be done by the use of **Ultra - Grout HS** curing membrane, or continuous application of water and /or wet hessian.

Cleaning

Ultra - Grout HS should be removed from tools and equipment with clean water immediately after use. Cured material can be removed mechanically, or with **U.n.C.** Acid Etch.

Sampling procedure

Cementitious grouts can not be tested as concrete. Special sampling procedure are required refer to **U.n.C.** office for further details.



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High temperature working

It is suggested that, for temperatures above 35°C, the following guide lines are adopted as good working practice:

- (i) Store un mixed material in a cool (preferably temperature Controlled) environment, avoiding exposure to direct sunlight.
- (ii) Keep equipment cool, arranging shade protection if necessary. It is especially important to keep cool those surfaces of the equipment which will come into direct contact with the material itself.
- (iii) Try to eliminate application during the hot test-times of the day and in direct sunlight.
- (iv) Make sufficient material, plant and labour available to ensure that application is a continuous process.
- (v) Water (below 20°C) should be used for mixing the grout prior to placement.

Limitations

Grouts should not be placed in any unrestricted situation, i.e. base plate plinths, etc. Failure to comply may lead to crack development in the grout.

Technical support

U.n.c. offers a comprehensive technical support service to specifiers, end users and contractors. It is also able to offer on-site technical assistance, an Auto CAD facility and dedicated specification assistance in locations all over the world.

Estimating

Supply

Ultra - Grout HS	:	25 kg bags
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Yield

Ultra - Grout HS	:	12.5 litre / bag
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Storage

Ultra - Grout HS has a shelf life of 12 months if kept in a dry store in sealed bags. If stored in high temperature and high humidity locations, the shelf life will be reduced.



Ultra - Grout HS

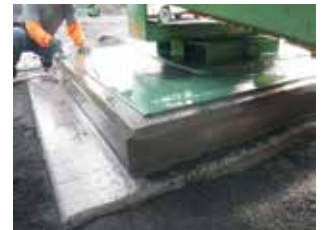
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Health and safety

Ultra - Grout HS contains cement powders which, when mixed or become damp, release alkalis which can be harmful to the skin. During use, avoid in halation of dust and contact with skin and eyes. Wear suitable protective clothing, gloves, eye protection and respiratory protective equipment. The use of barrier creams provide additional skin protection. In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water. In case of contact with eyes rinse immediately with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately do not induce vomiting.

Fire

Ultra - Grout HS is non-flammable.



Quality You Can Trust

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المنطقة الصناعية - أبو رواش - الكيلو 26
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ألترا جراوت إتش إس

جراوت أسمنتي عالي الجهد للاستخدام في مجموعة واسعة من التطبيقات.

وصف المنتج

ألترا جراوت إتش إس مسحوق جاف جاهز للإستخدام عالي الجهد متوفر في أكياس مقاومة للرطوبة سعة 10 كجم. يضاف إليه كمية محددة مسبقا من الماء النظيف لإنتاج جراوت يتدفق بحرية يتمتع بمقاومة مبكرة ونهائية عالية بالإضافة إلى متانة طويلة الأمد، وهو مناسب للإستخدام في العناصر الإنشائية التي يتراوح سمكها من 10 مم إلى 100 مم. يمكن تحقيق المقاطع السميكة من خلال دمج ركام نظيف وجاف بقطر 10 مم.

الإستعمالات

- ألترا جراوت إتش إس جراوت أسمنتي عالي القوة بشكل إستثنائي مصمم للإستخدام في :-
- الحشو أسفل محامل الجسور وأعمدة الحواجز وأعمدة الإضاءة ذات الحواف.
 - قواعد الدعامات الثقيلة وألواح القواعد للآلات الترددية.
 - أعمال الحقن أسفل المعدات الصناعية المعرضة للصدمات والإهتزازات.
 - يستخدم في قواعد التحميل والأوناش والتوربينات والمولدات والماكينات.

المميزات

- غير قابل للإنكماش.
- قوة ضغط مبكرة ونهائية عالية.
- تدفق جيد، وخاصة في درجات الحرارة المنخفضة.
- نفاذية منخفضة تضمن متانة عالية.
- يمكن سكبها أو ضخها.
- خالي من الكلوريدات.

البيانات الفنية

(عند 25 درجة مئوية)

اللون	: بودرة أسمنتية رمادية اللون.
الكثافة	: 0.1 ± 2 كجم / لتر
إجهاد الضغط	: 45 نيوتن / مم ² عند 1 أيام
	: 85 نيوتن / مم ² عند 7 أيام
التعبئة	: 102 نيوتن / مم ² عند 28 يوم
	: شكاير زنة 25 كجم
الصلاحية	: 12 شهر من تاريخ الإنتاج في عبواته المغلقة
التخزين	: في مكان جاف بعيدا عن التعرض لأشعة الشمس



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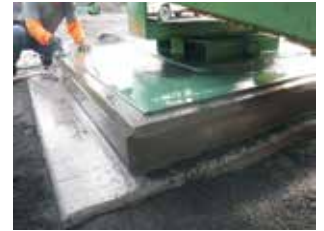
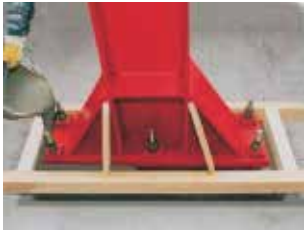
التطبيق والإستخدام

- يتم تجهيز السطح فيجب أن يكون السطح نظيفا وخاليا من الزيوت والشحوم والشوائب الأخرى.
- يتم خلط المادة بأستعمال خلاط ميكانيكي بسرعه بطيئه (300) لفة / دقيقة).
- يتم تحضير كمية الماء اللازمة (3 : 4) لتر / شيكاره 25 كجم) حسب القوام المطلوب.
- صب ثلثي الماء المعابر في وعاء الخلط وبالتدرج أضف المادة مع التقليب ثم أضف باقي الماء وأخلط لمدة 3 دقائق.

- يتم ترطيب السطح الخرساني بالماء قبل صب **ألترا جراوت إتش إس**.
- يتم صب **ألترا جراوت إتش إس** حتى سمك 10 سم على مرة واحدة.

المعالجة :

- يتم معالجة سطح الجراوت بإستخدام **ألترا كور** أو بإستخدام الخيش المبلل بعد الإنتهاء مباشرة ولمدة ثلاثة أيام من زمن الشك الإبتدائي.



تعليمات الأمان

- يتم تنظيف أدوات التطبيق بعد إنتهاء الإستخدام مباشرة قبل الجفاف والإ سيتم التنظيف ميكانيكا بعد الجفاف.
- غير سامة طبقا لقواعد الصحة والأمان السائدة.
- يجب إرتداء الملابس الواقية المناسبة والقفازات وحماية العين ومعدات حماية الجهاز التنفسي.
- عند التلامس مع الجلد يجب الغسل فورا بالماء والصابون وإذا حدث تلامس مع العين أو الأغشية المخاطية يجب الشطف بالماء الدافىء وإستشارة الطبيب المختص.

لمزيد من التفاصيل ارجع إلى الداتا شيت باللغة الانجليزية أو اتصل على الإدارة الفنية.

جودة تستحق الثقة



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