

# Ultra - Metall Top

Metallic based, monolithic hardening compound

## ألترا ميتال توب

مقوي ومصلد لأسطح الأرضيات الخرسانية يحتوي على ركام معدني مجلفن ذو مقاومة عالية للبري والإحتكاك.

**ULTRACHEM**  
For Construction Chemicals



**Cementitious Flooring**



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## Uses

**Ultra - Metall Top** provides an extremely hard wearing, abrasion and impact resistant surface to new concrete floors. Applied by the shake-on method it is ideally suited to all areas of heavy industrial use, e.g:

- All industrial areas subjected to heavy traffic.
- Warehouses where high abrasion and impact loads are expected.
- Passenger & freight terminals.
- Iron armored joints.
- Distribution centers.
- Where wear, impact and abrasion resistance are required.

## Advantages

- Provides an extremely strong, hard wearing, abrasion and impact resistance surface.
- Forms a monolithic bond with the base concrete.
- Supplied ready to use - no additive required.
- Provides a hard abrasion resistant surface.
- Hard, dense surface resistant to oil and grease.
- Available in range of colors to improve working environment.
- Economical and easy to apply.
- Increases impact resistance to concrete surface.

## Description

**Ultra - Metall Top** surface hardening compound is a quality controlled, factory blended powder which is ready to use on site. It consists of special hard wearing emery aggregates selected for their physical properties of abrasion and wear resistance, Portland cement and special additives to improve workability. This combination produces a material which is easy to trowel in the surface of fresh, wet concrete. **Ultra - Metall Top** cures monolithically to provide a dense, non porous surface which is extremely hard wearing and abrasion resistant. Monolithic cure ensures that problems normally associated with thin (Granolithic) screeds, e.g. curling, shrinkage, cracking, etc. are completely overcome.

## Standard Compliance

**Ultra Metal Top** Compliance with ASTM D 4060 and BS 1881 part 116 1983

## Properties

Color	: Cementious Grey - Brick Red - Green - Other colors upon request.
Form	: Cement, metallic Galvanized aggregates and additives.
Abrasion resistance (ASTM D4060)	: 100 mg loss in weight
Abrasion resistance increase For concrete surface	: 450% : 600%
Compressive strength	: Mettal top cups 88N/mm <sup>2</sup>
Hardness (Mohs' scale)	: The selected aggregates contained have 8



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### Design criteria

#### Base concrete

The base concrete should have a minimum cement content of  $300 \text{ kg/m}^3$ . The concrete mix should be designed to minimize segregation and control bleeding, although some limited bleed is desirable to ensure sufficient moisture is available to wet out the **Ultra - Metall Top** when it is first applied.

The use of water reducing admixtures from the **Ultra - ADD** range is strongly recommended in order to achieve a water: cement ratio below 0.55. The base concrete should have an on-site slump of between 75 and 100mm.

The base concrete should be laid and compacted in accordance with good concrete practice, taking care to ensure accurate finished profile and minimum laitance build up.

Particular attention should be paid to bay edges and corners to ensure full compaction of the base concrete -see Instructions for use, Bay edges. Vacuum dewatering is not recommended.

### Instructions for use

**Ultra - Metall Top** powder shall be applied to the freshly - laid concrete floor by the dry- shake method. It shall be applied at the point where light foot traffic leaves an imprint of about 3 - 6 mm.

The powder shall be applied in two stages, in full accordance with the manufacturer's instructions, to achieve an overall application rate not less than  $4 \text{ kg/m}^2$ . Special attention shall be paid to bay edges in accordance with the manufacturer's written requirements.

**Ultra - Metall Top** should be applied at an even application rate of  $4- 6 \text{ kg/m}^2$ . It is recommended that the floor be marked off into bays of known area.

Sufficient materials should then be laid out to meet the recommended spread rate.

Application of **Ultra - Metall Top** should begin without delay when the base concrete has stiffened to the point when light foot traffic leaves an imprint of about 3 - 6 mm. Any bleed water should now have evaporated, but the concrete should have a wet sheen. On large floors it will be necessary to work progressively behind the laying team to ensure application at the correct time.

**Ultra - Metall Top** is applied in two stages.

A) The first application is broadcast at an even rate of  $2 \text{ kg/m}^2$  onto the concrete surface.

When the material becomes uniformly dark by the absorption of moisture from the base concrete, this first application can be floated. Wooden floats or, on large areas, a power float, may be used. It is important, however, that the surface is not overworked.

B) Immediately after floating, the remaining  $2 \text{ kg/m}^2$  Of **Ultra - Metall Top** is applied evenly over the surface at right angles to the first.

Again, when moisture has been absorbed the surface can be floated in the same way as before.

Final finishing of the floor using the blades of a power float can be carried out when the floor has stiffened sufficiently so that damage will not be caused.



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### Bay edges

Where bay edges are likely to suffer particularly heavy wear or impact and where saw - cut transverse control joints are to be located, it is desirable to give these areas additional protection, by one of the following methods prior to full treatment of the entire surface:

- Immediately after leveling the freshly placed concrete, **Ultra - Metall Top** should be sprinkled by hand at a rate of 0.5 kg/lin.m.(5kg/m<sup>2</sup>) in a strip 100 mm wide along the bay edge and hand-trowelled into the surface.
- Immediately after leveling the freshly placed concrete, remove a wedge of the concrete 10mm deep at the slab edge and tapered up to slab level.  
 Replace this with a very stiff paste of **Ultra - Metall Top** mixed thoroughly with a small amount of water. Ensure it is fully compacted on to the base concrete.

These reinforced areas will be further strengthened when the subsequent full treatment is applied. Timing of the application of **Ultra - Metall Top** is important and care should be taken to ensure adequate labour, machinery and material is available to complete the whole area while sufficient moisture is available to fully react with the powder to provide a good dense finish. Conversely, the full benefit will not be achieved if the material is applied too early when bleed water is still present.

Any addition of water to wet out the surface on either the first or second application of **Ultra - Metall Top** will be detrimental to the overall quality of the floor. Pigmented floors require extra care and need to be protected from damage and staining after completion.

It is essential that the correct recommended rate of application is achieved over the entire floor area in order to avoid possible localised variations in shading.

### Curing

Proper curing of concrete floors treated with **Ultra - Metall Top** is essential to the physical properties of the finished floor, however, if the floor is to receive further surface treatments please consult **U.n.C.** office for advise on recommended curing methods.

For indoor applications where curing conditions are less arduous and breakdown of curing membrane is slower alternative approved methods of curing such as polythene sheets taped at the edges is acceptable.



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### Limitations

- In particularly aggressive environments, where abrasion resistance of the highest order is required consideration should be given to the use of **Ultra - Metall Top** Emeritop. For guidance contact **U.n.c** office or representative.
- Do not use **Ultra - Metall Top** in areas exposed to acids and their salts or other materials known to rapidly attack or deteriorate concrete containing Ordinary Portland Cement.
- Do not apply to concrete containing calcium chloride or concrete having greater than 3% air entrainment.

### Estimating

#### Supply

<b>Ultra - Metall Top</b>	25 Kg bags
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#### Coverage

<b>Ultra - Metall Top</b>	4 - 6 m <sup>2</sup> bag
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Applications should comply with the recommended rate to obtain the published performance characteristics.

Any reduction may have a detrimental effect on the finished floor's abrasion resistance and, in the case of pigmented floors, the quality and consistency of the finish.

The average figures for liquid products are theoretical.

Due to the variety and nature of possible substrates, and wastage factors, practical coverage figures will be reduced.

### Storage

If protected from the environment in original undamaged packing, the shelf life of **Ultra - Metall Top** is 12 months. If stored in high temperature and high humidity locations the shelf life will be reduced.



### Quality You Can Trust

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## ألترا ميتال توب

مقوي ومصلد لأسطح الأرضيات الخرسانية يحتوي على ركام معدني مجلفن ذو مقاومة عالية للبري والإحتكاك.

### وصف المنتج

**ألترا ميتال توب** خليط جاهز للإستعمال مكون من أسمنت وركام معدني ذو مقاومة عالية للبري والإحتكاك وإضافات خاصة مصلد ومقوي لسطح الخرسانة ويزيد من مقاومة الأرضيات للبري والإحتكاك وزيادة تحملها للضغوط العالية مطابق للمواصفات القياسية.

### الإستعمالات

- أرضيات المناطق الصناعية المعرضة لحركة النقل الثقيل.
- أرضيات محطات توليد الطاقة , مواقف السيارات , المسالخ , المباني الزراعية , أرضيات المستودعات, أرضيات مصانع التقطير والمختبرات.
- أرضيات المخازن التي تتطلب مقاومة عالية للبري والإحتكاك.
- أرضيات أرصفة الشحن والتحميل أرضيات محطات البنزين.

### المميزات

- يعطي سطحاً ذو مقاومة عالية للبري والتآكل و الصدمات مقارنة بالخرسانة العادية.
- جاهز للاستخدام لا توجد حاجة لأي إضافات حيث يتم إستخدامه من العبوة مباشرة.
- يكون سطح صلب وكثيف ومقاوم للزيوت والشحوم.
- يقلل من الغبار المتكون على السطح متاح باللون الرمادي و يمكن توفيره بعدة ألوان حسب الطلب.

### البيانات الفنية

(عند 25 درجة مئوية)

اللون	: رمادي بلون الخرسانة (العديد من الألوان الأخرى حسب الطلب )
مقاومه البري والتآكل	: يزيد من مقاومه التآكل للخرسانه بنسبه 450 - 600%
التعبئة	: 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 تطبيق **ألترا ميتال توب** بمعدل 3 كجم / م<sup>2</sup> للأرضيات ذات الاستخدام الخفيف. 5 كجم / م<sup>2</sup> للأرضيات ذات الاستخدام الشاق.

يتم رش **ألترا ميتال توب** على سطح الخرسانة حديثة الصب عندما تكون خرسانة الأرضية جاهزة عندما يغرس الإبهام ليترك علامة عمقها 3 - 5 مم ) حيث يتم توزيع المنتج بالتساوي باليد أو إستعمال آلة مناسبة.

يتم إستعمال بروة ميكانيكية مثل الهليكوبتر ذات لفات بطيئة ليتم ضبط مستوى السطح تماما.

النهو / التنعيم :

- عندما تسمح لدونة الخرسانة أو عند حدوث الشك الإبتدائي للخرسانة تتم التسوية النهائية بإستعمال الهليكوبتر على سرعة عالية.

المعالجة :

- يتم معالجة سطح الخرسانة بإستخدام **ألترا كيور** بعد الإنتهاء مباشرة من التسوية النهائية بالهليكوبتر.



### تعليمات الأمان

- يتم تنظيف أدوات التطبيق بعد إنتهاء الإستخدام مباشرة قبل الجفاف والإستعمال للتنظيف 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 فوراً بالماء والصابون وإذا حدث تلامس مع العين أو الأغشية المخاطية يجب الشطف بالماء الدافئ وإستشارة الطبيب المختص.

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

### جودة تستحق الثقة



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