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abe.®dur S - Dustless

NON-METALLIC, ULTRA HIGH STRENGTH CEMENTITIOUS FLOOR SCREED

DESCRIPTION

abe.®dur S is a blend of very hard, high wearing natural aggregates, shrinkage compensated cement, free from metallic material, used to produce a hard wearing granolithic type floor.

USES

abe.®dur S may be used in surfacing areas operating under very wet or dry conditions and/or subject to extreme wear internally or externally. These screeds can be applied to fine tolerances with respect to line and level. **abe.®dur S** has a successful record as flooring in mine change houses; mine stores; hostel kitchens; abattoirs; warehouses; bakeries; fish shops; sand blasting plants; pavements; municipal bus sheds; loading bays; product drying tunnels; shopping malls and freezer rooms.

SHOULD NOT BE USED

- Where it would be subjected to attack by acids.
- Where it would be subjected to attack from detergents and other chemicals that will affect Portland Cement

ADVANTAGES

abe.®dur S screeds may be laid:

- Easily applied, just add water and mix
- Used for internal and external applications
- Surface profile finish as required
- Uniform application thicknesses between 10 mm and 35 mm
- Dustless (up to 80 % reduction in dust)
- Shrinkage compensated
- Ultra-high strength and high abrasion properties
- Light to heavy traffic applications
- Non-metallic
- Quick turn around
- Monolithically with a new subfloor, i.e. while the subfloor is still green.
- On existing floors where the **abe.®dur S** screed is bonded to the existing floor by means of an epoxy adhesive such as **epidermix 116**.

TYPICAL PERFORMANCE VALUES

| 25 kg of abe.®dur S | 2.5 litres of water |
|--|-------------------------|
| Flow table @ 25 drops @ 25 °C | 110 mm |
| Fresh wet density | 2.387 g/cm ³ |
| Compressive strengths (MPa) - cured at 25 °C | |
| 1 Day | 45 |
| 3 Days | 65 |
| 7 Days | 70 |
| 28 Days | 85 |

Flexural strengths (MPa) - cured at 25 °C

| | |
|---------|----|
| 3 Days | 10 |
| 28 Days | 11 |

COLOUR

Similar to concrete.

SURFACE PREPARATION

PRECAUTIONARY NOTES

BASE CONCRETE: Where an **abe.®dur S** screed is to be laid monolithically on concrete, the slab should be cast to within a minimum of 10 mm of the finished level. The surface should be true and free of excess water and laitance. Where an **abe.®dur S** screed is to be laid on an existing floor, the floor should have a compressive strength of not less than 25 MPa and provides a tensile adhesion strength greater than 1.5 MPa. It must be mechanically sound and fully cured in accordance with good concrete practice, must be clean and free of laitance, oil, grease, dust and any other contamination. The concrete should be roughened prior to surfacing with **abe.®dur S**. This may be done by scabbling, abrasive or water blasting, chipping or under exceptional circumstances, acid etching. If acid etching is used, request full details from **a.b.e.®** on how to do this before work is commenced (13% strength HCl – the surface has to be neutralized afterwards and cleaned/flushed with high pressure washing using potable water). Structural cracks should be repaired prior to the application of **abe.®dur S**. (All cracks repaired must be approved by owner or engineer, dynamic structural cracks will mirror through the **abe.®dur S**).

JOINTS IN FLOORS

The position of the joints should be mapped to facilitate correct forming and cutting of joints in the **abe.®dur S** screed. Any joints required must be saw-cut within 36 - 48 hours after laying. Joints must be cut in the screed to coincide with any expansion/ construction joints in the sub-floor. Panel size must not exceed 25 m² and joints must not be spaced more than 5 m apart.

MIXING

Using a pan mixer add 2.0 litres of clean potable water to the mixing vessel. Whilst mixing slowly add the powder to the mixer and mix for 1 minute until the product is uniform and lump free. Add the additional 0.5 litre to the mix to obtain consistency and mix for 2 minutes until the product is thoroughly mixed and ready to be applied. Total mixing time must be a minimum of 3 minutes.

Only mix the required quantity that can be placed at one time. Do not exceed 2.7 litres of water per 25 kg bag.

Do not re-temper the mix or add more than the prescribe water content as this will impair the products performance. If the product has stiffened up due to delays in application discard the mix and mix a fresh batch.

COVERAGE

25 kg **abe.®dur S** plus 2.5 litres of water will yield 11.5 litres approximately 1.15 m² at a thickness of 10 mm.

(10 m² @ 10 mm thick = 100 litres divided by 11.5 = approximately 8.7 x 25 kg of **abe.®dur S**).

APPLICATION

Uniform application thicknesses may range between 10 mm and 35 mm.

1. AS A MONOLITHIC SCREED

Allow the concrete to attain initial set (±3 hours), remove all surface bleed water and any laitance and then spread the **abe.®dur S** mortar to 10 mm thickness, using a wooden float and compact well as work proceeds. Finish with the type of float the project demands.

2. USING EPOXY BONDING LAYER – epidermix 116

The concrete must be completely clean and surface dry. The recommended bonding layer is mixed as detailed in the relevant data sheet and is applied to the clean dry concrete by brush or roller.

The **abe.®dur S** screed is laid into the still tacky epidermix 116, compacting well. Ensure freedom from voids both in and under the screed. Finish with the type of float the project demands. Cure fully for at least 5 days.

Power trowels may be employed for larger areas.

CAUTION

For optimum **abe.®dur S** screed performance:

1. Avoid excess water in the mix
2. Do not overflow the surface
3. Cure thoroughly. An **abe.®dur S** floor is only as good as its curing. Compressive strengths exceeding 80 MPa may be achieved when using the recommended water demand and curried correctly.
4. Do not apply the product if the surrounding temperature and substrate is expected to be 10 °C and falling, lower temperatures will delay the strength development properties.

CURING

Wherever **abe.®dur S** is being laid, every effort must be made to prevent too rapid drying of the screed. Draughts should be excluded and direct sunlight must be avoided. To be able to perform as designed, **abe.®dur S** screeds must be fully cured. The preferred method of curing is to pond the surface as soon as it will bear traffic and then to cover with polythene sheets weighed down with sand-filled polythene sausages. A spray-applied **a.b.e.®** approved concrete curing compound may be used where a polythene sheet is impracticable (**dura.®cure SBC** or **Chryso Cure WB**). Curing should be continued for at least five days.

PROTECTION ON COMPLETION

Protect surface against traffic and spillage until cured.

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MODEL SPECIFICATION

The floor screed will be **abe.®dur S**, a nonmetallic, hard wearing, shrinkage compensated floor screed applied in accordance with **a.b.e.® Construction Chemicals'** recommendations including all necessary primers (**epidermix 116**) and curing compound (**dura.®cure SBC** or **Chryso Cure WB**) where directed.

PACKAGING

abe.®dur S is supplied in 25 kg polyethylene lined paper bags.

(Code: 11412025)

HANDLING & STORAGE

All **abe.®dur S** related products have a shelf life of 12 months if kept in a dry, cool store in the original, unopened packs. If stored at high temperatures and/or high humidity conditions, the shelf life may be reduced.

HEALTH & SAFETY

abe.®dur S contains cement powders, which when mixed or become damp, release alkalis which can be harmful to the skin. During use, avoid inhalation of dust and contact with skin and eyes. Wear suitable protective clothing, gloves, eye protection and respiratory protective equipment. The use of barrier creams provides 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. MSDS is available upon request.

IMPORTANT NOTE

This data sheet is issued as a guide to the use of the product(s) concerned. Whilst **a.b.e.® Construction Chemicals** endeavours to ensure that any advice, recommendation, specification or information is accurate and correct, the company cannot - because **a.b.e.®** has no direct or continuous control over where and how **a.b.e.®** products are applied - accept any liability either directly or indirectly arising from the use of **a.b.e.®** products, whether or not in accordance with any advice, specification, recommendation or information given by the company.

FURTHER INFORMATION

Where other products are to be used in conjunction with this material, the relevant technical data sheets should be consulted to determine total requirements. **a.b.e.® Construction Chemicals** has a wealth of technical and practical experience built up over years in the company's pursuit of excellence in building and construction technology.

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