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WINE INDUSTRY
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FOOD INDUSTRY
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a.b.e.® Construction Chemicals

abe.®flo HPU

High Build Polyurethane

FOUR COMPONENT POLYURETHANE SELF-SMOOTHING, CHEMICAL RESISTANT MORTAR

DESCRIPTION

abe.®flo HPU is a four component polyurethane self-smoothing topping, applied between 2 and 6 mm, in general 4 mm thick, available in a range of matt colours.

USES

abe.®flo HPU provides a heavy duty, thermally shock resistant, hard wearing floor finish with exceptional chemical resistance.

Typical areas of application include food processing factories, chemical processing plants, and pharmaceutical production for use in wet and dry process areas where the floor is subjected to hot fluid spillage steam cleaning, heavy traffic, impact and chemical attack.

Determination of emission compounds as well as the specific pathogens, bacteria or microbes that should be tested for flooring material used in the food industry.

The tests were conducted as per ASTM D5116 by an ISO 17025 accredited laboratory.

Specific pathogens, bacteria or microbes tested for:

- *Listeria monocytogenes* (presumptive)
- *Listeria monocytogenes* (confirmation)
- Coliforms
- *Salmonella* ssp. (presumptive)
- *Salmonella* ssp. (confirmation)
- Enterobacteriaceae

abe.®flo HPU flooring system meets the emission requirements as per ASTM D5116 and the green building specification for flooring material. This ensures that the material will not affect the indoor air quality of the premises.

abe.®flo HPU flooring system meets the requirements with regards to the acceptable levels of microorganisms for flooring material in the food industry provided standard sanitization take place regularly.

The **abe.®flo HPU** flooring system samples are suitable for flooring application in a food environment based on their emission and microorganisms levels detected through the tests conducted as outlined in this report. The low levels of coliform and enterobacteriaceae are easily eliminated by standard sanitization processes.

The VOC test results are <0.01 and the maximum acceptable levels as per green building specifications is <0.5 mg/m²/hr.

ADVANTAGES

- Impact resistant.
- Seamless and hygienic finish, no crevices where dirt and bacteria can collect.
- Excellent chemical resistance.
- Easy to clean and sterilise, low maintenance requirement.
- Matt finish.
- High abrasion resistance.
- Low odour during installation.
- Complies with emission and microbiological specifications for the food industry.

COLOUR

abe.®flo HPU is not colour stable and may discolour on ageing; this is more noticeable in light colours. This will not impair its chemical resistance. Where colour matching is required over more than one order or delivery, **a.b.e.®**'s Technical Department must be contacted prior to placing the order(s) and the requirement stated clearly on all orders relating to the project(s). The colour range includes dark green, mid grey, mustard, cream, blue and red.

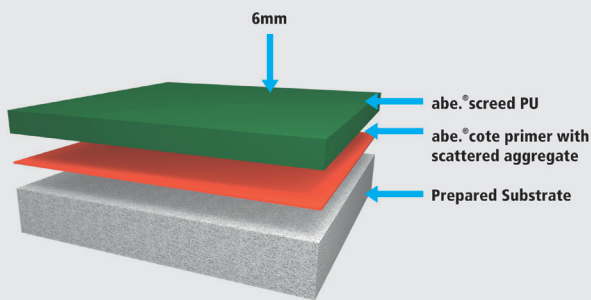
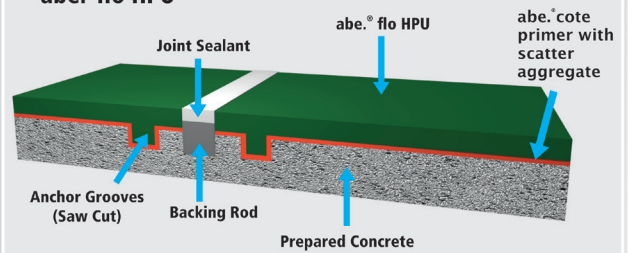
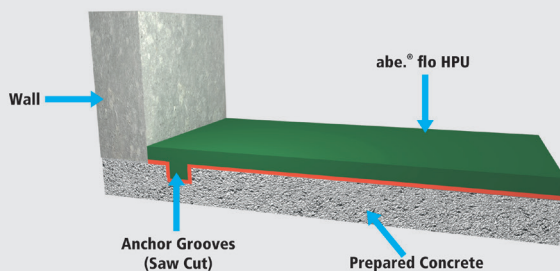
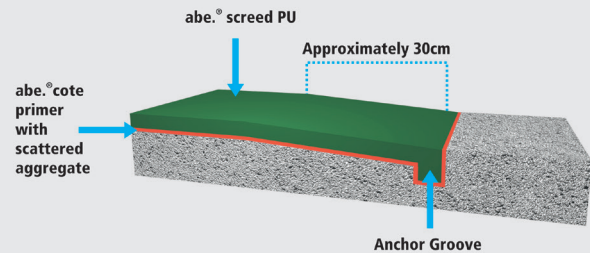
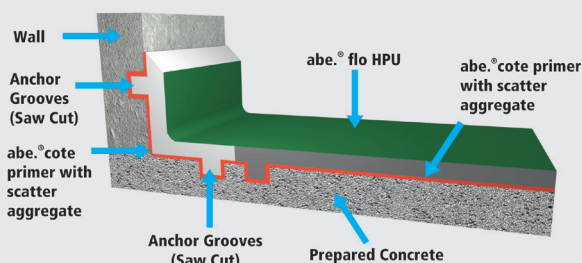
CAUTIONARY NOTE:

Variations in aggregates can cause variations in floor colour.

Although every effort is made to keep product colours consistent, it is advisable to use product from the same batch in specific areas. Products can be pre-blended to further limit colour variations.

PROPERTIES OF WET MATERIAL AT 23 °C

Pot life	15to 20 minutes
Light traffic	24 hours
Full cure	7 days
Full traffic	Semi-matt
Mixed density	1,904
Yield per kit	15,8 litres
Do not apply the coating if the substrate temperature is at least 3 °C (5 °C is better) above dew point.	

abe.® screed PU**Movement Joint****abe.® flo HPU****Termination at Wall****abe.® flo HPU****Termination at Free Edge****abe.® screed PU****Cave to Wall****abe.® flo HPU****SUBSTRATE REQUIREMENTS**

All movement joints need to be carried through the **abe.® flo HPU** and properly sealed. Subject to environmental conditions consult your local **a.b.e.®** representative for the appropriate sealant type.

Construction joints and cracks may be covered but if substrate movement occurs, the **abe.® flo HPU** will reflect the cracked areas. Subject to large temperature changes, the effect of these changes on the substrate movement must be considered.

BONDING/PRIMING

abe.® cote primer with scattered aggregate is recommended as a pore sealer and must be allowed to cure. Priming must be undertaken in the late afternoon (i.e. declining substrate temperature).

COVING

Use the relevant **abe.® screed PU CG** coving grade colour with appropriate primer for coving and/or vertical applications.

MIXING

Kit components are pre-weighted for optimum performance.

Never split or proportion kits. The prescribed aggregate must be used as supplied in kit form and not substituted with an alternative. A forced action pan mixer is recommended. Do not mix by hand.

Mechanical mixing using a heavy duty drill and helical mixer may be considered. The heavy duty drill/stirrer should provide a minimum of 1100 W input power, 600 W output power, torque 45 Nm and variable speed of 0 to 700 rpm, including a heavy duty paddle having a 120 mm diameter and helical stirrer height of 100 mm suitable for mixing cement mortars and grouts (see typical illustration of a helix stirrer on last page). The rotation of the stirrer should be such that the material is lifted from the bottom of the mixing container upward during mixing. The mixer is to be

SURFACE PREPARATION

Substrate must be concrete or polymer modified screed above 25 MPa compressive strength and a minimum of pull off strength of 1.5 MPa.

Totally enclosed heavy shot blasting or scarification should be used to remove all residues to provide a dry, dust free open textured surface with exposed aggregate. Anchor grooves, minimum 4 mm wide x 4 mm deep, must be formed at all edges, bay joints, columns doorways, drains and at regular centres across the floor. Generally, groove width and depth is twice the screed thickness. If time constraints (or any other) results in application of screed short of these anchor grooves, then cut new grooves to finish off application and start next application with new grooves.

used at slow speed to avoid air entrapment. To the clean mixing vessel add the base component followed by the liquid pigment and mix for 30 seconds, add the hardener component and mix for approximately 30 seconds until the colour is uniform. Finally whilst mixing slowly add the aggregate component to avoid lumps forming and mix for at least 3 minutes, until the mixture is homogenous and uniform.

HELICAL STIRRER



COVERAGE

7.6 kg/m² at 4 mm or 1L/m²/mm thick.

APPLICATION

Within one minute after mixing, spread the topping onto the primed floor to the required thickness using a steel-bladed trowel, or pin rake set to the correct depth. Within 3 minutes of application, roll with a spiked roller. Lay abutting mixes within 3 minutes of application of previous mix. Maximum bay width is 5 metres.

CLEANING

abe® super brush cleaner before dried/cured.

PROTECTION ON COMPLETION

Protect surface against traffic and spillage until cured.

MODEL SPECIFICATIONS

The floor topping will be **abe®flo HPU**, a four component polyurethane self-smoothing floor topping applied in accordance with **a.b.e.® Construction Chemicals'** recommendations.

PACKAGING

abe®flo HPU is supplied in 30 kg packs, consisting of base, hardener, aggregate and pigment.

HANDLING & STORAGE

All **abe®flo HPU** 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

When wet, **abe®flo HPU** is toxic and flammable. Ensure working area is well ventilated during application and drying. Avoid flames in vicinity. Avoid inhalation of dust and contact with skin and eyes. Suitable protective clothing, gloves, eye protection and respiratory protective equipment should be worn. The use of barrier creams provides additional skin protection. If contact with skin occurs, wash with water and soap. Splashes into eyes should be washed immediately with plenty of clean water and medical advice sought.

When cured, **abe®flo HPU** is inert and harmless.

NB: When transporting liquids and semi-liquids by aircraft, ask for material safety data sheet.

COMPONENTS

Product	Code	Pack size
Resin kit	52500825	8.25 litre
Aggregate	C52510218	21.8 kg

PIGMENTS

Product	Code	Pack size
Red	20207350	350 grams
Green	20209350	350 grams
Mustard	20208350	350 grams
Mid-grey	20205350	350 grams
Cream	20206350	350 grams
Blue	20210350	350 grams

IMPORTANT NOTE

This data sheet is issued as a guide to the use of the product(s) concerned. Whilst **a.b.e.® Construction Chemicals** endeavors 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 flooring and concrete technology.

CHEMICAL PROPERTIES OF DRIED SCREED

Chemical Resistance	Excellent	Good	Limited
Alkali's			
Sodium hydroxide 70%	+		
Ammonia 10%	+		

Consult **a.b.e.®** for more specific requirements.

Excellent = No change in product even after long-term contact.

Good = No change in the product after one month contact, either no long term test results, or some change after long term contact.

Limited = Will resist 2 - 3 hours before irreversible damage occurs or is destroyed.

CHEMICAL PROPERTIES OF DRIED SCREED

Chemical Resistance	Excellent	Good	Limited
Acids			
Citric acid 10%	+		
Acetic acid 10%	+		
Lactic acid 5%	+		
Citric acid 10%	+		
Acetic acid 10%	+		
Lactic acid 5%	+		
Sulphuric acid 20%	+		
Hydrochloric acid 20%	+		
Nitric acid 20%	+		
Phosphoric acid 20%	+		

COLOUR CHART

abe.®flo HPU colour chart on next page. Note these colours are provided as a guidance only and exact colour matches will be dependant on the surface condition.

DATE UPDATED: 13/09/2019

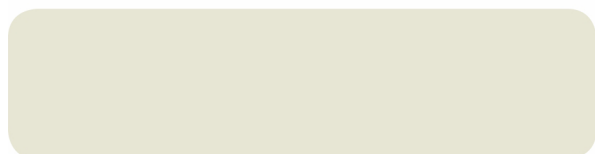
a.b.e.® is an ISO 9001:2015 registered company
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 is a CHRYSO Group Company



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**mid grey****cream****red****mustard****green****blue****light grey****dark grey****grey white****umbra grey**

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