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WINE INDUSTRY
APPROVED



FOOD INDUSTRY
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a.b.e.® Construction Chemicals

abe.®screed PU Polyurethane

FOUR COMPONENT POLYURETHANE MORTAR

DESCRIPTION

abe.®screed PU is a four component polyurethane mortar which when applied at 6 to 10 mm thick provides a non-slip floor available in a range of colours.

abe.®screed PU is available in a standard grade and an easily workable high slump grade.

USES

abe.®screed PU 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 motocyctogenes* (presumptive)
- *Listeria motocyctogenes* (confirmation)
- Coliforms
- *Salmonella* ssp. (presumptive)
- *Salmonella* ssp. (confirmation)
- Enterbacteriaceae

abe.®screed PU 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.®screed PU 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.®screed PU** 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.

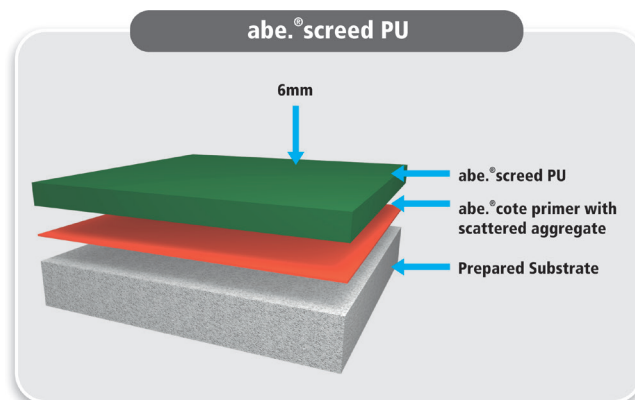
COLOURS

abe.®screed PU 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 DURING APPLICATION

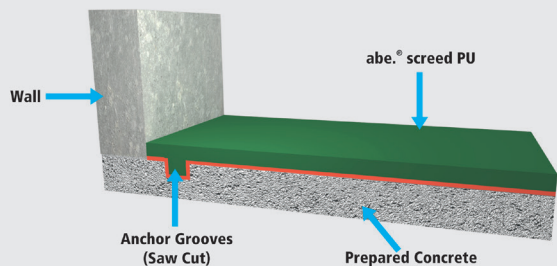
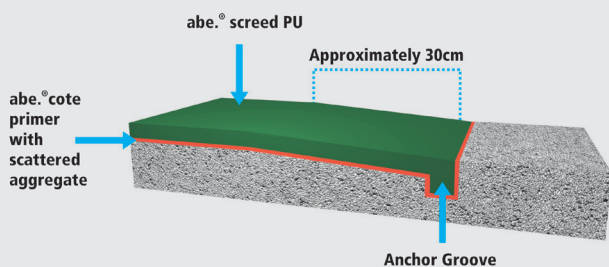
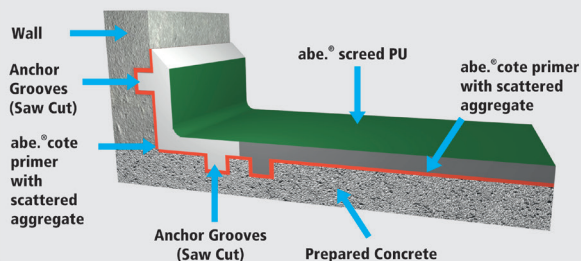
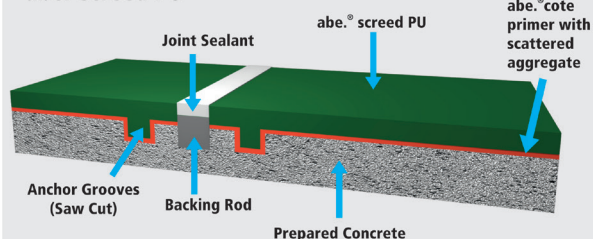
	23 °C	33 °C
Pot life	15 minutes	10 minutes
Light traffic	16 hours	12 hours
Full traffic	40 hours	24 hours
Full cure	7 days	5 days
Coverage (excluding waste)	17.52 kg/m ² at 8 mm thick	
Packaging	34.6 kg four component kit	
Mixed yield (high slump)	15.8 L (34.6 kg)	

Do not apply the coating if the substrate temperature is at least 2 °C (5 °C is better) above dew point.

PROPERTIES DURING APPLICATION

Density	2.19 kg/L
Compressive strength (at 7 days)	Approximately 50 MPa
Flexural strength (at 7 days)	Approximately 14 MPa
Tensile strength (at 7 days)	> 12 MPa
Bond	> Cohesive strength of concrete
Impact resistance	> 0.5 mm (BRE screed)
Temperature resistance	-35 °C +120 °C at 8 mm thick

Abrasion resistance by Taber (1 000 1 kg load) to ASTM D4060 cycles with a loss of 30 mg.

Termination at Wall**abe.® screed PU****Termination at Free Edge****abe.® screed PU****Cave to Wall****abe.® screed PU****Movement Joint****abe.® screed PU****SURFACE PREPARATION**

Substrate must be concrete or polymer modified screed above 25 MPa compressive strength. 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, a minimum 8 mm wide x 8 mm deep, must be formed at all perimeter edges, each side of bay joints, around columns and doorways, at drains and at the perimeter of each area installed. Generally, groove width and depth is 2x 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.

SUBSTRATE REQUIREMENTS

The prepared concrete substrate must be sound and have sufficient compressive strength (minimum 25 MPa) with a minimum pull off strength of 1.5 MPa.

Must be free from rising damp.

All contamination must be removed, resulting in a clean, dry, open textured surface with exposed aggregate.

SUBSTRATE MOVEMENT

All vertical surfaces must be of a rigid construction to resist deflection during the application process.

All movement joints need to be carried through the **abe.® screed PU** 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.® screed PU** will reflect the cracked areas subject to large temperature changes, the effect of these changes on the substrate movement must be considered.

BONDING/PRIMING

For non-porous surfaces no primer is required – **abe.®screed PU** may also be applied to slightly damp surfaces. Porous surfaces tend to absorb binder and therefore compromise workability during application. For porous surfaces, **abe.®cote primer** with scattered aggregate is recommended as a pore sealer. Apply **abe.®screed PU** an hour minimum after application of primer.

Priming must be undertaken in the late afternoon (i.e. declining substrate temperature).

COVING

Use relevant coloured **abe.®screed CG** (coving grade) with appropriate primer for coving and/or vertical applications. For high chemical resistance on these areas, the cured coving may be further sealed with several thin film applications of **abe.®cote primer** with scattered aggregate.

MIXING

Kit components are pre-weighed 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. **Do not mix by hand.** A forced action pan mixer is recommended.

The mixer is to be 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.

COVERAGE

Approximately 17.52 kg/m² at 8 mm thick, excluding waste.

APPLICATION

Immediately after mixing, spread the mix using a screed box (highly recommended for this fast curing system) alternatively, dump mix on substrate and form screed using screed rails and plastic trowels (the use of a metal trowel will result in discolouration).

Lay abutting mixes within 10 minutes to ensure neat edge.

The surface is finished off with a structured roller while wet immediately after trowelling. Late or heavy rolling may induce pin holes.

CLEANING

abe® super brush cleaner before dried/cured.

PROTECTION ON COMPLETION

Protect surface against traffic and spillage until cured.

TEMPERATURE AND RELATIVE HUMIDITY

abe.®screed PU should be applied at material temperatures between 12 °C and 18 °C and ambient temperatures of 5 °C to 30 °C. Temperatures should not fall below 5 °C in the 24 hours after application.

MODEL SPECIFICATIONS

A four component polyurethane floor screed.

The floor topping will be **abe.®screed PU**, a four component, polyurethane system comprising a resin and activator blended with a pre-packed filler applied in accordance with **a.b.e.® Construction Chemicals'** recommendations including all necessary primers (**PU/HPU primer**).

PACKAGING

abe.®screed PU is supplied in 34.6 kg kits, consisting of Base, Hardener, Aggregate and Pigment.

COMPONENTS		
Product	Code	Pack size
Resin kit	49600564	5.64 kg
Plain aggregate	C49606289	28.97 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

HANDLING & STORAGE

All **abe.®screed PU** 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.®screed PU** 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.®screed PU** is inert and harmless.

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

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
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%	+		

CHEMICAL PROPERTIES OF DRIED SCREED			
CHEMICAL RESISTANCE	EXCELLENT	GOOD	LIMITED
ALKALI'S			
Sodium hydroxide 70%	+		
Ammonia 10%	+		

CHEMICAL PROPERTIES OF DRIED SCREED			
CHEMICAL RESISTANCE	EXCELLENT	GOOD	LIMITED
SOLVENTS			
Engine oil	+		
Hydraulic oil	+		
Petrol	+		
Diesel	+		
Kerosene	+		
Acetone			+
Butanol	+		
Skydrol	+		
Xylene	+		
Toluene	+		

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.

DATE UPDATED: 10/04/2019

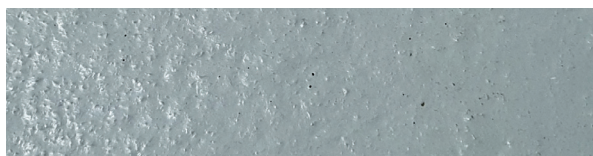
a.b.e.® is an ISO 9001:2015 registered company
 Registration Number: 1982/005383/07
 101 Main Reef Road, Boksburg North, 1459
 PO Box 5100, Boksburg North, 1461

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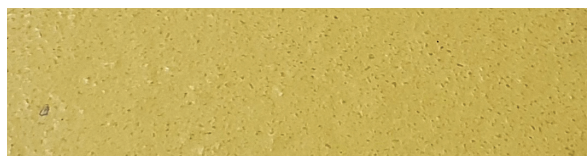


abe.® screed PU COLOUR CHART

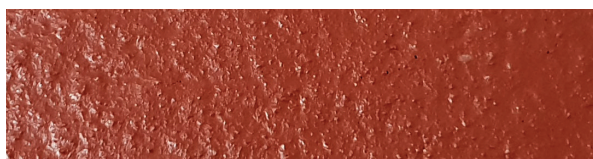
These colours are provided as a guidance only and exact colour matches will be dependent on the surface condition.



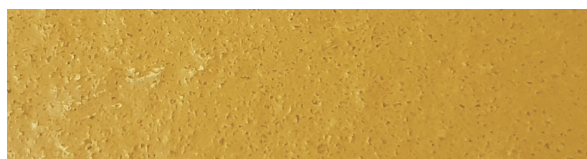
mid grey



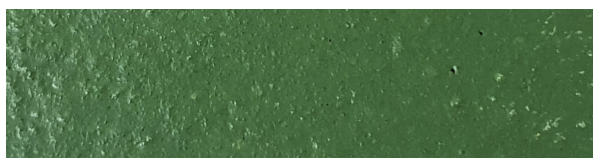
cream



red



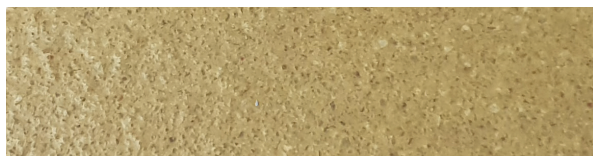
mustard



green



blue



natural

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