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WINE INDUSTRY APPROVED

a.b.e.® Construction Chemicals

abe.®cote 441

POLYURETHANE ENAMEL

DESCRIPTION

abe.®cote 441 is a protective and decorative coating for steel, concrete and timber.

USES

Finish coating on various flooring systems. The clear material is suitable for bar counters and similar applications.

ADVANTAGES

- Non-toxic when dry
- Salt spray resistance (passes 1 000 hours)
- Weather resistance – does not chalk, white does not yellow
- Excellent water resistance
- Resists aliphatic solvents, xylol, alcohol
- Does not taint water
- Good distilled water resistance

SURFACE PREPARATION

At the time of applying **abe.®cote 441** the surface should be clean, mechanically sound and dry. **abe.®cote 441** is normally applied over primed surfaces and therefore surface preparation is consistent with the primer being used. If timber is sealed with **abe.®cote 441** it should be sanded smooth and all debris of sanding removed. Oily timbers such as teak should be washed down with pure acetone (not oily acetone) and allowed to dry before coating with **abe.®cote 441**.

The substrate must be dry before application. Moisture content tests must be conducted prior to application of the priming system. Maximum moisture should be between 4 – 5%, e.g. protimeter survey master or equivalent, or dynamic calcium chloride moisture "weight gain" over 24 hours, or a practical overnight "plastic sheet test" is also advisable approximately 1 m² masked own on surface.

PROPERTIES OF WET MATERIAL	
Mixing ratio base: activator	2:1 by volume
Density (typical)	1.40 g/cm³ white 1.20 g/cm³ colours 1.10 g/cm³ clear
Colour	Base: Clear or pigmented Activator: Clear Mixed material: Clear or as per **abe.®cote** colour chart
Finish	High gloss
Flash point	17 °C
Fire resistance	Flammable
Dilution	**abe® thinners no. 2** only
Consistency	Low-medium viscosity liquid

PROPERTIES OF DRY FILM	
Maximum service temperature	Dry ±120 °C Immersion ±70 °C
Flexibility on conical mandrel	Passes
Hardness	2 000 gm (sheen scratch test)
Chemical resistance	10% hydrochloric acid, 10% phosphoric acid, 10% sulphuric acid, 40% caustic soda domestic bleach

PROPERTIES DURING APPLICATION	
Pot life	8 hrs/5 L at 25 °C (white) 3 hrs/5 L @ 25 °C (clear)
Volume solids	53% pigmented 38.5% clear
Recommended average dft per coat	35 – 40 µm pigmented 25 µm clear
Theoretical coverage for above dft	13.5 m²/L pigmented 16.5 m²/L clear on smooth surfaces
Wet film thickness at above coverage	75 µm pigmented 50 µm clear
Maximum recommended wft	100 µm pigmented 80 µm clear
Practical coverage	6 – 9 m²/L pigmented 7 – 10 m²/L clear dependent on surface texture)
No. of coats	Minimum 2
Overcoating time @ 25 °C	Mimimum 12 hours Maximum 48 hours
Drying time @ 25 °C	Touch dry 5 hours Hard dry 12 hours Full cure 7 days

BONDING/PRIMING

Dry concrete and other porous surfaces - **abe.®cote 386** or **abe.®cote 436**

- mild steel – **abe.®cote 384**
- Dry concrete and other porous surfaces - **abe.®cote 386** or **abe.®cote 436**
- timber (under pigmented **abe.®cote 441**) – **abe.®cote 386** ensure the timber is free of natural oils by solvent wiping the surface with oil free acetone and allow it to dry.
- galvanised steel – **abe.®cote 386** ensure the timber is free of natural oils other wipe the surface with oil free acetone and allow it to dry.

  abe.®cote 386 abe.®cote 386 is easy to rub down with emery or sand paper and to achieve the best finish this should always be done and all resulting debris removed. If wet sanding, the surface must be allowed to dry completely as any trace of moisture under **abe.®cote 441** will promote bubbling in the film. Where **abe.®cote 441** clear is used on timber no priming is required. Reduce the first coat with 15% **abe® thinners no. 2**.

MIXING

Stir the contents of each container, particularly the base, very well. Add activator to base and stir together for at least five minutes using a flat paddle. Mechanical mixing gives better dispersion than manual mixing. A suitable mixing method would be a slow speed electric drill (approximately 200 r/min) fitted with a paddle. If only part of a kit is to be used add one volume of activator to two volumes of base. Measuring must be accurate and separate stirrers and containers used for proportioning each component.

Allow mixed material to stand for 20 minutes in shade prior to application. If thinning is needed use only **abe® thinners no. 2** – incorrect choice of thinners may cause bubbling in the film. If the kit is split and kept for future use, the activator container must be very tightly sealed and stored upside down. The activator will react with moisture in the air. The split kit should not be stored for more than a few days or gelling will occur.

APPLICATION

abe.®cote 441 should be applied to the pre-primed surface within the overcoating time stipulated for the relevant primer.
If airless spray is used for application a nozzle of approximately 400 µm should be used. Conventional spray is not recommended since any trace of moisture in the air supply may result in bubbling. Bubbling can also result from using damp brushes or short fibre rollers which are not completely dry before use, and also from applying too thick a film of material. Never apply thicker films than recommended.

abe.®cote 441 should not be applied if the ambient temperature is below 8 °C. The curing reaction will not proceed at low temperatures. If the surfaces are not at least 2 °C above the dew point, a film of condensed moisture could be present. This again will cause bubbling as well as compromising adhesion.

CLEANING

abe® super brush cleaner before curing.

PROTECTION ON COMPLETION

Protect surface against traffic and spillage until cured.

MODEL SPECIFICATION

The coating will be **abe.®cote 441**, a two component polyurethane enamel applied in accordance with **a.b.e.® Construction Chemicals'** recommendations.

PACKAGING

abe.®cote 441 is supplied in 1 L and 5 L yield metal containers.

Clear Gloss (IH)	44199055(IH)
Clear Matt (IH)	44173005(IH)
White (IH)	44101055(IH)
Div Grey (IH)	44172005(IH)
Levi Grey	44172-005
Road Marking Yellow	44145005
Road Marking Black	44147005

HANDLING AND STORAGE

All **abe.®cote 441** 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 AND SAFETY

Wet **abe.®cote 441** 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. Cured **abe.®cote 441** is inert and harmless. 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** 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.

DATE UPDATED: 04/10/2019

abe.®cote 441
COLOUR CHART

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

white

levi grey

div grey

clear

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