

UNITHANE® 655 WDA 55

ARCHITECTURAL COATINGS

ARKEMA COATING RESINS

Product Application details

UNITHANE® 655 WDA 55 is an urethane alkyd designed for use in clear and pigmented finishes, which can be used in combination with long oil alkyds in order to increase hardness and abrasion resistance while maintaining excellent gloss retention.

UNITHANE® 655 WDA 55 can be used in pigmented decorative gloss or eggshell finishes and should comprise between 20-50% of the media, the balance being a suitable long oil alkyd.

In thixotropic decorative gloss and eggshell finishes, similar percentages can be used. Abrasion resistant and rapid drying finishes are obtained, with the durability, pigment wetting and non-chalking characteristics of the alkyd resin being retained.

For interior varnishes, it is recommended that UNITHANE® 655 WDA 55 be used as the sole binder.

The resin is supplied in high flash low aromatic white spirit to enable the formulation of coatings that do not require adverse environmental labelling.

Performance Benefits

- Rapid drying
- High gloss
- Good abrasion resistance
- Good chemical resistance

Polymer Type

- Solventborne Urethane Alkyd

Sales Specifications

Solid Content at 125°C, % (ISO 3251)	54 - 56
Viscosity at 25°C, mPa.s (Brookfield) (ISO 3219)	1300 - 2000
Colour, Gardner scale (ISO 4630)	6 max
Acid value, mg KOH/g (ISO 2114)	3 max

Other Characteristics¹

Volatile	Low aromatic white spirit
Flash point, °C (ISO 3679)	62
Density / Specific Gravity at 25°C, g/ml (ISO 2811)	0.92
Type of fatty acid	Linoleic rich
Fatty Acid content, %	61
NCO content (delivery form), %	0.1 max

Note: Acid value and/or Hydroxyl value quoted relative to solid resin

¹ The data provided for these properties are typical values, intended only as guides, and should not be construed as sales specifications

Formulation Guidelines

DRIERS

UNITHANE® 655 WDA 55 requires metal driers to accelerate the autoxidation process. A suitable combination is 0.05% cobalt, 0.15% zirconium and 0.2% calcium, calculated as metals on total solid resin. Depending on the formulation (clear, pigmented, thixotropic, etc...) and on the application, the loading of each drier may be increased or reduced in order to achieve the appropriate drying/hardness profile.

The use of antiskinning agent is essential to prevent in-can skinning of the finished product.

SOLUBILITY

UNITHANE® 655 WDA 55 is soluble in aliphatic and aromatic hydrocarbons, esters and ketones and has a limited solubility in alcohols.

COMPATIBILITY

UNITHANE® 655 WDA 55 is compatible with most long oil alkyds, some medium oil alkyds and most thixotropic alkyds.

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OTHER ADDITIVES

Thixotropic varnishes are obtained by the addition of 10-50% of thixotropic alkyds: GELKYD® are suitable for this purpose.

Product Safety

Please refer to the corresponding Safety Data Sheet.

Storage & Handling

UNITHANE® 655 WDA 55 should be stored indoors in the original, unopened and undamaged container, in a dry place at a temperature not exceeding 30°C. Exposure to direct sunlight should be avoided.

In the above mentioned storage conditions the shelf life of the resin will be 6 months from the shipping date

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