

TECHNICAL DATA SHEET

UNITHANE® 655 WDA 55

Solventborne Urethane Alkyd

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.

SALES SPECIFICATIONS

	CHARACTERISTICS	METHODS
Solid content (125°C)	54 - 56 %	ISO 3251
Viscosity (Brookfield) (25°C)	1300 - 2000 mPa.s	ISO 3219
Color	6 max Gardner	ISO 4630
Acid value	3 max mg KOH/g	ISO 2114

OTHER CHARACTERISTICS¹

	CHARACTERISTICS	METHODS
Solvent	Low aromatic white spirit	
Flash point (25°C)	62 °C	ISO 3679
Density	0.92 g/ml	ISO 2811
Fatty acid type	Linoleic rich	
Fatty acid content	61 %	
NCO content	0.1 max %	
Modification	Urethane	

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

MARKETS

Coatings & Inks

- Architectural Coating
 - Specialty Coatings
 - Stains
 - Trim
- Flooring
 - Floor Polish & Floor Coatings

PERFORMANCE BENEFITS

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

UNITHANE® 655 WDA 55

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.

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 AND 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 from the shipping date.

Shelf Life Durability (Months): 6

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