ROSKYDAL® 502 BA

Technical Datasheet

TYPE

Highly-reactive, styrene-free unsaturated polyester resin (wax-free) which cures to yield hard films.

USES

In the formulation of clear and pigmented, monomer-free coatings for applying thin finishes to wood and furniture. The coatings can be cured by conventional methods or UV radiation and have good resistance to solvents and other chemicals and yellowing in both light and dark conditions.

FORM SUPPLIED

Approx. 80 % in butyl acetate

SPECIFICATION

Non-volatile content (1 g, 1 h, 125 °C): DIN EN ISO 3251	80 ± 1 %
Viscosity (23 °C): DIN EN ISO 3219/A.3	4500 ± 500 mPa·s
Hazen colour value: DIN EN 1557	≤ 100
Acid value, supply form: DIN EN ISO 2114	18 ± 4 mg KOH/g

OTHER DATA*

Density (20 °C): DIN EN ISO 2811-2	approx. 1.15 g/cm³
Flash point: DIN EN ISO 1523	approx. 30 °C

* These values provide general information and are not part of the product specification.

PROPERTIES / APPLICATIONS

ROSKYDAL 502 BA permits the formulation of monomer-free coatings for applying thin finishes to wood and furniture. The application rate should not exceed 100 g/m^2. The coatings can be cured by conventional methods or, after addition of photo-initiators, by UV radiation. The resultant films are hard and resistant to scratching, to solvents and other chemicals and to yellowing in both light and dark conditions. The requirements of, for example, DIN 68 861, Group B, are thus satisfied. The drying of the coatings can be accelerated by the addition of nitrocellulose. Inadequate compatibility with cellulose acetobutyrate results in clouding of the film.

Coatings based on ROSKYDAL 502 BA can be applied using conventional methods, e.g. spraying, roller coating or curtain coating.

1. Conventional curing
Curing by conventional methods requires the addition of a cobalt accelerator (e.g. cobalt octoate) and peroxide. For curing at room temperature or temperatures up to approx. 60 °C we recommend the use of cyclohexanone peroxide. Tertiary butyl peroctoate should be used at higher curing temperatures because it results in a longer pot life.

Even small amounts of styrene will significantly reduce the pot life of a coating containing cobalt/peroxide.

2. UV curing
UV curing requires the use of a photoinitiator. Coatings containing 2 % Darocur 1173[1] , calculated on the resin supply form, can be cured at a conveyor speed of 3.5 m/min under an 80 w/cm UV lamp.

Approx. 2 % Lucirin TPO[1], calculated on the resin supply form, is added in the formulation of pigmented coatings to achieve a conveyor speed of 1.25 m/min with an 80 W gallium-doped lamp. The pigmenting, application and curing recommendations given in our guide formulations should be observed. If a cobalt accelerator and/or Desmodur N [2] are added, coatings based on ROSKYDAL 502 BA will also cure without exposure to radiation. This is of importance in spray application.

The addition of Desmodur N also improves the flexibility, chemical resistance and intercoat adhesion after overnight storage of the coated objects. The amount of Desmodur N required is given in our guide formulations.

[1] BASF
[2] Covestro

STORAGE

When stored in its sealed containers at a temperature not exceeding 23 °C, the product will remain stable for at least 730 days.

SOLUBILITY / THINNABILITY

Alcohols	partly soluble
Aliphatic hydrocarbons	insoluble
Esters	soluble
Ketones	soluble
Toluene, xylene	partly soluble

COMPATIBILITY

Generally speaking, ROSKYDAL 502 BA is compatible with ROSKYDAL grades containing styrene. However, compatibility should be tested beforehand.

LABELING AND REACH APPLICATIONS

This product data sheet is only valid in conjunction with the latest edition of the corresponding Safety Data Sheet. Any updating of safety-relevant information – in accordance with statutory requirements – will only be reflected in the Safety Data Sheet, copies of which will be revised and distributed. Information relating to the current classification and labeling, applications and processing methods and further data relevant to safety can be found in the currently valid Safety Data Sheet.