

TEKNODUR AQUA 3390-09

Polyurethane top coating paint and varnish

TEKNODUR AQUA 3390-09 is a water-based, two pack polyurethane top coat and varnish. The hardener is an aliphatic isocyanate resin.



The paint is used as a top coat in water-based polyurethane systems exposed to atmospheric corrosion. The use of TEKNODUR AQUA 3390-09 polyurethane varnish is recommended when the top coat is required to have excellent gloss and colour retention.

TECHNICAL DATA

Binder	Polyurethane			
Solids	Paint: 42 ±2% by volume			
	Varnish: 40 ±2% by volume			
Total mass of solids	Paint: approx. 690 g/l			
	Varnish: approx. 460 g/l			
Volatile organic compound (VOC)	Base paint 1: approx. 88 g/l			
	Varnish: approx. 89 g/l			
	The VOC value provided is the average value for factory produced products, and consequently it will be subject to variations between individual products covered by this TDS.			
Theoretical spreading rate		Dry film (µm)	Wet film (µm)	Theoretical spreading rate (m²/l)
	Paint	40	95	10.5
	Varnish	40	100	10.0
	As many of the paint's properties will change if too thick coats are applied, it is not recommended that the product is applied to a film thickness that is more than double of the thickest recommended film.			
Practical spreading rate	The values depend on the application technique, surface conditions, overspray, etc.			
Colours	By agreement.			
Tinting system	Teknomix			
Gloss (60°)	Gloss			
Hardener	Comp. B: TEKNODUR AQUA HARDENER 7313			
Mixing ratio (A:B)	5:1 parts by volume			
Pot life, +23°C	1.5 h			
Thinner	Water or TEKNOSOLV 1936			

Storage

The storage stability is shown on the label. Store indoors in a cool and dry place and in a tightly closed can. The hardener reacts with air humidity and therefore the opened can is to be kept carefully closed, and it is recommended to be used within 14 d of opening.

DIRECTION FOR USE

Surface preparation

Remove from the surfaces any contaminants that might be detrimental to surface preparation and application. Remove also water-soluble salts by using appropriate methods. The surfaces are prepared according to the different materials as follows:

OLD PAINTED SURFACES SUITABLE FOR OVERCOATING: Any impurities that might be detrimental to the application of paint (e.g. grease and salts) are removed. The surfaces must be dry and clean. Old, painted surfaces that have exceeded the maximum overcoating time are to be roughened as well. Damaged parts are prepared in accordance with the requirements of the substrate and the maintenance coating.

The place and time of the preparation are to be chosen so that the prepared surface will not get dirty or damp before the subsequent treatment.

Additional instructive information for surface preparation can be found in standards EN ISO 12944-4 and ISO 8501-2.

Application method

Airless spraying, Conventional spraying

Application

The base and hardener are mixed together and stirred mechanically thoroughly before application down to the bottom of the vessel. The hardener is mixed undivided and in one go into the base. The stirring time is at least 5 min. Inadequate stirring or incorrect mixing ratio results in imperfect curing and impaired film properties.

Ready paint is to be used within 1½ h from mixing. After this the mixture is unfit for use.

For the application it is recommended to use airless spray (nozzle 0.011-0.013") or conventional spray. Conventional spray gives the best result. The components are not to be thinned separately.

Once the hardener is added, do not seal the vessel as small amounts of carbon dioxide produced in the paint may cause pressure build up.

Application conditions

The surface to be treated has to be dry. During the application and drying period the temperature of the ambient air, the surface and the product shall be above +10 °C and the relative air humidity below 70%.

Additionally, the temperature of the surface to be treated and the product must be at least +3 °C above the dew point of the ambient air.

Especially when applying with a spray the relative air humidity should be above 30% to avoid the onset of the drying process to be too fast.

Surface temperature, film thickness, drying temperature and ventilation affect the drying of the paint. The paint is dry when all water has evaporated from the paint film. It is essential that all painted surfaces have sufficient ventilation. If the painted surface will be exposed to weathering, moisture or low temperatures (below +10 °C) thick paint films are to be avoided and the last coat must be allowed to dry for at least 24 hours (at +23 °C) before exposure.

Low temperatures and insufficient ventilation slow down the drying process.

Drying time

+23 °C / 50% RH (dry film 40 µm)

- dust free

2.5 h (ISO 9117-3:2010)

- touch dry

6.5 h (ISO 9117-5:2012)

- fully cured

7 d

Overcoatable

Surface temperature	By itself	
	min.	max.*
+10 °C	1 d	14 d
+23 °C	6 h	14 d

* Maximum overcoating interval without roughening.

Increase in film thickness and rise in the relative humidity of the air in the drying space usually slow down the drying process.

Cleaning

Water, TEKNOSOLV 6060, TEKNOSOLV 9521

When painting equipment used for application of solvent-borne paints is used for water-borne paints the equipment must be cleaned carefully:

1. Wash with solvent.
2. Wash with washing solvent for water-borne paints, e.g. TEKNOSOLV 6060.
3. Rinse with water.

When shifting from water-borne to solvent-borne paints act in reverse order.

Left over mixed paint and water washings from the clean-up containing hardener should not be sealed in a vessel, tin or otherwise, as small amounts of carbon dioxide produced in the paint may cause pressure build up.

HEALTH AND SAFETY

Safety and precaution measures

See safety data sheet.

The hardener of the product and the ready mixture contain isocyanates. In poorly ventilated areas and especially when using spray application we recommend the use of a fresh air mask. In short or temporary work, a mask with combined filter A2-P2 can be used. In this case eyes and face are to be protected.

The hardener can must be opened with caution, as pressure may develop in the can during storage.

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