

# TEKNODUR 100 9-00

## Polyurethane top coat

TEKNODUR 100 9-00 is a two-component, full-gloss polyurethane top coat. The hardener is an aliphatic isocyanate resin.



A highly durable topcoat for protective coating systems used on general structural steel constructions in demanding applications, such as transportation industry (trucks, trains, trams etc.), agricultural and construction equipment and steel constructions.

TEKNODUR 100 9-00 provides a durable and weather resistant film with excellent colour and gloss retention, as well as good mechanical properties together with an excellent surface finish.

### TECHNICAL DATA

<b>Recommended substrate</b>	Metal						
<b>Binder</b>	Polyurethane						
<b>Solids</b>	49 ±2 % by volume (ISO 3233:1988)						
<b>Total mass of solids</b>	Approx. 720 g/l						
<b>Volatile organic compound (VOC)</b>	Approx. 450 g/l (DIRECTIVE 2010/75/EU) 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 Technical Data Sheet.						
<b>Theoretical spreading rate</b>	<table border="1"><thead><tr><th>Dry film (µm)</th><th>Wet film (µm)</th><th>Theoretical spreading rate (m<sup>2</sup>/l)</th></tr></thead><tbody><tr><td>40</td><td>81</td><td>12.2</td></tr></tbody></table>	Dry film (µm)	Wet film (µm)	Theoretical spreading rate (m <sup>2</sup> /l)	40	81	12.2
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40	81	12.2					
<b>Practical spreading rate</b>	The values depend on the application technique, surface conditions, overspray, etc.						
<b>Tinting system</b>	Teknotint						
<b>Gloss (60°)</b>	Full gloss						
<b>Hardener</b>	Comp. B: TEKNODUR HARDENER 7230						
<b>Mixing ratio (A:B)</b>	7:1 parts by volume						
<b>Pot life, +23 °C</b>	3 h						
<b>Thinner</b>	Standard thinner: TEKNOSOLV 9521. Other thinners suitable for the product: see Thinning.						

## 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.

### Priming

Recommended primers are: TEKNOPOX PRIMER 9-00 and TEKNODUR PRIMER 8-00.

### Application method

Air-assisted airless spraying, Conventional spraying

Suitable air-assisted airless spray nozzle size 0.008 - 0.013".

Suitable conventional spray nozzle size 1.0 - 1.5 mm, pressure 2.5 - 4.0 bar.

**Application**

**MIXING OF THE COMPONENTS:** Take into consideration the pot life of the mixture when estimating the amount to be mixed at a time. The base must be stirred until it is homogeneous before mixing the components. Before application the base and hardener are mixed in right proportion. Stir thoroughly down to the bottom of the vessel. Inadequate stirring or incorrect mixing ratio results in imperfect curing and impaired film properties.

Stir thoroughly before use. Before use clean the spray gun and paint vessels with a thinner suitable for the paint.

Painting should be carried out by 1.5 or 2 layer method:

- Apply 1st layer as mist coat (1.5 layer method) or as thin as possible to form complete film (2 layer method).
- Let the first layer dry for 5–10 min flash-off period. For both methods the second layer should be applied before the solvents have fully evaporated from the first layer.
- Apply second layer to achieve the target dry film thickness.

**Application conditions**

The surface to be treated must be dry and the relative air humidity below 80%. During the application and drying period the temperature of the ambient air and the surface shall be at least above +5 °C, and the temperature of the product above +15 °C during mixing and spraying. 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.

**Thinning**

Standard thinners: TEKNOSOLV 9521 and TEKNOSOLV 6220.

Slow thinner: TEKNOSOLV 6291. Used e.g. when painting large surfaces and when the temperature is above room temperature.

Dilute 10 - 40%, when required. Do not use universal thinners, since they may contain alcohol which will react with the hardener.

**Drying time**

+23 °C / 50% RH (dry film 40 µm)

**- dust free**

1 h (ISO 9117-3:2010)

**- touch dry**

8 h (ISO 9117-5:2012)

Drying of the coating film can be carried out either at ambient temperature or the film can be dried at +60 - +80 °C after 15–30 min flash off period after the second film has been applied. Drying time at elevated temperature is dependent on the painted object. Normal drying time at elevated temperature is 60 min.

**Overcoatable**

surface temperature	by itself	
	min.	max.*
+5 °C	20 h	-
+23 °C	6 h	-

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

**Cleaning**

TEKNOCLEAN 6496 or TEKNOSOLV 9534.

**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.

**Teknos Group Oy Takkatie 3, P.O.Box 107 FI-00371 Helsinki, Finland Tel. +358 9 506 091**

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