TEKNODUR 0050

Polyurethane top coat

TEKNODUR 0050 is a two-pack, semigloss polyurethane top coat. The hardener is an aliphatic isocyanate resin.

TEKNODUR 0050 is intended for use as a top coat in protective coating systems on steel and other metals.

The paint produces a semigloss film with good mechanical and weather resistance.
The use of TEKNODUR 0250 polyurethane varnish is recommended when the top coat is required to have excellent gloss and colour retention.

TECHNICAL DATA

Recommended substrate	Metal, Steel
Binder	Polyurethane
Solids	56 ±2 % by volume (ISO 3233:1988)
Total mass of solids	Approx. 870 g/l
Volatile organic compound (VOC)	(For mixed product, base and hardener ratio 9:1.) Approx. 430 g/l (Theoretical, according to IED 2010/75/EU). 410 g/l (Tested according to China GB/T 23985-2009).
Theoretical spreading rate	See table below.
Practical spreading rate	The values depend on the application technique, surface conditions, overspray, etc.
Colours	Same tinting system should be used during the whole painting project. Factory colours by agreement.
Tinting system	Teknomix;Teknotint
Gloss (60°)	Semi-gloss
Hardener	Comp. B: TEKNODUR HARDENER 0010
Mixing ratio (A:B)	9:1 parts by volume
Pot life, +23°C	4 h
Thinner	Standard thinners: TEKNOSOLV 9521 and TEKNOSOLV 6220. Other thinners suitable for the product: see Thinning.

Dry film (µm)	Wet film (µm)	Theoretical spreading rate (m^2/l)
40	71	14.0
60	107	9.3

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.

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 paints from TEKNOPLAST PRIMER series. Also suitable primers are e.g. TEKNOMASTIC 80 PRIMER, INERTA PRIMER 5 and INERTA 51 MIOX.
Application method	Airless spraying, Conventional spraying
Application	Take into consideration the pot life of the mixture when estimating the amount to be mixed at a time. 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. Suitable airless nozzle size 0.011 - 0.013".

Application conditions	The surface to be treated must be dry. During the application and drying period the temperature of the ambient air, the surface and the product shall be above +5 °C and the relative air humidity below 80%. 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 thinners: TEKNOSOLV 1640 and TEKNOSOLV 6291. Used e.g. when painting large surfaces and when the temperature is above room temperature. Fast thinner: TEKNOSOLV 9526. Used when spray painting large surfaces with mist coating technique, and when using electrostatic spraying. Dilute 10 - 20%, 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	6 h (ISO 9117-5:2012)
Overcoatable	

surface temperature	**by itself**	
	min.	max.*
+5 °C	20 h	18 months or Extended**
+23 °C	12 h	18 months or Extended**

* A completely clean surface is mandatory to ensure the best intercoat adhesion. If the maximum overcoating interval has been exceeded, the surface must be roughened before overcoating. Increase in film thickness and rise in the relative humidity of the air in the drying space slow down the drying process and effect the overcoating properties.
** Maximum overcoating interval can be extended in certain circumstances. To determine if extended overcoating interval is applicable please consult Teknos representative in written form.

Cleaning	TEKNOCLEAN 6496

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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