

TEKNODUR 0050

Polyurethane Top Coat

PAINT TYPE	TEKNODUR 0050 is a two-pack, semigloss polyurethane top coat. The hardener is an aliphatic isocyanate resin.
USAGE	Intended for use as a top coat in TEKNODUR Polyurethane Coating Systems K27 and K29 on steel and metal.
SPECIAL PROPERTIES	The paint produces a semigloss film with good mechanical and weather resistance. Varnishing with TEKNODUR 0250 Polyurethane Varnish is recommended when the topcoat is required to have excellent gloss and colour retention.
APPROVALS	Quality-System Approval (Module D) number EUFI29-19001263-MED and EC Type-Examination Certificate (Module B) number VTT-C-12042-15-17 according to Marine Equipment Directive (2014/90/EU) for coating system TEKNOPLAST PRIMER 5 primer + TEKNODUR 0050 or TEKNODUR 0090 top coat.

TECHNICAL DATA

Mixing ratio	Base (Comp. A): Hardener (Comp B): TEKNODUR HARDENER 0010	9 parts by volume 1 part by volume
Pot life, +23 °C	4 h	
Solids	56 ±2% by volume (ISO 3233:1988)	
Total mass of solids	abt. 870 g/l	
Volatile organic compound (VOC)	abt. 430 g/l	
Recommended film thickness and theoretical spreading rate	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.

Practical spreading rate The values depend on the application technique, surface conditions, overspray, etc.

Drying time at +23°C / 50% RH (dry film 40 µm)

- dust free (ISO 9117-3:2010) after 1 h
- touch dry (ISO 9117-5:2012) after 6 h

Overcoatable, 50% RH (dry film 40 µm)

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

Recommended primers are: TEKNOPLAST PRIMER -series. Also suitable primers are e.g. INERTA PRIMER 5 and INERTA 51 MIOX.

Thinner Standard thinners: TEKNOSOLV 9521 and TEKNOSOLV 6220.
Other thinners suitable for the product: see page 2.

Clean up TEKNOCLEAN 6496

Finish Semigloss

Colours The paint can be tinted with Teknotint and Teknomix tinting systems.
Same tinting system should be used during the whole painting project.
Factory colours by agreement.

SAFETY MARKINGS See Safety Data Sheet.

DIRECTION FOR USE**Surface preparation**

Remove from the surfaces any contaminants that might be detrimental to surface preparation and painting. 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.

Mixing of the components

Take into consideration the pot life of the mixture when estimating the amount to be mixed at a time. Before painting 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.

Application conditions

The surface to be painted has to be dry. During the application and drying period the temperature of the ambient air, the surface and the paint shall be above +5°C and the relative air humidity below 80%. Additionally the temperature of the surface to be painted and the paint must be at least 3°C above the dew point of the ambient air.

Application

Before use stir the paint thoroughly.

Apply by conventional spray or airless spray. Suitable airless nozzle size 0.011 - 0.013".

Before use clean the spray gun and mixing vessels with a thinner suitable for the paint.

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 the paint 10 - 20%, when required. Universal diluents or thinners cannot be used, since they may contain alcohol that will react with the hardener.

The hardener of the paint and the ready paint 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.

ADDITIONAL INFORMATION

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.

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

The information of this data sheet is normative and based on laboratory tests and practical experience. Teknos guarantees that the product quality conforms to our quality system. Teknos accepts, however, no liability for the actual application work, as this is to a great extent dependent on the conditions during handling and application. Teknos accepts no liability for any damage resulting from misapplication of the product. This product is intended for professional use only. This implies that the user possesses sufficient knowledge for using the product correctly with regard to technical and working safety aspects. The latest versions of Teknos data sheets, material safety data sheets and system sheets are on our home pages www.teknos.com.



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