TEKNODUR COMBI 3430-09

High solids one layer polyurethane coating

TEKNODUR COMBI 3430-09 is a two pack anticorrosive pigmented polyurethane paint with low solvent content where the hardener used is an aliphatic isocyanate resin.

Used as a one layer paint. The paint can also be used as a top coat in Polyurethane coating systems. It is suitable for use on steel, zinc and aluminium surfaces.

The paint produces a film with good mechanical and weather resistance properties. The use of TEKNODUR 0290 Polyurethane varnish is recommended on objects when the topcoat is required to have excellent gloss and colour retention.

TECHNICAL DATA

Recommended substrate	Steel, Aluminium, Zinc
Binder	Polyurethane
Solids	58 ±2 % by volume
Total mass of solids	Approx. 920 g/l
Volatile organic compound (VOC)	Approx. 380 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.
Theoretical spreading rate	<table><tr><th>Dry film (µm)</th><th>Wet film (µm)</th><th>Theoretical spreading rate (m^2/l)</th></tr><tr><td>80</td><td>152</td><td>6,6</td></tr><tr><td>100</td><td>190</td><td>5,3</td></tr><tr><td>120</td><td>228</td><td>4,4</td></tr></table> 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.
Tinting system	Teknomix;Teknotint
Gloss (60°)	Gloss
Hardener	Comp. B: TEKNODUR HARDENER 7230
Mixing ratio (A:B)	6:1 parts by volume
Pot life, +23°C	1 h 30 min
Thinner	Standard thinner: TEKNOSOLV 9504, TEKNOSOLV 9524, TEKNOSOLV 9526, TEKNOSOLV 9521 or TEKNOSOLV 6220

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: STEEL SURFACES: Remove mill scale and rust by blast cleaning to preparation grade Sa 2½ (standard ISO 8501-1). Roughening the surface of thin-plate improves the adhesion of the paint to the substrate. ZINC SURFACES: Hot-dip-galvanized steel structures that are exposed to atmospheric corrosion can be painted if the surfaces are sweep blast-cleaned (SaS) till matt all over. Suitable cleaning agents are, e.g. aluminium oxide and natural sand. It is not recommended according to standard ISO 12944-5 to paint hot-dip-galvanized objects that are subjected to immersion strain. Painting of hot-dip-galvanized objects that are subjected to immersion strain must be discussed separately with Teknos. It is recommended that new zinc-coated thin-plate structures are treated with sweep blast-cleaning (SaS). Surfaces that have been weathered to matt can be treated also with RENSA STEEL washing agent. ALUMINIUM SURFACES: Treat the surfaces with RENSA STEEL washing agent. Surfaces that are exposed to weathering are also roughened up with sweep blast-cleaning (AlSaS) or sanding. 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

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 0.013 - 0.017"

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

When needed, thin the paint with TEKNOSOLV 9504 (standard thinner), TEKNOSOLV 9524 (slow thinner), TEKNOSOLV 9526, TEKNOSOLV 6220 or TEKNOSOLV 9521.

Do not use universal thinners, since they may contain alcohol which will react with the hardener.

Drying time

+23 °C / 50% RH (dry film 80 µm)

- dust free

45 min (ISO 9117-3:2010)

- touch dry

5 h (ISO 9117-5:2012)

- fully cured

7 d

Overcoatable

surface temperature	by itself	
	min.	max.*
+5 °C	20 h	18 months or Extended**
+23 °C	4 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.

If some other top coats besides the ones mentioned above are used, please contact Teknos representative for overcoating recommendations.

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.

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