TEKNODUR P (EMAPUR P)



Polyurethane topcoat

TEKNODUR P (EMAPUR P) is a two-pack, gloss polyurethane top coat. The hardener is an aliphatic isocyanate resin.

Intended for final painting of areas of ships above the waterline, construction operating in industrial and heavy duty environment, bridges constructions. It is also suitable for anticorrosive systems for road and rail transport vehicles.

High decorative, gloss coating, good adhesive to substrate, tough and flexible. Resistant to weathering, sun radiation, sanitary, fresh and sea water, salt and alkali solutions, diluted acid solutions, oil, fuel oil, diesel and some thinners (gasoline, xylene). Coating in white colors shows a reflectivity of solar radiation above 70%.

TECHNICAL DATA

Fields of application	Machinery, Steel constructions, Transportation equipment
Binder	Polyurethane
Solids	56±2% by volume (ISO 3233)
Total mass of solids	Approx. 780 g/l
Volatile organic compound (VOC)	Approx. 420 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>50</td><td>90</td><td>11.1</td></tr></table> Depending on destination and type of construction, other thickness of a single layer can be assumed than recommended in information. Typical coating thickness range using airless spray is from 40 to 60µm. Different dry film thickness than recommended causes change in theoretical spreading rate, wet film thickness, weight of dry film thickness, drying time, overcoating time and ready for handling time.
Practical spreading rate	The values depend on the application technique, surface conditions, overspray, etc.
Colours	RAL and NCS colours according to product list. Other colours by agreement.
Gloss (60°)	Gloss
Hardener	Comp. B: TEKNODUR HARDENER 7434 (EMAPUR utwardzacz)
Mixing ratio (A:B)	100:22 parts by volume

Pot life, +23°C	2 h
Thinner	TEKNOSOLV 9521 - slow evaporating. TEKNOSOLV 433 - fast evaporating.
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 can is to be kept carefully closed. Use opened hardener within two weeks.

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, Brush, Roller

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. Apply by airless spray, brush, roller or conventional spray.
Suitable airless nozzle size 0.011 - 0.013".
For air spray application it is recommended to thin the paint to 18-23 seconds according to Ford cup Ø4.
Before use clean the spray gun and mixing vessels with a thinner TEKNOSOLV 9521 or TEKNOSOLV 433.

If a coating with better scratch resistance is needed, instead of the standard hardener TEKNODUR HARDENER 7434 (EMAPUR utwardzacz), use TEKNODUR HARDENER 7332-01 in the same mixing ratio. Using this hardener will not change the pot life and the drying properties of the coating.

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

Application conditions

The surface to be treated must be dry and the relative air humidity below 80%. Minimum surface temperature -5°C (surface frost- and ice-free) and at least 3°C higher than dew point during the application and drying period. Adequate ventilation during application and drying period is recommended.

Drying time

+23°C / 50% RH (dry film 50 µm)

- dust free

3 h

- touch dry

8 h

Overcoatable

Surface temperature	By itself	
	Min.	Max.
+10°C	16 h	18 months or extended**
+23°C	8 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

TEKNOSOLV 9521, TEKNOSOLV 433

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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The above information is normative and based on laboratory tests and practical experiences. The information is noncommittal, and we cannot accept liability for the results obtained under working conditions beyond our control, and consequently the buyer or the user is not released from the obligation to test the suitability of our products for specific means and application methods under the actual application conditions. Our liability covers only damage caused directly by defects in the products supplied by Teknos. 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' Technical Data Sheets and Safety Data Sheets are available from our homepage www.teknos.com. All trademarks displayed on this document are the exclusive property of Teknos Group or its affiliated companies.