# TEKNOMASTIC COMBI 80-500


## Epoxy top coat

TEKNOMASTIC COMBI 80-500 is a two-pack solvent-borne epoxy paint with low solvent content.

Use: As a priming and top coat in abrasion and chemical resistant epoxy coating systems on blast-cleaned steel. Can also be used for priming and top coating zinc, aluminium, thin-plate and acid-proof steel surfaces and as an intermediate and top coat over zinc epoxy and zinc silicate primers.

The paint is quickly overcoatable and is therefore suited to a fast painting tempo. The paint film withstands heavy abrasion, oils, grease, solvents, chemical splashing and also immersion in water. The paint is suitable for maintenance painting of steel surfaces which are cleaned at least to preparation grade St 2.

For the product there is also available a WINTER hardener TEKNOMASTIC WINTER HARDENER 7275, which is used when the painting is done in temperatures below +10°C. When using the WINTER hardener it will strengthen the yellowing and chalking that is typical for epoxy paints. White and light shades (e.g. RAL 9001, RAL 9003, RAL 9010 and RAL 9016) are especially susceptible for yellowing.

## TECHNICAL DATA

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| **Fields of application** | Steel constructions |
| **Recommended substrate** | Aluminium, Steel, Zinc |
| **Binder** | Epoxy |
| **Solids** | 82 ±2% by volume (ISO 3233:1988) |
| **Total mass of solids** | Approx. 1300 g/l |
| **Volatile organic compound (VOC)** | TEKNOMASTIC HARDENER 7465 / TEKNOMASTIC WINTER HARDENER 7275<br>Approx. 200 g/l / Approx. 190 g/l<br>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 TDS. |
| **Theoretical spreading rate** | |

| Dry film (µm) | Wet film (µm) | Theoretical spreading rate ($m^2/l$) |
|---|---|---|
| 100 | 121 | 8.2 |
| 150 | 182 | 5.5 |
| 200 | 243 | 4.1 |

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.

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| **Practical spreading rate** | The values depend on the application technique, surface conditions, overspray, etc. |
| **Tinting system** | Teknotint |
| **Gloss (60°)** | Semi-gloss |
| **Hardener** | Comp. B: TEKNOMASTIC HARDENER 7465 or TEKNOMASTIC WINTER HARDENER 7275 |
| **Mixing ratio (A:B)** | 4:1 parts by volume |
| **Pot life** | TEKNOMASTIC HARDENER 7465 2 h,<br>TEKNOMASTIC WINTER HARDENER 7275 1.5 h |
| **Thinner** | TEKNOSOLV 9506 |
| **Storage** | The storage stability is shown on the label. Store in a cool place and in tightly closed containers. |

## DIRECTION FOR USE

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| **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:<br><br>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.<br><br>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.<br>It is recommended that new zinc-coated thin-plate structures are treated with sweep blast-cleaning (SaS). Thin-plate surfaces that have been weathered to matt can be treated also with RENSA STEEL washing agent for galvanized surfaces.<br><br>ALUMINIUM SURFACES: Treat the surfaces with RENSA STEEL washing agent for galvanized surfaces. Surfaces that are exposed to weathering are also roughened up with sweep blast-cleaning (AlSaS) or sanding.<br><br>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 |

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| | 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.<br>From the bare steel surfaces the rust is removed to preparation grade St 2 (ISO 8501-1).<br><br>An alternative method to dry cleaning is high-pressure water jetting with a pressure of over 70 MPa. This water-jetting can be used on intact, well adhering paint coats and/or on steel. After the water jetting the intact paint coats must have a rough surface structure. The cleanliness of the steel surface must be Wa 2 (ISO 8501-4:2006) or according to the specification. A flash-rust degree of maximum M (ISO 8501-4:2006) is allowed before application.<br><br>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.<br><br>Additional instructive information for surface preparation can be found in standards EN ISO 12944-4 and ISO 8501-2.<br><br>Prefabrication primer: KORRO E Epoxy, KORRO SE Zinc Epoxy and KORRO SS Zinc Silicate Prefabrication Primers can be used, when required. |
| **Application method** | Airless spraying |
| **Application** | MIXING OF THE COMPONENTS: 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.<br><br>Stir thoroughly before use.<br><br>Apply preferably by airless spray as only this method provides the recommended film thickness in a single operation. Suitable airless nozzle size 0.015 - 0.019". Brush or roller can be used for touching up and painting small areas.<br><br>When twin-feed spray is used for application, the mixing ratio of the dosage pump must be 4:1. The feed pump pressure and the consumption of components is to be checked during application to ensure of the correct mixing ratio. The components cannot be thinned if twin-feed spray with fixed ratio is used. |

**Application conditions**

The surface to be treated has to be dry. During the application and drying period the temperature of the ambient air, the surface and the product shall be above +10°C and the relative air humidity below 80%.
When using TEKNOMASTIC WINTER HARDENER 7275, during the application and drying period the temperature of the ambient air and the surface shall be above -5°C and the temperature of the product during mixing and spraying shall be above +15°C. The surface to be treated must be free from ice. 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**

If needed, thin the paint with TEKNOSOLV 9506.

**Drying time**

+23°C / 50% RH (dry film 100 µm)
TEKNOMASTIC HARDENER 7465 / TEKNOMASTIC WINTER HARDENER 7275

**- dust free**

2 h / 3 h (ISO 9117-3:2010)

**- touch dry**

6 h / 4 h (ISO 9117-5:2012)

**- fully cured**

7 d / 7 d

**Overcoatable**

| Standard hardener | | | | | | |
|---|---|---|---|---|---|---|
| surface temperature | by itself | | by TEKNOPLAST top coats | | by TEKNODUR 0050 top coat | |
| | min. | max. * | min. | max. * | min. | max. * |
| +10°C | 8 h | 3 months | 8 h | 7 d | 1 d | 7 d |
| +23°C | 4 h | 3 months | 4 h | 7 d | 6 h | 7 d |

| WINTER hardener | | | | | | |
|---|---|---|---|---|---|---|
| surface temperature | by itself | | by TEKNODUR COMBI 3560-68 or TEKNOPLAST HS 150 | | by TEKNODUR 0050 top coat | |
| | min. | max. * | min. | max. * | min. | max. * |
| -5°C | 1 d | 2 months | - | - | - | - |
| 0°C | 1 d | 2 months | - | - | - | - |
| +10°C | 8 h | 2 months | 10 h | 1 month | 10 h | 1 month |
| +23°C | 4 h | 2 months | 4 h | 1 month | 6 h | 1 month |

* Maximum overcoating interval without roughening.

When overcoating the product at low temperatures the lowest usability temperature of the top coat has to be checked from the appropriate Data sheet.

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.

**Cleaning**

TEKNOSOLV 9506 or TEKNOSOLV 9530.

## HEALTH AND SAFETY

**Safety and precaution measures**

See safety data sheet.

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