

TECHNICAL DATA SHEET

TELPUR S210 E

Two-component polyurethane anticorrosive single coat

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Composition

Mixture of pigments, fillers and Zn phosphate in solution of styrene-acrylic resin in organic solvents, hardened with aliphatic polyisocyanate.

Characteristics and use

The paint is determined for anticorrosive single coats of steel, where it ensures to the painting system anticorrosive protection in various demandingly exposed environments. The paint can be used for protection of oxidized galvanized steel. The coat is resistant to weather, yellowing, humidity and mechanical wear. The paint is possible to use also as anticorrosive prime coat under suitable finish top coat (e.g. under TELPUR T340). Before use the paint is mixed properly with the hardener in specified ratio. The final properties of coat are achieved after complete maturing ca. 7 days.

- excellent adhesion to steel
- quick drying
- ◆ paint 2 in 1 for cost-saving work
- it stays on vertical surfaces
- ◆ suitable for the tinting system HOSTEMIX

Application area

Exterior and interior with medium and higher corrosive stress, e.g. chemical plants, industrial zones, coating of machines, piping, metal sheet and steel constructions.

Shades

According to BALT, RAL, NCS and ČSN colour chart and the others according to individual customer requirements.

Physical properties

Flow time	thixotropic
Weight solids	> 68 % (hardened mixture)
Volume solids	> 52 % (hardened mixture)
Flash point	> 25° C
Density of product	1370 - 1500 kg/m ³
Density of hardened mixture	1360 - 1470 kg/m ³

Emission limits

VOC: 0.28 – 0.32 kg/kg of hardened mixture	TOC: 0.25 - 0.29 kg/kg of hardened mixture			
This product is for professional use only. Not for DIY.				

Properties of cured coat

Hiding power	degree 1 - 2
Gloss / 60°	30 - 50
Hardness / Persoz	up 12 % in 2 days
Adhesion with crosshatch test	degree 0

Drying time

Surface temperature	10 °C	23 °C	23 °C
Dust free	90 min	25 min	30 min
Dry through	12 h	5 h	7 h
Dry film thickness DFT	40 μm	40 μm	70 μm

Spreading capacity

Wet film thickness WFT	75 μm	150 µm
Dry film thickness DFT	40 μm	80 µm
Theoretical spreading capacity	11 – 12.5 m ² /kg	5.5 – 6.2 m ² /kg

Thinning

TELSOL PUR 3, BALTECH U6003, to thin after hardening.

Other diluents (especially those containing alcohols) can significantly slow down the curing mechanism of the chemical reaction.

Hardening

Hardener: TELHARD PUR, TELHARD PUR 4

Mixing ratio: 20 weight parts TELPUR S210 E: 1 weight part TELHARD PUR
100 weight parts TELPUR S210 E: 7 weight part TELHARD PUR 4*



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The pot life of the hardened mixture is 3 hours (23 °C).

* when using the hardener TELHARD PUR 4 the gloss increases (60-70)

Surface preparation

For corrosive environment C2, C3 and C4 the surface must be prepared by blast-cleaning to degree Sa 2 ½ according to EN ISO 8501-1 (welds and edges must be prepared according to EN ISO 8501-3). It is necessary to clean, degrease and remove poorly adhering old coats from previously painted surfaces. To ensure compatibility of new coat with old one it is recommended to contact the producer or carry out test reference coating on surface of 1 m².

Application conditions

Stir the paint properly with a mechanical stirrer before use so that there will be no sediment on the bottom and harden. To thin and filter if it necessary.

The temperature of the paint itself should be $15-25\,^{\circ}$ C. If the paint temperature is below $15\,^{\circ}$ C, a higher dilution is required and this can subsequently cause problems with the formation of a homogeneous paint film and a longer drying time.

For coating / spraying outside the suitable weather forecast is necessary. During rain, fog, creation of condensation water, effect of aggressive gases and during wind with strong content of dust the coating work must be suspended and can be restart after absolute drying of surface-treated material. Minimal air temperature for application is 10 °C, temperature of painted surface must be 3 °C above dew point. Temperature and relative humidity must be measured in proximity of painted surface. The surface temperature must not be higher than 40 °C. Relative humidity must not be higher than 75 %. Lower temperature and higher humidity during an application and a drying and high thickness of applied coats markedly slow down drying and hardening of the coat. Imperfectly dried surface can cause problems with adhesion of paint to surface or with adhesion between individual coats. In addition, it can negatively affect overall appearance of the paint film and can lead to reduced gloss or other irreversible surface defects such as graying and whitish haze. Both the paint and the object to be treated, as well as the surrounding environment, must have a suitable temperature. Condensation that occurs during or just after application can cause a matte finish and poor quality paint film.

If the paint film is prematurely exposed to standing water, the shade may change, especially in dark shades and at low temperature.

Thermal resistance

Thermal resistance of the cured coat: up to 120 $^{\circ}$ C: without restrictions, the hardness of the coating film gradually increases during long-term loading and the flexibility decreases. At temperatures of 120 $^{\circ}$ C to 150 $^{\circ}$ C, visual changes, gradual increase in hardness, decrease in flexibility and embritlement of the coating film may occur.

Workflow

Apply 1 or 2 coats (spraying) of TELPUR S210 E, final dry film thickness should be at least 100 μ m. If necessary, recoating is possible after 20 minutes by the system so-called "wet into wet".

The paint is applied by cross spraying or in parallel strips to achieve a final uniform layer. First it is necessary to treat problematic places (corners, edges, welds, surface defects).

It is very important to apply each coat in a uniform layer, in a thickness specified by the specific paint system. Consumption of paint must be checked to avoid excessive thickness, to avoid splashing, cracking and solvent retention.

For larger compact areas always use the material from the same batch. Using the same batch can guarantee the same shade of the colour. We recommend to mix the content of the individual cans by homogeneous mixing.

The stability of some shades may be influenced by exposure to harsh chemical environments. But it does not affect a protective characteristics of the coating.

For some shades it may be necessary to apply an additional coat to ensure full hiding power.

Optimal thickness of system

The optimal thickness and composition of the paint system depends on the aggressivity of atmosphere and on the expected durability of a protective system. The selection of an appropriate system should be in accordance with EN ISO 12944-5: 2018.



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Application Airless/AirMix spraying (5 – 20 % thinning depending on type of device)

Conventional spraying (recommended viscosity 25-35 s / cup Ford \varnothing 4 mm; 15-25 % thinning) Brush and roller (velour) (recommended viscosity 60-80 s / cup Ford \varnothing 4 mm; 8-10 % thinning) Application by brush and by roller is recommended only for small areas and for corrections.

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Data for conventional spraying

Spraying gun e.g. EST 115, EcoGun 116, EcoGun 246

Nozzle according to desired capacity 1.4-2.0; Air pressure 1.5 – 2 atm.

Data for airless spraying Airless/AirMix (tested on the device EcoPump VP 55 445, 64:1 gear ratio, in combination with air assist spraying gun EcoGun 2100 (DÜRR))

Device	Nozzle	Pressure on nozzle	Thinning
AirMix	0.011 inch (0.28 mm)	12-18 Mpa (120-180 atm)	5-20 %
		air assist 1.0-2.0 atm	
AirMix	0.013 inch (0.33 mm)	12-18 Mpa (120-180 atm)	5-20 %
		air assist 1.0-2.0 atm	
Airless	0.011 inch (0.28 mm)	14-20 Mpa (140-200 atm)	5-20 %
Airless	0.013 inch (0.33 mm)	14-20 Mpa (140-200 atm)	5-20 %

Recommended filter of spraying gun yellow 100/149 (mesh/ μ m), spraying angel 20 - 60°. It is not recommended using free adjustable nozzle.

Handling

Read the instructions in the Safety Data Sheet before use and follow all safety instructions and regulations. The product contains organic solvents. Follow basic hygiene rules. Do not eat, drink or smoke while using this product. Avoid contact with eyes, skin or clothing. Wear protective gloves, eye protection, protective clothing. Ensure effective ventilation of the workplace.

Packing

10 kg; 20 kg (tinted, not hardened product)

Storability

The product keeps the product qualities 5 years from production date in original closed container. To store in dry storage at the temperature 5 to 25 °C. Flammable liquid II. hazard class.

Disposal of packing and waste

Hand over the used, properly empty packing at the collection point of the packing waste. Dispose the packing with the product rest at the place determined by the town for disposal of hazardous waste or hand over to the person authorized for hazardous waste disposal. Further see the product safety data sheet.

These data are only for information and their accuracy is influenced by the properties of individual materials and unpredictable factors during application. The user is responsible for correct use of the product according to the direction for use and for correct application of painting system, i.e. he must always evaluate all conditions of application, which could influence final quality of the top treatment. Therefore we always recommend to the user to carry out the test for actual working conditions and type of surface applied. Above mentioned data are data, which influence individual working conditions and therefore they do not establish a legal claim. It is necessary to consult information outside the terms of this catalogue sheet with the producer.

The producer stipulates the right for the change in the catalogue sheets without previous notification.