TELKYD T300

Synthetic enamel

Composition

Mixture of pigments and fillers in solution of alkyd and alkyd-urethane resins in organic solvents with addition of additives and driers.

Characteristics and use

The enamel is determined for top coats in interior and exterior on wood and metal surfaces. The enamel has excellent environmental resistance, quick drying, good spreading and good and easy workability. The coating film resists dry heat up to 80 °C, but with prolonged heat exposure, the shade gradually changes and the coating becomes brittle.

- very good environmental resistance
- universal applicability
- quick drying
- suitable for indirect food contact
- suitable for the tinting system HOSTEMIX

Application area

Exterior and interior with medium corrosive stress (laundry rooms, cellars, industrial areas, workshops), metal and steel constructions and halls, small metal objects, metal furniture, gates, doorframes, fencing, boxpalletes, metal fittings, trailers and industrial objects.

Shades

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

Physical properties

	MATT	SEMI-GLOSS	GLOSS
Flow time (cup Ford)	110 – 130 / Ø6 mm	≥ 100 / Ø 6 mm	100 – 220 / Ø4 mm
Weight solids	> 72 %	> 65 %	> 55 %
Volume solids	47 - 50 %	50 %	46 %
Flash point	25 °C	25 °C	25 °C
Density	1500 – 1650 kg/m^3	1230 – 1370 kg/m^3	1000 – 1250 kg/m^3

Emission limits

	MATT	SEMI-GLOSS	GLOSS
VOC kg/kg	0.30 – 0.34	0.30 – 0.35	0.35 – 0.43
TOC kg/kg	0.24 – 0.28	0.26 – 0.32	0.32 – 0.39
This product is for professional use only. Not for residential use.			

Properties of dried coat

	MATT	SEMI-GLOSS	GLOSS
Hiding power (shades - brightly yellow and red)	degree 1 – 2 degree 3	degree 1 – 2 degree 3	degree 1 – 2 degree 3
Gloss / 60°	10 - 30	> 50	> 80
Hardness /Persoz/	up 8 % after 24 h	up 8 % after 24 h	up 8 % after 24 h

Drying time

	MATT	SEMI-GLOSS	GLOSS
Temperature	23 °C	23 °C	23 °C
Dust free	45 min	45 min	45 min
Dry through	16 h	24 h	24 h
Dry film thickness DFT	40 µm	40 µm	40 µm

Spreading capacity

	MATT	SEMI-GLOSS	GLOSS
Wet film thickness WFT	80 - 90 µm	80 µm	90 µm
Dry film thickness DFT	40 µm	40 µm	40 µm
Theoretical spreading capacity	7.5 – 8.5 m^2/kg	9 - 10 m^2/kg	9.5 – 11.5 m^2/kg

Thinning

TELSOL BR 5, BALTECH S6005 (by spraying)
TELSOL BR 6, BALTECH S6006 (by roller and brush)

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Surface preparation

For corrosive environment C2 and C3 the surface must be before the prime coat application 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).Galvanized and aluminous surfaces must be before the prime coat application treated according to EN ISO 12944-4, čl. 12.1. and 12.2.
For corrosive environment C1 the surface must be clean, dry, free of grease and rust, mechanically cleaned to degree St 2 – St 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 m^2.

Application conditions

Stir the paint properly with a mechanical stirrer before use so that there will be no sediment on the bottom. To thin and filter if it necessary.
The temperature of the paint itself should be 15-25 °C. If the paint temperature is below 15 °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.
Do not apply the paint on a hot summer day.
Stackability must be tested for specific conditions (climatic conditions, thickness, number of coats, the shape of the substrate, substrate type, etc.).

Workflow

1. Apply 1 to 2 coats of TELKYD P100, final dry film thickness of primer should be at least 40 - 80 μm. Optimal dry thickness of one coat is 40 μm, drying time of one coat is 24 hours. Drying on metal subjects can be accelerated by temperature increasing up to 80 °C;
2. Sanding of bonded places with sandpaper no. 280 while wet;
3. Apply 1 to 2 coats of TELKYD T300, optimal dry thickness of one coat is 35 – 40 μm, recoating is possible after 24 hours or by the system so-called “wet into wet”. If next coat is applied to the already dried paint, but incompletely cured, it can cause "wrinkling" the paint. An interval for an overspray without this risk can not be accurately determined, it is dependent on purpose and area of use (e.g. a thickness of the coat, an application method, a method of dilution, local climatic conditions).

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.
For the finished coating system, it is advisable to establish a maintenance plan within the expected durability of the protective system according to EN ISO 12944-8:2018. The choice of the appropriate type (level) of maintenance is then mainly dependent on the state of corrosion attack (ISO 4628-3).

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.

Product may be specified in another film thickness than indicated depending on purpose and area of use. Therefore this can alter spreading rate, drying time, overcoating interval and the expected durability of a protective system.

Application

Airless/AirMix spraying (5-15 % thinning depending on the type of device)
Conventional spraying (recommended viscosity 25 – 35 s / cup Ford ∅ 4 mm; 10 - 15 % thinning)
Brush (recommended viscosity 60 - 80 s / cup Ford ∅ 4 mm; 5 - 10 % thinning
Roller (flock) (recommended viscosity 50 - 80 s / cup Ford ∅ 4 mm; 5 - 10 % thinning)
Application by brush and by roller is recommended only for small areas and for corrections. Application by brush is suitable only for MATT and SEMI-GLOSS version. If a brush or roller is used for application, multiple coats will be required to maintain the specified coating thickness.

Application data

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 2.5 – 3 atm

TELKYD T300 MATT a TELKYD T300 SEMI-GLOSS
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)). Spray data are only indicative and subject to adjustment to the type of spraying equipment used.

Device	Nozzle	Pressure on nozzle	Thinning
AirMix	0.011 inch (0.28 mm)	12-17 Mpa (120-170 atm) air assist 1.5-2.5 atm	5-15 %
AirMix	0.013 inch (0.33 mm)	15-20 Mpa (150-200 atm) air assist 1.5-2.5 atm	5-10 %
Airless	0.011 inch (0.28 mm)	15-20 Mpa (150-200 atm)	5-10 %
Airless	0.013 inch (0.33 mm)	17-25 Mpa (170-250 atm)	5 %

TELKYD T 300 GLOSS
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	0.009 inch (0,23 mm)	12-17 Mpa (120-170 atm) air assist 1.5-2.5 atm	5-15 %
AirMix	0.011 inch (0,28 mm)	15-20 Mpa (150-200 atm) air assist 1.5-2.5 atm	5-10 %
Airless	0.009 inch (0,23 mm)	15-20 Mpa (150-200 atm)	5-10 %
Airless	0.011 inch (0,28 mm)	17-25 Mpa (170-250 atm)	5 %

Recommended filter of spraying gun yellow 100/149 (mesh/ µm), 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	GLOSS: 2.5 kg; 10 kg; 20 kg (tinted product) SEMI-GLOSS, MATT: 10 kg; 20 kg (tinted product)
Storability	The product keeps the product qualities 3 years from production date in original closed container. Shades tinted according to the customer's wishes have a warranty period of only 12 months from the date of tinting. 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.