

Solvent free polyamine epoxy suitable for contact with drinking water, juices, oils, alcoholic beverages and food. Applicable to high thickness in one coat by airless spray. Nonylphenol and benzyl alcohol free.

WT: Water Tank

Description

TQ17 is a two component epoxy coating 100% solid , free of nonylphenol and benzyl alcohol, specially formulated to protect steel and concrete surfaces, in tanks, containers and pipes that are in direct contact with drinking water and/or liquid or solid food products.

TQ17 displays controlled viscosity and enough pot-life to be easily applied by airless spray gun up to dry thickness of 400 microns in a single layer.

Characteristics

- The cured coating forms an inert non-biodegradable coating in contact with drinking water and solid food.
- All raw materials are included in the positive list under European regulations.
- Free from benzyl alcohol and nonylphenol which might alter the organoleptic qualities of the water constant.
- Excellent flexibility compared to other benchmark products.
- Provides high corrosion protection.
- High chemical resistance.
- Excellent hardness and abrasion resistance.
- Solvent-free.
- Gloss finish allowing easy cleaning.
- Excellent adhesion onto steel without the need of a primer.

Recommended uses

For the protection of steel and concrete surfaces that are submerged in drinking water, oils, alcoholic beverages (< 20%), juices, or direct contact with food.

- For high builds, use in tanks, pipes, fittings and steel surfaces in direct contact with potable water.
- Interior of silos or hoppers containing solid food, abrasive powder or grain cereals, sugar, salt, feed, etc.

Certifications

- **EU Regulation No. 10/2011** and **Royal Decree 847/2011** on the list of permitted substances for the manufacture of plastic materials and articles intended to be in contact with food.
- Meets **ANSI - AWWA C210-07** standards for the coating of the inside of pipes.
- Complies with the new limits for BPA (Bisphenol A) according to **Regulation 213/2018**, and with the limits for epichlorohydrin migrations.

Basic data

The following data was determined at 23 °C and 60% RH:

Color:	Cream, white, red, green.
Finish:	Gloss
Volume solids:	100%
Density:	1.35 ± 0.05 g/ml
Recommended dry film thickness:	min. 200 µm max. 500 µm
Theoretical spreading rate:	5.0 m ² / l (200 µm) 2.5 m ² / l (400 µm)
Dry to touch (350 µm):	8 hours
Fully dried (350 µm):	24 hours
Overcoat interval, min.:	24 hours
Overcoat interval, max:	14 days
VOC content:	< 0 g/l (J Group Directive 2004/42/CE)
T ^a resistance (Immersion in water):	< 60 °C (continuous)
T ^a resistance: (dry temperature):	< 150 °C (continuous)
Tensile adhesion (ASTM D4541)	> 8 MPa (18 MPa at workshop)
Cross-cut adhesion (ASTM D3359):	> 4A

Data table for drying and curing times (400 µm dft)

Substrate T ^a	10 °C	20 °C	30 °C	35 °C	40 °C
Dry to handle	2 d	1 d	12 h	9 h	6 h
Fully cured	21 d	10 d	6 d	4 d	2 d
Recoatibility	2 d	1 d	16 h	10 h	5 h

d: days; h: hours; m: minutes

* During the 24 hours after application, the relative humidity should be Hr <60 %

Tabla de Pot-Life

T ^a ambiente	10 °C *	20 °C	30 °C
Pot-Life	-	90 m	50 m

* It is recommended to apply at temperatures above 20 °C.

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Surface preparation

- Steel surfaces: abrasive blast to Sa 3 or Sa 2 ½ (ISO 8501/1) with a roughness profile of 50-80 microns obtained with the adequate form and granularity abrasive to reach the required profile.
- Concrete: remove traces of mortar and foreign materials. The surface must be free of grout, dust, dirt, release agents, moisture, residual cement and hardeners. For surface preparation, see SSPC- SP13 or NACE 6 Surface Preparation Concrete - 4.3.1 or 4.3.2. Previously, apply the recommended fixative or sealer.

Application instructions

TQ17 is supplied in sets of two cans which must be totally mixed.

- Homogenize the Base (component A) with mechanical stirring making sure that there are no traces of pigment at the bottom.
- Add the Hardener (component B) to the base, and mix everything mechanically to a uniform product.
- Leave for 10-20 minutes induction time for pre-reaction before applying, and to allow air bubbles to disperse.
- It's recommended to apply 350-400 microns in 2 or 3 coats.
- The use of short hoses at high pressures is preferable.
- Provide adequate ventilation during application and especially in enclosed spaces, to facilitate evaporation of solvents and curing.
- After application, wash immediately all the equipment with cleaning solvent. Do not allow any material to remain in hoses, gun or equipment.

Mixing ratio in volume: 75% Base
25% Hardener

Induction time 10-20 minutes

Pot-Life 90 minutes at 20°C

Thinner Not recommended

Cleaning solvent: VD-400

Airless Spray: Nozzle diameter: 0.017" to 0.021"
Nozzle pressure: 220-280 bars
Pressure ratio 60:1 (> 20°C)

Brush / Roller: Cuts, adjustments and small pieces
Maximum dry film thickness: 200 µm

Application conditions

The substrate temperature must be above 10°C and 3°C above dew point to avoid condensation.

- Proper application viscosity is found at a paint temperature above 20°C.
- Maximum relative humidity RH 80%.
- In case of temperatures of 10-15°C, do not exceed 60 % RH not either during 24 h after application to avoid side carbonation reactions (blushing and stickiness)

Observations

- Consider a possible deviation of 10-20% between the measured wet and dry thickness due to the volume contractions that occurs upon release of air trapped in the film. This phenomenon is due to the thixotropy and the surface tension of the paint.
- The theoretical performance may vary depending on several factors including the method of application, surface roughness, losses during preparation and application, or application on uneven surfaces.
- It is recommended to previously cut by brush in welds, and sharp edges to improve wetting and reach minimum dft to enhance protection.
- For best adhesion between layers, it is advisable to undertake application within the minimum overcoat time.
- If the maximum overcoat time is exceeded it is necessary to provide surface roughness to ensure adhesion.
- Before placing into service and once cured, wash the tank with fresh water. Empty the tank and repeat the operation. If possible, leave it filled up for 48 hours, and empty.
- Available in a special tixotropic version to obtain thicknesses of up to 1000 microns by heat power systems.
- Also available in a quick drying version for winter application (T^a < 20 °C)

Safety precautions

The containers safety labels contain information necessary for proper handling. It is important to meet the requirements of the applicable law. Avoid inhalation of paint mist or contact of the liquid paint with skin and eyes. When paint is applied in enclosed spaces forced ventilation should be provided, accompanied by appropriate respiratory protection of skin and eyes, especially when applied by gun.

Complete information on MSDS, under request: www.pinvisacoatings.com.

Packaging and storing

Sets of 4 litres (3 l Base; 1 l Hardener)

Sets of 20 litres (15 l Base; 5 l Hardener)

Sets of 800 litres (600 l Base; 200 l Hardener). For other, please consult.

Keep for 24 months in the original closed packs in a controlled storage between 10 and 35°C and far from heat sources. After that period of time, it is recommended not to use the product and consult a possible re-inspection in our installations.

Last updated: May'2018