

Ceramic-Polymer KTW-1 is a 2- pack special composite coating containing silanized high-tech-micro-particle reinforcement, based on an ultra-modern A-resin and hardener base especially designed for drinking water applications.



APPLICATION RANGE

- Internal coating for
 - Storage tanks
 - Filter tanks e. g. sand filters
 - Pipelines
 - Further drinking water applications



FEATURES AND BENEFITS

- High corrosion and abrasion protection to a wide variety of substrates
- 1-layer-system
- Solvent-free
- Test series according to DVGW-W270
- Drinking water test series according to the UBA Coating-Guideline for 23 °C (73 °F) and 60 °C (140 °F)

TECHNICAL INFORMATION

Color	Black
Surface	Satin
Volume Solids	100%
Adhesion	Excellent; >20 MPa (2,901 psi) on carbon steel according to ISO 4624
Density	Approx. 1.25 g/cm ³

APPLICATION DATA

Application by airless spraying	Airless pump, gear ratio 1 : 68 or higher, inlet pressure > 6 bar, tip size: 0.015-0.023"; Hose length max. 15m; Spray hose diameter max. 1/2"; We recommend the removal of the high-pressure filter and the direct suction of the material without use of a siphon tube.
Application by brush/roller	Recommended for small areas, repairs or to precoat edges. To obtain the required layer thickness, additional coating passes (wet-on-wet) may be necessary.
Mixing ratio	4 : 1 by weight / 3 : 1 by volume
Mixing time	Component A: Stirup intensively by mechanical means Components A+B: Mix up homogeneous. Mixer speed >100 rpm
Potlife	20 minutes at 25 °C (77 °F) / 12 minutes at 30 °C (86 °F) material temperature - waiting time under continuous pressure may reduce pot life!
Material spray temp.	Minimum 25 °C (77 °F) recommended. - lower spray temperatures may cause an orange peel effect on the coating surface!
Cleaner	Do not use thinners. We recommend to use Proguard cleaners to clean and flush equipment.
Number of coats	1 coat. Minimum coating thickness 400 µm; sagging limit per layer: 800 µm at 25 °C (77 °F) material temperature.

Theoretical consumption	Film thickness per coat: dry	Film thickness per coat: wet	kg/m ²	m ² /kg
Contact Chesterton International technical services for specific system and application advice.	400 µm	400 µm	0.50	2.0
	800 µm	800 µm	1.0	1.0

All above values are approximate and may be used as a guideline for specifications. Consumptions vary according to conditions.

SURFACE PREPARATION

All surfaces to be coated should be clean, dry and free from contamination. Prior to application, all surfaces should be assessed and treated in accordance with ISO 8504:2000. Remove weld spatter and smooth weld seams and sharp edges. Oil or grease should be removed according to SSPC-SP1 solvent cleaning.

Abrasive Blast Cleaning	For best adhesion results the surfaces should be prepared by abrasive blast cleaning to minimum SA 2.5 (ISO 8501-1:2007) or SSPC-SP10. An average surface roughness of R_a 75-100 μ m is required. Contact Chesterton International GmbH for further information. The coating system must be applied before oxidation of the steel occurs. If oxidation does occur the entire oxidized area should be reblasted to the standard specified above. Surface defects revealed by the blast cleaning process should be ground, filled or treated in the appropriate manner.
Concrete Substrates	Refer to Chesterton International GmbH for specific recommendations.

CONDITION DURING APPLICATION

Substrate temperature should be minimum 10 °C (50 °F) and minimum 3 °C (37 °F) above dew point. Relative humidity should be below 85 %. Temperature and relative humidity must be measured in the vicinity of the substrate.

CURING TIMES

Substrate temperature	Fully cured	Resistant to media	Recoat Airless spraying
20 °C (68 °F)	48 hrs	7 days	Only wet-on-wet!
25 °C (77 °F)	36 hrs	7 days	Only wet-on-wet!
30 °C (86 °F)	24 hrs	5 days	Only wet-on-wet!

Ceramic-Polymer KTW-1 may only come into contact with potable water or food stuff if the coating is fully cured. This has to be ensured by inspection to avoid an impairment of the medium quality.

On putting the tanks / plant components into operation, the DVGW (German Association for Gas and Water) instructions regarding cleaning and disinfection as well as the applicable potable water regulations, in particular §11 „List of treatment agents and disinfection procedures“, must be followed.

Instruction for initial filling:

Before first filling with potable water or foodstuffs, wash the coated tanks or pipes with 5 % citric acid and rinse thoroughly.

STORAGE AND PACKING

Preferred storage conditions are to keep the containers in a dry and cool area below 35 °C (95 °F) provided with adequate ventilation. The containers should be sealed tightly.

Packing	15 kg kits incl. hardener (12 kg part A + 3 kg part B)
Shelf life	2 years

QUALITY ASSURANCE AND INSPECTION

To ensure a continuous quality of the product, the quality assurance and inspection plan of Chesterton International GmbH has to be considered. Recommendations for qualified test control units are also available.

HEALTH AND SAFETY

Observe the precautionary notices on the container label, and read the Material Safety Data Sheet before use. The product is intended for use by properly qualified professional applicators in industrial conditions. The product is flammable and should be kept away from sparks, open flames, and other sources of ignition. Smoking is prohibited in the application area. Wear suitable respiratory equipment and apply in well ventilated areas. Avoid contact with skin and eyes.

DISCLAIMER

All technical information in this Product Data Sheet is signified as material description and based on laboratory tests and practical experiences under normal conditions. During individual use, actual measured data may vary due to circumstances beyond our control. In particular, the recommendations regarding the application and use require the proper storage and treatment of our products. Due to differences in materials, substrates and real site conditions Chesterton International GmbH does not assume any warranty or liability for application results or fitness for a particular purpose, of any legal relationship whatsoever, neither from this information, nor from any given recommendations, or from any other oral advice. The user of the product must check the product's suitability for the intended application and purpose. Chesterton International GmbH reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our general terms and conditions of sale and delivery. The most recent issue of the Product Data Sheet has to be considered, please ask always for the current version.