

## Permanent coating to facilitate graffiti removal

### Product description:

KTX 07 is a unique, single component, colourlessly drying agent based on synthetic organosilicon compounds, applicable for surface protection against graffiti, with a strong protective, anti-adhesive function, which makes it difficult or even impossible to stick posters, stickers, and adhesive tapes. It is fast-drying; it cures under the influence of moisture contained in the air and has good adhesive qualities. The treated surface is ideally protected against aerosol graffiti paints and most commercially available markers, ink, changeable weather conditions, bird droppings, dirt, acid rain, chewing gum, posters, stickers and glue. It also prevents penetration by water and hazardous substances. On its application, KTX 07 constitutes an anticorrosion release liner which prevents paints/pigments/glues from penetrating into the substrate, reduces their adhesiveness and makes it easy to remove them from the coating surface.

KTX 07 is a diffusion open product with preservative properties and UV filters thanks to which it retains the colour of the protected surface.

Texture of protected surfaces is maintained.

It is available in three options: glossy, matte/semi-matte, RAL colour.

KTX 07 has been awarded technical Approval by IBDiM: No. AT/2016-02-3286.

### Technical data:

Density in 20°C: 0,89 g/cm<sup>3</sup>

Appearance: colourless to grey

CO<sub>2</sub> permeability : ≥50 m. PN-EN 1062-6.

Water vapour permeability: ≤4 m. PN-EN ISO 7783.

Capillary absorption: ≤ 0,1 kg•m<sup>2</sup>•h<sup>0.5</sup>. PN-EN 1062-3.

Crack sealing class: A2. PN -EN 1062-7.

Impact resistibility: Class I resistance > 4 Nm. PN-EN ISO 672-1:2011.

Durability of the coating amounts to 20 years. Removal of graffiti: up to 100 cycles. (first degree removability) Dried coating thickness: approx.180 µm., depending on the surface type and roughness. Full anti-graffiti protection is achieved after 8 hours.

The coating has anti-adhesive and anti-poster properties. It also functions as an anti-corrosion layer and an elastomer with high formability, durability and resistance to adverse thermic, biological or chemical factors and UV, alkali, corrosion, salt and ammonia solutions.

KTX 07 is durable system facilitating multiple removals of graffiti paints. It does not require restoration after graffiti has been removed.

### Appearance on the substrate

The coating can look either matte/semi-matte or glossy (depending on the selected option) which can be more or less visible depending on the type of substrate, amount and angle of sunlight. The substrate colour may become deeper, and if colours have faded, the coating improves/strengthens them. Some absorptive surfaces, e.g. concrete, may become darker. This can be prevented or minimised by using PX 07 primer first.

**Areas of application:**

KTX 07 can be used on smooth as well as on porous absorptive surfaces made of building materials such as: sand-lime bricks, fibre cement boards, ordinary bricks, clinker, plaster, concrete, natural stone e.g. sandstone, granite, travertine, most paint coatings as well as for hydrophobic substrates; also for sculptures, monuments, wood and for thermal insulating systems. It is intended for use on non-absorptive surfaces such as ceramics, some plastics, laminates, polyester and steel, galvanised steel, aluminium. Due to a large variety of protected substrates, it is recommended to carry out initial testing before application to check reaction of the agent with the surface, adhesiveness, the change in substrate colouring etc.

**Substrate:**

The substrate must be properly prepared: dry, dense and cleaned of all atmospheric impurities, dirt, cement wash, hazardous substances, oils and fats, graffiti as well as biological and organic efflorescence. Examples of substrate preparation are: chemical cleansing, water vapour cleansing, high pressure washing, abrasive blaster washing.

Non-absorptive surfaces e.g. steel, plastics, powdered paints must be degreased. Residues of cleaning agents after application may have an adverse influence on KTX 07 effectiveness; therefore they have to be removed entirely. The parts of elevation, which should not be come into contact with the protecting agent should be covered with e.g. building foil. Minimum surface temperature 3°C above the dew point. Relative air humidity cannot exceed 90%.

**Compatibility with other painting systems:**

KTX 07 coating is compatible with most primers, hydrophobic coatings and surface paints including polyurethane paints, epoxy paints, 2K acrylic or polyurethane systems, anti-corrosion coatings, solvents, phthalic enamels and paints, alkyd paints, oil paints, chlorinated rubber paints, nitrocellulose paints, vinyl, acrylate, silicone and silicate dispersion-based paints.

A confirmed compatibility has been asserted with regard to:

1. Anti-corrosion paints for concrete:
  - Sika: Sikagard 550 W Elastic, Sikagard 680 S,
  - Sto: StoCryl V 100, V 200, V 400, V 450, V 500, EF, RB,
  - Hufgard: EuroCret Color Flex, EuroCret Color,
  - Megachemie: MEGApotect AR 100 E, MEGApotect AR 100 S,
  - Gemiprem: Prem PE, Prem PS,
  - Baumit Siliconcolor.
2. Hydrophobic impregnation substances for concrete
  - Hufgard: EuroCret HMC, HMB, HMX,
  - Sika: Sikagard 703 W, 702 W Aquaphob,
  - Sto: StoCryl HC 100, GW 100, HP 100, HP 150, HG 200,
  - Premix: Silcobet-1.

**Application:**

After opening the container stir all of the agent thoroughly for approx. 1 minute with a mixer and it can be applied.

Stirring is especially important in the case of "matte" coating option due to the added matte factor, which has to be well mixed in the entire volume of the package.

The container should be closed after pouring an adequate amount of the agent. Contact with the air will cause a slow curing effect, increase viscosity of the coating and its further cross-linking. The agent is usable for several months after opening the container, as long as it is tightly closed and stored properly.

In the case of prolonged application, the coating must be mixed repeatedly every 60 minutes. Depending on the weather conditions the average application time is 6 hours at temperature of 20°C, when the coating is poured into a container/tray; however, after 30 minutes a film may form on the surface; it must be removed before further application.

**KTX 07 coating application:**

Matte: -5 to + 30°C

Glossy: +10 to + 30°C

**Drying time at + 22°C**

After 1 hour – dust-dry

After 2 hours – touch-dry, externally cured, no fingerprints left by touching

After 3 hours - cured

It is crucial that temperatures remain within the same range throughout the drying period. Application of the coating in lower temperatures will prolong the drying time.

The agent should be applied in two layers. The other layer should be applied approx. 3-4 hrs after the first one has cured, at the temperature of 22°C.

The complete curing of the coating is reached after 7 hours at temperature of +22°C. It should be protected from rain for at least 4 hours.

There are no time limits for application of the second layer or supplementary applications of the coating.

In the case of a longer break between applications of the two layers the protected surface should be rinsed with water to remove dust and other atmospheric impurities. The coating should be applied precisely in order to cover all irregularities and cracks within the structure of the material; failure to do so may limit the effectiveness of the coating and cause problems while removing graffiti. On a rough or porous surface a uniform and sufficiently thick layer must be obtained. Several days' break should be made for "seasoning" of the paint if the coating is applied to the newly painted surface. In the case of poor adhesion of coating to the surface it is necessary to use a primer appropriate for the individual substrate type.

On very absorptive materials such as concrete, it is recommended to use PX 07 primer filler in two layers.

**PX 07 primer application:**

+5 to + 30°C

PX 07 primer causes reduction of the wear of the coating and prevents or minimizes the darkening effect of protected surface. The time between the primer application and the first layer of anti-graffiti coating should be approx. 24 hours.

It should be noted that not too much coating should be put on smooth surfaces. In the case



streaks occur they should be distributed on the surface by means of a roller before they dry. The agent can be applied with an hydrodynamic or conventional spraying nozzle 12-17 and also by using rollers for solvent-based paints. It can be used in ventilated rooms.

**Graffiti removal:**

Graffiti removal technology from protected surfaces:

**From smooth surface:**

- sprinkle the surface with water and by means of a brush remove the graffiti. Remove markers with a wet cloth. Addition of a delicate washing agent (liquid soap or dishwashing liquid) speeds up the process of graffiti removal.
- graffiti removal from larger surfaces can be carried out with a high pressure cleaner with cold water jet under pressure of up to 100 bar; the water stream must be moved evenly, without prolonged action in a single spot.
- the most recommended and the fastest method is the application of a high pressure cleaner with water at maximum temp. 50°C and pressure up to 100 bar.

**From porous surface:**

- with a brush and water with addition of washing agents (liquid soap or dishwashing liquid).
- graffiti removal from larger surfaces can be carried out with a high pressure cleaner with cold water jet under pressure of up to 100 bar; the water stream must be moved evenly, without prolonged action in a single spot.
- the most recommended and the fastest method is the application of a high pressure cleaner with water at maximum temp. 50°C and pressure up to 100 bar.

**Chemical removal**

Graffiti can also be removed by means of anti-graffiti removers.

When applying this method, the coating must be tested for resistance to solvents.

After graffiti removal there is no need for application of another coating because it is only the graffiti that has been removed and the protection layer is left intact.

The coating may be damaged if the used pressure is above 100 bar or a turbo system is applied – a rotating nozzle, narrow nozzle jet or the lance washing end is too close to the cleaned surface. Intensive scrubbing of coating may damage the protective layer or reduce the number of graffiti removal cycles.

**Removal of posters and glues:**

Posters, tapes, stickers fall off on their own under the impact of wind and rain or they can be removed by hand. Residues of glue remaining on the protected substrate and posters which are glued with special adhesives can be removed by hand or with a high pressure cleaner with water jet at temperature up to 50°C and pressure up to 100 bar. The coating does not require restoration after posters and glue removal.

**Consumption:**

The basic principle is to apply 2 layers.

Theoretical coverage: 6 m<sup>2</sup> / 1 L (167 ml/m<sup>2</sup>) to 10 m<sup>2</sup> / 1 L (100 ml/m<sup>2</sup>)

Theoretical coverage is an approximate value setting the extreme consumption figures, which differ depending on the type of the protected substrate.

Little-absorptive smooth surfaces:

7 m<sup>2</sup>/1 L (143 ml/m<sup>2</sup>) to 9 m<sup>2</sup> /1 L (111 ml/m<sup>2</sup>), two layers, e.g. brick, elevation paints.

Very absorptive, little-porous surfaces:

6 m<sup>2</sup>/1 L (167 ml/m<sup>2</sup>), two layers, e.g. sandstone, limestone, concrete.

On absorptive substrates the consumption may increase.

Non-absorptive smooth surfaces:

Up to 10 m<sup>2</sup>/1 L (100 ml/m<sup>2</sup>), two layers, e.g. steel, ceramics, granite, surfaces painted with powdered paints.

Practical coverage - depends on individual cases and applications, including the conditions during application, method of application, shape and roughness of the surface as well as base absorptiveness and losses during application.

In order to increase the coverage on absorptive surfaces it is recommended to use the PX 07 primer

8.3 m<sup>2</sup>/1 L (120 ml/m<sup>2</sup>) two layers.

**Packaging:**

Metal: 5 L, 10 L, 20 L.

Plastic: 1 L, 5 L, 10 L, 20 L, (160 L at special request)

**Storage:**

In temperatures from + 5 to + 28°C. Don't expose to direct sunlight.

**Durability:**

12 months in closed original packaging, unopened.

**Tools cleaning:**

Before use, painting sprayers must be cleaned of paint and water remains and dried including the tubes, to avoid curing of the coating in contact with moisture. Cleaning must be carried out immediately after the use of the sprayer, as the coating left for a longer time inside the sprayer or its careless cleaning may clog the tubes. The cured coating may only be removed mechanically. Kerosene should be used for cleaning spraying machines before and after work; other solvents e.g. nitro-based thinners accelerate curing of the coating and may clog the spraying tubes.

Usually, rollers and brushes are not suited either for cleaning or further use.



**Hazards and safety instructions:**

Pay attention to environment and follow the rules for working with chemicals. The product must be kept out of reach of children. Wear protective gloves, glasses and clothing during operation. Use individual respiratory protection equipment. The gloves should be made of butylene rubber. Prolonged contact with the product may cause skin dryness.

**Marking:**

ADR/RID: agent is not classified as hazardous in transport.

**Further information:**

Information regarding safety during transportation, storage, use and disposal as well as environmental protection is included in the Safety Data Sheet. The above information has been compiled in our production department according to our latest technological developments and application techniques. As the types and methods of application are beyond our supervision, no liability of the producer can be derived from the contents of this information sheet. Considering various circumstances appearing in product application, the user should not depart from testing and should follow the regulations in force at his/her own responsibility.

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The present edition of Technical Data Sheet renders older editions invalid.