



Permanent coating to facilitate graffiti removal

Preparation Description:

KTX 07 is a unique, single component, colourlessly drying preparation based on synthetic organosilicon compounds, used for surface protection against graffiti, featuring anti-poster functionality with a strong anti-adhesive characteristics, which renders it difficult or even impossible to stick posters, stickers, and tapes with own adhesive layer.

The preparation is fast-drying; it cures under the influence of air moisture and features very good adhesiveness. Treated surfaces are 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 adhesives; it also prevents water penetration and protects against hazardous substances. On its application, KTX 07 constitutes an anti-corrosive release liner that prevents paint coatings/pigments/adhesives and makes it easy to remove them from a coating surface. KTX 07 is a diffusion-open preparation with preservative properties and UV filters, thanks to which it retains the colour of the protected surface. Texture of protected surfaces remains intact.

The preparation is available in three variants: gloss, matte/semi-matte, RAL colour.

Technical Approval:

Road and Bridge Research Institute No. IBDiM-KOT-2022/0841.

Technical Data:

Appearance: colourless/grey liquid

Density: 0.89 g/cm³

Thermal stability: up to 380°C

Flash-point: above 64°C

CO₂ permeability: ≥ 50 m (PN-EN 1062-6)

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

Capillary absorption: ≤ 0,1 kg·m⁻²·h^{-0,5} (PN-EN 1062-3)

Water absorbability limitation indicator: ≥ 66% (IBDiM Nr PB-TM-X5:2012)

Crack sealing class: A2 (PN-EN 1062-7)

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

UV radiation resistibility: 500 h (PN-ISO 11507, PN-EN ISO 4628)

Technical Data After Application:

Coating durability: up to 20 years. Graffiti removal: up to 100 cycles.

Dried coating thickness: approx. 180 μm, depending on surface type and roughness.

Full anti-graffiti protection is achieved after 24 hours at the drying temperature 22°C.

The coating features anti-adhesive and anti-poster properties. The preparation also functions as a water-repellent and anti-corrosive layer and an elastomer with high formability, durability and resistance to adverse external factors: thermal, biological or chemical, UV radiation, alkali, corrosion, salt and ammonia solutions.

KTX 07 is a durable system facilitating multiple removals of graffiti paints, without the need for coating restoration after graffiti removal.

**Appearance on a Substrate:**

On a substrate, the coating forms either matte/semi-matte or gloss effect (depending on the selected variant), 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 in the case of faded colours, the coating improves/strengthens the colours.

Some absorptive substrates, e.g. concrete, sandstone may become darker; in such a case, it is recommended to apply PX 07 primer, which prevents/minimises the darkening effect of the protected surface.

Areas of Application:

KTX 07 can be used on smooth as well as porous absorptive surfaces made of construction materials, such as: sand-lime bricks, fibre cement boards, ordinary bricks, clinker; mineral, acrylic, silicone, silicate plasters, concrete; natural stone, e.g. sandstone, granite, travertine; most paint coatings and hydrophobized substrates; as well as for sculptures, monuments, wood and for thermal insulation systems. It is suitable for use on non-absorptive surfaces, such as ceramics, some plastics, laminates, polyester, steel, galvanised steel, aluminum, and powder paint coatings. Due to a large variety of substrates, it is recommended to carry out initial testing before application to check reaction of the preparation with a substrate, define adhesiveness, the change in substrate colour shade, etc.

Substrate:

Substrates must be properly prepared: dry, compact and cleaned of any atmospheric soilings, dirt, cement wash, hazardous substances, oils and fats, graffiti as well as biological and organic efflorescence. Examples of substrate preparation: chemical cleaning, water vapour cleaning, high pressure water washing, abrasive blasting. On repaired, leveled cement substrates apply the coating after a min. 7 days. Minimum age of concrete is 28 days. If the anti-graffiti coating is applied on newly paint coated substrates, maintain sufficient break time for curing of the paint coating, following Technical Data Sheet of a paint coating system. Non-absorptive surfaces, e.g. steel, plastics, powder paint coatings must be degreased, for instance, with isopropyl alcohol. In the case of poor adhesion of coating to a substrate, it is necessary to use a primer appropriate for the individual substrate type: non-absorptive substrates, e.g., powder paint coatings, plastics; use one or two layers of PX 08 primer. After preparation application, residues of cleaning agents may have an adverse influence on KTX 07 preparation effectiveness; therefore, they have to be completely removed. Parts of facades, which should not come into contact with the protective preparation, should be covered with, e.g., construction foil. The temperature of the substrate should be at least 3°C above the dew point temperature at that ambient temperature and humidity. Substrate moisture: max. 4 %.

Compatibility with Other Painting Systems:

KTX 07 matte coating is compatible with most primers, water-repellents for paint coatings, including: polyurethane paint coatings, epoxy paint coatings, two-component acrylic systems, two-component polyurethane systems, anti-corrosive coatings, solvents, phthalic paint coatings and enamels, oil paint coatings, chlorinated rubber paint coatings, alkyd paint coatings, nitrocellulose paint coatings; and vinyl, acrylic silicate, and silicone dispersion-based paint coatings. An adhesion test should be carried out before applying the coating.



The test should be performed by rubbing strongly with a finger (in two layers) anti-graffiti coating at least one day before. In case of poor adhesion the coating will detach from the substrate during the test.

Application Method:

After opening the container, stir all of the preparation thoroughly for approx. one minute with a mixer. After stirring, the preparation is ready for application. Do not dilute. Stirring is particularly essential in the case of 'matte' coating variant due to the added matte factor, which has to be well mixed in the entire volume of the packaging. Close the container after pouring over an adequate amount of the preparation. Contact with air will spur a slow curing effect of the coating, increasing its viscosity. The preparation is usable for several months after opening the container, as long as it is tightly closed and stored properly. In the case of a prolonged coating application, the preparation must be mixed repeatedly every couple of hours. Depending on weather conditions, the average application time is 6 hours at 20°C should the coating be poured into a container/tray; however, after 30 minutes, a skinning effect may gradually appear on the surface; it must be removed before further application.

KTX 07 coating application:

- MATTE variant: -5°C to +30°C
- GLOSS variant: +10°C to +30°C
- relative air humidity: up to 90%
- the temperature of the substrate should be at least 3°C above the dew point temperature at that ambient temperature and humidity

Amount of coating layers:

- the preparation should be applied in two layers

The second layer should be applied approx. 3 hours after the first one has cured, at the drying temperature of 22°C. 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, rinse the protected surface with water to remove dust and other atmospheric impurities.

Priming:

Anti-graffiti coatings in a permanent system and absorptive substrates may become darker and create the effect "wet concrete". To improve the aesthetics of absorptive substrates, e.g., concrete, sandstone; architectural concrete use one or two layers of PX 07 primer. PX 07 primer causes reduction of the anti-graffiti coating wear and prevents/minimizes the darkening effect of the protected surface. Protect primed substrate from rain until the coating is applied. KTX 07 Anti-graffiti coating should be applied to the primed substrate after complete evaporation of water or dry the substrate, min. 1 hour.

The substrates covered with paints and protective coatings are not primed.

PX 07 primer application: +5°C to +30°C.

Drying time KTX 07 at 22°C:

- after 1 hour: dust-dry
- after 2 hours: touch-dry, externally cured, no fingerprints left when touched
- after 3 hours: cured
- after 8 hours: complete curing

Suitable weather conditions must be maintained throughout the entire coating drying period. Coating application in lower temperatures prolongs the drying time.

Protect from rain for at least 3 hours after application.



The complete curing of the coating is reached after 7 hours at 22°C.

The coating should be applied precisely in order to cover all irregularities and cracks within the material structure. Failure to do apply the preparation precisely may limit the effectiveness of the coating and cause problems while removing graffiti paints.

On a rough or porous surface, a uniform and sufficiently thick protective layer must be obtained. Make sure that no excessive coating should be applied on smooth surfaces; if streaks occur, distribute them on the substrate with a roller before they dry.

The preparation can be used in ventilated rooms.

Application:

- lint free paint rollers
- pneumatic/airless spraying method, nozzle 12 to 18

Graffiti Removal Technology:

Sprinkle surface with water or chemical remover and use a brush or a cloth to remove graffiti. With larger surfaces or porous substrates, it is recommended to wash graffiti out with a water jet high pressure cleaner at 50°C and under the pressure of up to 100 bar; the water jet must be moved evenly, without prolonged action in individual areas.

The recommended and the fastest method is to use gel chemical remover and apply preparation coating onto graffiti; wait for up to 10 minutes, chafe graffiti with a soft-hair brush and rinse with pressurized water. The liquid KT 04 preparation or gel KT 04+ preparation are dedicated graffiti paint chemical removers for KTX 07 anti-graffiti coatings. Following graffiti removal there is no need for application of new 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 water pressure exceeds 100 bar or a turbo system is applied a rotating nozzle, narrow nozzle jet or when the lance washing end is too close to the cleaned surface. Intensive scrubbing of the coating may damage the protective layer or reduce the number of graffiti removal cycles.

Removal of Posters and Adhesives:

Applied posters, tapes, stickers fall off on their own under the impact of wind and rain or they can be removed easily by tearing them off manually. Adhesive residues remaining on the protected substrate and posters can be removed by hand or with a water jet high pressure cleaner at up to 50°C under the and pressure of up to 100 bar. The coating does not require restoration after removal of posters and adhesive residues.

Anti-Graffiti Coating Maintenance:

KTX 07 anti-graffiti coating may be washed manually with a soft-hair brush or water wide jet high pressure cleaner under the pressure of up to 150 bar, using chemical preparations for ongoing facade washing. It is recommended to execute the facade washing process by means of spraying with the so-called 'active foam', and rinsing it with pressurised water.

**Wear:**

The basic principle is to apply 2 layers of anti-graffiti coating.

Theoretical spread rate: **3 m²/L** (333 ml/m²) up to **10 m²/L** (100 ml/m²)

Theoretical spread rate is an approximate value defining the extreme consumption figures, which differ depending on the type of the protected substrate.

Absorptive surfaces, without texture:

3 m²/L (333 ml/m²) to **6 m²/L** (167 ml/m²) jointly for two layers
e.g., sandstone, concrete.

Low absorptive surfaces, without texture:

7 m²/L (143 ml/m²) up to **8 m²/L** (125 ml/m²) jointly for two layers
e.g., facade paint coatings.

Non-absorptive surfaces, smooth:

till **9 m²/L** (111 ml/m²) jointly for two layers
till **10 m²/L** (100 ml/m²) one layer only for anti-poster protection
e.g., steel, ceramics, granite, surfaces coated with powder paint coatings.

Practical spread rate: depends on individual cases and applications, including: conditions during application, methods of application, shape and roughness of protected surfaces, as well as substrate absorbability and application losses.

In order to increase the spread rate on absorptive surfaces, it is recommended to use a primer: PX 07: approx. 8.3 m²/L (120 ml/m²) jointly for two layers.

Packaging:

Metal: 1 L, 5 L, 10 L, 20 L.

Storage:

In temperatures of +5°C to +28°C. Do not expose to direct sunlight.

Shelf life:

12 months from the date of manufacture, in an unopened, closed, original packaging.

Tools Cleaning:

Before use, a paint sprayer and its tubing must be cleaned to remove paint residues and water, for the coating cures in contact with moisture. Cleaning of a paint sprayer and its tubing must be carried out immediately after the use of the sprayer, for the coating left for a longer period inside the sprayer or failure to remove it properly may clog the spray tubing. A cured coating may only be removed mechanically. For example, kerosene may be used for cleaning spraying equipment before and after work. Other solvents, e.g., nitro-based, accelerate curing of the coating and may lead to clogging of spray tubing. Usually, rollers and brushes are not suited for cleaning neither for further use.

**Hazards and Safety Instructions:**

Pay attention to immediate surrounding and follow the rules for working with chemicals. The preparation must be kept out of children's reach. Wear protective gloves, goggles and clothing during operation. Use individual respiratory protection equipment. Gloves should be made of butyl rubber. Prolonged contact with the product may cause skin dryness.

Marking:

ADR/RID: preparation 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 product's Safety Data Sheet. The above information has been compiled in our production department according to our latest technological developments and application techniques. For the types and methods of application are beyond our supervision, no liability of the producer shall be derived from the contents of this information sheet.

Considering various circumstances and factors conditioning product application, users should not refrain from testing and should follow the regulations in force at one's own responsibility.

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Publication of this edition of Technical Data Sheet renders previous editions invalid.