Permanent Coating Facilitating Graffiti Removal

Preparation Description:

KTX 20 is a unique, single - component polymer product which is colourless after drying and is used for protecting surfaces against graffiti. KTX 20 has anti-poster, anti-adhesive and anti-static properties. The preparation dries fast and features very good adhesiveness and durability. Treated surfaces are ideally protected against aerosol graffiti paints and most commercially available markers, ink, bird droppings, dirt, acid rain, acid and base solutions, alkalis, oil. It hinders permanent sticking of posters, stickers, and adhesive tapes. On its application, KTX 20 constitutes a release liner that prevents substrate penetration and its anti-adhesive properties reduces adhesiveness, often spurring the so-called 'beading' effect in liquid substances/pigments. Surfaces protected with KTX 20, owing to its anti-static properties, remain clean for a long time, which positively limits the costs of cleaning and maintenance, and thus extending service intervals for such surfaces. Protected substrate exposed to atmospheric conditions facilitate rainwater and snow run-off, thus improving visibility in adverse conditions. KTX 20 features preservative properties and UV filters, thanks to which it preserves the colour of protected substrates, and in the case of old, damaged, dull and oxidized surfaces the coating restores their natural look. The preparation is available only in gloss variant.

Technical Data:

Physical state: liquid
Appearance: transparent, clear
Odour: ammonia
Density: 0.85 g/cm³
Flash-point: > 23°C (PN EN ISO 2719:2016-08)
Thermal stability: up to 260°C
Co_2 permeability: ≥ 50 m (PN-EN 1062-6)
Water vapour permeability: ≤ 4 m (PN-EN ISO 7783)
Capillary absorption: ≤ 0,1 $kg \cdot m^{-2} \cdot h^{-0,5}$ (PN-EN 1062-3)
UV radiation resistibility: 500 h (PN-ISO 11507, PN-EN ISO 4628)

Technical Data After Application:

Appearance on surface: transparent coating with gloss. Coating durability: at least 20 years. Graffiti removal: multiple cycles. Dry coating thickness: 2 - 6 µm. Full anti-graffiti protection: after 24 hours. Full curing: after 7 days. The preparation also features anti-corrosive, water-repelling, anti-adhesive and anti-poster properties with high durability and resistance to adverse external factors: thermal, biological or chemical, UV radiation, alkali, corrosion, salt and ammonia solutions, and the majority of solvents.
KTX 20 is a durable system facilitating multiple removals of graffiti paints, without the need for coating restoration after graffiti removal.

Areas of Application:

KTX 20 is suitable for use on hard, non-absorptive surface, e.g.: varnish coatings, powder paint coatings, polyurethane coatings, epoxy coatings, industrial paint coatings; plastics, e.g., polystyrene, ABS, polycarbonates, acrylic glass (plexiglass, polymethyl methacrylate)

PHSC Chemicals Sp. z o.o.
ul. Droga Dębińska 29, 61-492 Poznań, Poland
mobile: 0048 693 861 115, 0048 601 77 88 23
www.phsc.pl, e-mail: biuro@phsc.pl
www.antygraffiti-system.pl

glass, steel, zinc plated substrates, aluminium, as well as natural stone, such as polished granite. It is applicable on interior and exterior surfaces of trams, buses, train cars, as well as ticket vending machines, parking meters and lighting poles. Due to its unique chemical resistance it is especially recommended for protection elements of urban infrastructure.

Substrate:

Due to the possibility of hindering adhesiveness, substrates must be seasoned, compact, hardened, without cracks, dry and cleaned of any atmospheric soilings, dust, dirt, oil, wax, fats, impregnating coatings. Degrease the substrate with isopropyl alcohol.
Parts of facades, which should not come into contact with the protective preparation, should be covered with, e.g., construction foil. Surface temperature: +5°C to +30°C.
Due to a large variety of substrates, it is recommended to carry out initial testing (by applying it on a test area) before application to check reaction of the preparation with a substrate, define adhesiveness, the change in substrate colour shade.
Check of the coating adhesiveness may be executed through applying a piece of a strong adhesive tape to the coating and tearing it off.

Application Method:

After opening the container of preparation is ready for use. Before use, do not stir nor shaken the container due to a possibility of and excessive pressure build-up.
After pouring the desired amount of the preparation (through a varnish strainer of approx. 125 µm) close the container to prevent impact of humidity and evaporation of the preparation. Apply small portions of the preparation at a time. Do not pour the unused preparation back to the original packaging.
KTX 20 coating application:

- relative air humidity: up to 70%
- coating application: +5°C to +30°C
- optimum application temperature: +15°C to +20°C
- 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 one, thin layer

After curing the coating, it cannot be permanently covered with a second layer.
Technological breaks plan on the edges of the wall. If the layer is applied too thick, dried coating is susceptible to cracking.
Drying time KTX 20 at 22°C:

- after 15 minutes: touch-dry
- after 12 hours: cured, resistance to weather conditions
- after 7 days: complete curing (mechanical and chemical)

Initial anti-graffiti protection properties the coating features after 24 hours.
During this period, the coating should not be forcibly wiped/scrubbed.
Mean coating correction time after application on a substrate is at temp 22°C:

- approx. 5 minutes

Due to the quick drying of the preparation, correction should be done immediately.
Anti-adhesive properties of the coating do not allow the application of another layer.
During the coating curing time avoid any pollution, including water. The proper temperature range must be maintained throughout the coating curing time; avoid direct sunlight and humidity.

Humidity accelerates cross-linking of the coating and affects its quality and tightness.
The coating should be applied precisely, so that the treated surface is entirely covered with a film of liquid and a homogeneous layer is created. Failure to do apply the preparation precisely may limit the effectiveness of the anti-graffiti protection. Make sure that no excessive coating should be applied. 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. The coating may be applied outdoors and indoors with proper ventilation. Pay special attention to potential sources of fire.
Wind spreads vapours over significant distances.
Application:
Manual: microfibre cloth, varnish rollers, window-glass washing pads or lint-free, absorptive fabrics. Another way is to wrap the rubber part of a squeegee or the fabric part of a washing pad with a microfibre cloth. Select suitable application equipment to the size and shape of the treated surface. Apply the coating directly onto a microfibre cloth, not onto the treated substrate. Replace microfibre when it is dirty.
Spraying: the product is applied by means of a pneumatic low pressure (HVLP) spray gun with a 0.7 to 1.3 mm nozzle, under the pressure of 2 to 3 bar.
Use the preparation as a concentrate. Do not mix it with any other liquids.

Graffiti Removal Technology:

Graffiti can be removed with solvent removers, e.g., KT 04, and ecological, water anti-graffiti preparations. Apply a graffiti remover with a sprayer or a sponge, avoid curtaining beyond the cleaned surface. Wait from a few seconds to a several minutes until after application of the preparation. Wait for the paint coating to dissolve and chafe the preparation in circular movements with an absorptive cloth or a sponge. When the paint has been removed, rinse the area with water. 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 number of removal cycles depends on the type of the graffiti and the removal method.

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 40°C under the and pressure of up to 100 bar.

Coating Washing:

The coating can be washed manually or with a water jet high pressure cleaner with pressure of up to 100 bar, and with commercially available washing preparations.
Avoid concentrated acids and alkalis.

Wear:

The basic principle is to apply 1 layer of full/tight coating.
The coating thickness of approx. 2 µm provides for sufficient protection.
A layer with thickness of 6 µm is applied to matte, absorbent and uneven surfaces.

Theoretical spread rate: **66 m^2/L** (15 ml/m^2) up to **111 m^2/L** (9 ml/m^2)

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

Practical spread rate: depends on conditions during application, methods of application and preparation application losses.

Packaging:
Aluminium: 100 ml, 0.5 L, 1 L, 5 L.

Storage:
In temperatures of +5°C to +15°C in a shaded location. Do not expose to packaging sunlight due to the possibility of a spontaneous explosion under the impact of high temp.

Shelf life:
12 months in a closed, original packaging.

Tools Cleaning:
Before use, a paint sprayer and its tubing must be dried, for the coating is sensitive to moisture. For example, butyl acetate may be used for cleaning spraying equipment before and after work. Microfibre clothes are not suitable to be reused.

Hazards and Safety Instructions:
Pay attention to immediate surrounding and follow the rules for working with chemicals. Keep the preparation away from children. Wear protective gloves, goggles and clothing during operation. Use individual respiratory protection equipment with A2B2E2K2Hg/P3 filter. Gloves should be made of butyl or nitrile rubber.

Marking:

DANGER

ADR/RID: UN 2924, Class 8 (3), II.

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.