



Photocatalytically active coating for matted glass and glazed ceramics for self-cleaning, air purification and algae control

TA2201



Benefits

TECHNICAL BENEFITS

- Reacts on UV-light only
- Suitable for matted glass and glazed ceramics
- Suitable for clear glass during production only
- Self-cleaning properties
- Hydrophilic surface avoids baking in of acids and soot
- Bonds with substrate
- Low material use per m² 25 – 50 ml/m²
- Full transparent coating
- No change of look-and-feel of host-material
- Fast drying <15mins
- Contains no biocides
- Long durability of >10 years

OPERATIONAL BENEFITS

- Prevents organic growth like mold, algae or moss
- Filters VOC's, pollen, NOx from the air
- 90m² treated surface = filter capacity of 8 mature oak trees
- Minimizes need for cleaning
- Application by ESS or HVLP
- Easy to touch-up during replacement or repair of surface
- Maintains pristine appearance of treated surfaces
- Non-hazardous, easy to transport

FINANCIAL BENEFITS

- Low cost per m²
- Minimizes cost for cleaning agents and soaps
- Minimizes repair and replacement costs due to pollution
- Reduces cost for ill personnel

Description

nC® Nadicare® TA2201 Matted Glass and Glazed Ceramics is a very fine, water-based titanium-dioxide dispersion. Its formulation is a photocatalytically active coating and is fully transparent. Upon radiation with light, the coatings will release oxygen radicals from the ambient air and thus decompose organic pollution: The surface becomes self-cleaning. TA2201 is active under UV light only (black light).

TA2201 is designed for all matted glass and glazed ceramic surfaces. Not suitable for clear glass, as TA2201 will make glass somewhat foggy. For painted surfaces please refer to TA2202 or consult our technical department. TA2201 can be applied without primer.

nC® Nadicare® TA2201 is both an indoor as an outdoor application. TA2201 needs somewhat preheated to hot surfaces varying between 40 °C and 600°C.



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Description

The coating protects the surface against algae, mould, moss, germs and bacteria. The design of nC® Nadicare® TA2201 provides self-cleaning properties to the treated surfaces, to protect them against pollution. The active self-cleaning titanium-dioxide particles transform all organic pollution on the surfaces, like soot, bird-droppings, stains of coffee, wine, oils, fingerprints etc. , into harmless compositions and oxygen. As the coating has strong hydrophilic capacities, pollution can never scale or “bake in.” It also filters NOx and VOC’s from the air.

nC® Nadicare® TA2201 unites the advantages of photo catalysis and hydrophilicity. By doing this, the coating system offers a very robust and wear resistant surface. The lifetime cycle of the coating is around 10 years. The active self-cleaning characteristics of titanium-dioxide will easily remain intact throughout this period.

nC® Nadicare® TA2201 GlassMetal Surfaces unites the advantages of photo catalysis with the unique capacity of nano-technology. Instead of sticking mechanically on the surface (like waxes or foils do), the use of nanotechnology ensures that the nC® Nadicare® TA2201 coating bonds into the surface chemically. The active self-cleaning characteristics of titanium-dioxide will not exhaust.

Application

It is recommended to apply TA2201 with ESS or HVLP. Industrial application processes on clear glass are also possible. In case of industrial application, technical consultation at the nC Group R&D dept. is strongly recommended.

- Do not eat, drink or smoke during application.
- Surface must be clean and free from kit, glue, grease, mold or moss.
- Rinse with clean and fresh water to remove soap residues.
- Surface must be dry.
- Ambient temperature during manual application must be at least 15° C.
- Do not apply when ambient humidity exceeds 80%.
- Do not apply in a dusty environment.
- Wear protective gloves during application. Wear safety goggles during application.
- Shake container well for a minute.
- Use roller or HVLP for application.
- Preheat surface up to at least 40 °C prior to immediate application.



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Application

- Recommended application quantities (no bathing):
 - Plain surfaces 25 ml/m²
 - Textured surfaces <50 ml/m²
- Let surface dry for 1 (when applied on 600 °C surface) to 15 minutes at ambient temperature of minimal 15 °C.
- Put left-over nC® Nadicare® TA2201 in container and use-up within 4 weeks after first opening of original.
- nC® Nadicare® TA2201 will deteriorate fast when dirty or greasy items are coated without cleaning.
- Clean tools, spray-nozzles with water immediately after every stop.
- Wash hands and face after every stop.

As the technology is about bonding particles into surfaces, matrices of particles need to be built up after application. The treatment reaches full performance AFTER a cure time of approximately 72 hours, which is dependent upon environmental variables, humidity and ambient temperatures. Tests for performance should be done after full cure. However, the surface can be used and exposed 60 minutes after application.

Limitations

- Do NOT apply on clear glass as the risk of permanent fog exists. TA2201`can be applied on clear glass during the production process of glass only.
- Re-apply regularly on paths or walking areas that are in heavy use.
- When installing over poor, greasy or dirty surfaces, the bonding of nC® Nadicare® TA2201 will become erratic, and so will the results be.
- Do NOT freeze product or store in subzero areas.
- Do not allow application during freezing temperatures.
- The selfcleaning effect will not occur in poor visible light, the effective light spectrum is < 400nm for UV-light only.

Logistic info

- Store nC® Nadicare® TA2201 at temperatures between +5° C and +30° C.
- Store nC® TA2201 for max. 6 months in unopened containers counting from production date.



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Logistic info

- Storage life for opened containers is 4 weeks, keep containers tightly sealed and store in a dark place.
- **Avoid freezing product.**
- nC® Nadicare® TA2201 is available in 5L, 25L and 200L containers.
- Never use pressure to empty containers.
- Dispose of contents/container in accordance with local/regional/national/international regulations.
- UN number DOT, IMDG, IATA: 1993
- Shipping name DOT, IMDG, IATA: Ethanol Mixture
- Transport hazard class DOT, IMDG, IATA: 3
- Packaging group DOT, IMDG, IATA: II
- Environmentally hazardous: No
- Marine pollutant: No

Typical properties

- TiO₂, H₂O, WO₃, SiO₂, Ethanol
- Appearance: yellowish transparent liquid
- Active material: >1,5% by weight
- Effective light spectrum: up to 400 nm
- pH value: approx. 5,5
- Primary particle size: 8 -20 nm
- Specific Density: 0,91 g/ml

