

# Anti Graffiti Non Porous

Technical Data Sheet

**Nm**<sup>TM</sup>  
Nanoman

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## 1 Description

Nanoman Anti-Graffiti Non-Porous is an advanced, high performance, long lasting one coat, anti-graffiti coating specially formulated to protect non porous surfaces from the permanent defacing of undesirable graffiti.

With Nanoman Anti Graffiti Non-Porous it's easy to protect metal surfaces, monuments and infrastructure from graffiti vandals. The anti-graffiti coating makes graffiti removal simple and quick without damaging the surface, painted or otherwise. It eliminates the need for costly repainting, repairs and labour-intensive cleaning.

Nanoman Anti Graffiti Non-Porous provides a thin barrier between the graffiti and the surface it's applied to, creating a new, easy to clean surface that prevents the graffiti from ever touching the protected surface underneath. This long lasting barrier between the substrate and graffiti allows the continued removal of graffiti without damage to underlying paint, or the substrate itself.

The invisible finish is abrasion resistant and will not yellow with age. Nanoman Anti Graffiti Non Porous is highly resistant to most types of aerosol spray paint and permanent markers, as well as dirt, chewing gum, oil, soot and pollution. Surfaces protected with Nanoman Anti Graffiti Non Porous prevent the adhesion of graffiti and makes removal of paints and permanent markers so much easier.

Unlike other anti-graffiti coatings that erode away after a few cleanings, Nanoman Anti Graffiti Non Porous allows graffiti to be removed numerous times without reapplication. Spray, brush or roll it directly to metal surfaces. It applies and dries quickly, with excellent adhesion properties.

Nanoman Anti Graffiti Non Porous is eco friendly as it eliminates the need for harsh environmentally damaging chemical graffiti removers. In addition, coated surfaces become hydrophobic and easy clean / self cleaning to normal environmental contaminants increasing the life of the coated item.

Nanoman Anti Graffiti Non Porous is truly the 21<sup>st</sup> century cost effective solution to for contractors, councils, building managers and property owners in controlling and eliminating graffiti.

Applied correctly and in accordance with this TDS, Nanoman Anti Graffiti Non Porous will remain effective for approximately 7 to 10 years.

## 2 Features and Benefits

- Reduction in time and cost to remove graffiti.
- Graffiti can be removed easily, leaving no residue.
- Non sacrificial - sustains multiple graffiti removals.
- Single coat application.
- Long lasting and durable.
- Reduction in the use of consumables and removers.
- No ongoing recoat and unsightly colour patches.
- Does not alter the visual appearance of the substrate.
- Excellent Hydrophobic properties providing an easy/self cleaning surface.
- High temperature-resistance – UV-stable.
- No moss or fungus formation.
- Enduring protection for the surface structure.
- Extremely weather-resistant.

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### 3 Application

Nanoman Anti-Graffiti Non-Porous is particularly suitable for smooth, non-absorbent surfaces, such as one or two component paints (polyurethane or epoxy systems), polyester paints, GRP surfaces, and for metal surfaces like aluminium, zinc, stainless steel, copper and several alloys (e.g. brass and bronze).

Typical applications for Nanoman Anti-Graffiti Non-Porous include:

- All metals and alloys including Aluminium, Stainless Steel, Copper, Brass and Tin.
- Tank equipment and industrial plants (inside and outside).
- Traffic signs.
- Public transport vehicles and shelters.
- Ventilating systems.
- Shipping Containers.
- Mining Equipment.
- Metal bollards, cabinets and outdoor furniture.
- Bridges.

### 4 Surface Preparation

The substrate to be coated must be clean, grease-free and ABSOLUTELY DRY. Areas which are difficult to reach, such as cavities or drainage channels etc. must be dried additionally with absorbent cloths or blown dry with compressed air. On contact with a damp substrate surface, Nanoman Anti-Graffiti Non-Porous reacts prematurely and cannot form a permanent seal.

The substrate temperature must be between + 5°C and + 30 °C, the relative humidity at 30 %-80 %.

Nanoman Anti-Graffiti Non-Porous will not adhere to a surface with oil, grease, silicone, wax or fluorination present. It is important to remove surface contaminants using a sodium hydroxide-based cleaner. Solvents like acetone and paint thinner are also effective at removing surface contaminants. If using these solvents please ensure that they are kept away from heat, open flame and do not apply to hot metals or painted surfaces.

#### Specific instructions:

New metal	Degrease with a suitable solvent e.g. lacquer thinners, prior to painting.
Rusted metal	Use a wire brush or chip with a chipping hammer to remove all loose, flaking surface rust, scale and flaking paint.
Previously painted surfaces	If there is any uncertainty as to whether there may be rust spots developing under the existing painted surface, we recommended that the old paint is completely removed before coating.

### 5 Directions for Use

Nanoman Anti-Graffiti Non-Porous is supplied ready-to-use.



Apply Nanoman Anti-Graffiti Non-Porous using:

- HVLP, Conventional or Airless spray equipment. Spraying is the preferred method of application. It produces the best result once cured.
- Application by Roller. Use a small roller for best result. Apply a thin strip of product on the roller and apply to the surface. **Do not** inundate the roller as this will result in runs and may be difficult to obtain an even



coverage. Allow the initial coat to tack-off for about 30 seconds and then re-roll the surface without applying any more product. This will result in a smoother and more even finish.

- Application with a paint brush. Suitable only for irregular shaped objects such as hand rails minor joins. Can result on streaking when dry so do not apply to sheet metal or in highly visible areas. Do not apply too much product as this will result in streaking when dry.

Guide	Spray Nozzle	Spray Pressure
<p><b>Suction Feed</b></p> 	<p>HVLP 0.8 – 1.3mm</p>	<p>50 - 60 PSI</p>
<p><b>Gravity Feed</b></p> 	<p>HVLP 0.8 – 1.3mm</p>	<p>50 - 60 PSI</p>

Nanoman Anti-Graffiti Non-Porous must be applied at an ambient temperature of at least + 5 °C and a relative humidity of 30%-80%. Avoid direct sunlight. Apply the coating in dry conditions and never in rain. Any mistakes can be rectified within approx. 10 min of application.

It is important to only apply a light film. Do not spray using a back and forth motion as this applies too much as this will apply too much product which may result in streaking. A single pass using a medium to wide spray pattern is sufficient to get the correct coverage on the surface.

After this the repellent effect of Nanoman Anti-Graffiti Non-Porous makes it impossible to apply another coat. During application, only small quantities should be decanted from the original container into the application container. Residues of unused Nanoman Anti-Graffiti Non-Porous should not be returned from the application container to the original container.

If there is high wind, this will affect the quality of the finish, as wind can disrupt the spray pattern from your HVLP and it can contribute to contamination of the finish from blowing dust. Take necessary precautions against natural elements and other trades working at the same time.

Traces of water in the applicator should also be avoided. Applicators dampened with water **MUST NOT** be used. If dirt appears on the applicators during coating, they should be replaced with clean applicators to avoid dirt entering the coating.

The applicators cannot be reused once the coating has been applied. If the solution in the application container solidifies or a deposit forms, it can no longer be used. Solutions that are no longer useable must be disposed of properly. Nanoman Anti-Graffiti Non-Porous is dry-to-touch after about one hour.

Clean equipment immediately after using Acetone. Never clean spray equipment with water.

The spray gun and nozzle can also be cleaned with n-butyl acetate.



## 6 Coverage

The average coverage rate using the recommended HVLP spray gun is 10 -12ml per square metre.

Avoid application in windy conditions.

Nanoman Anti-Graffiti Non-Porous is a single coat application. Avoid applying excessive amounts of the coating and do not apply multiple coats.

If there is an excess of coating on the surface material, spread it out evenly using a clean sponge or soft cloth whilst it is still wet. Nanoman Anti-Graffiti Non-Porous will be touch dry after about one hour.

## 7 Cure Time

- Touch dry: 1 hour.
- Completely dry: 4-5 hours.

The recommended curing conditions are:

- 80 °C: two hours (if using heating equipment )
- 130 °C – 180 °C: one hour (if using heating ovens)
- Ambient room temperature: 8–12 hours cure time at 22°C, 50% R.H.

The coating is fully cured after 5–7 days at room temperature.

## 8 Physical Characteristics

- Appearance: colourless to pale yellow liquid
- Density: ca. 0.92 g/cm<sup>3</sup>
- Binder base: Organic polysilazane
- Solvent base: n-butyl acetate
- Flash point: < 21 °C

## 9 Packaging

Nanoman Anti-Graffiti Non-Porous is available in the following pack sizes.

- 125ml
- 250ml
- 1 Litre

## 10 Shelf Life and Storage

Nanoman Anti-Graffiti Non-Porous is sensitive to moisture contamination. It is very important to quickly close the container immediately after opening. Do not leave the container cap open for extended periods, which will allow solvents to evaporate and crosslinking to begin.

### Shelf Life:

- 12 months from delivery date, at 20 °C
- Storage temperatures must be dry and between 4°C and 22°C. Higher temps will decrease shelf-life.
- Shelf life opened: 6 months



- Container must be closed immediately after use to avoid moisture contamination.
- Do not leave container open for extended periods to avoid moisture contamination.

## 11 Safety Instructions

The instructions on the Safety Data Sheet must always be followed.

Consult SDS for proper handling, clean-up, disposal, and use of personal protective equipment. Circulate sufficient air to maintain working environment below the PEL and LEL. Apply according to local, state, and federal (OSHA) regulations.

Nanoman Anti Graffiti Non-Porous was developed to cure or crosslink in the presence of humidity. As a general rule, higher humidity results in a faster cure cycle. Lower humidity results in a slower cure cycle. Higher humidity may reduce flow and levelling of the coating.

It is important to spray Nanoman Anti Graffiti Non-Porous in a dust-free environment to avoid surface contamination. Appropriate ventilation, approved respirator, protective clothing and rubber gloves are required to apply the Coating and for handling application equipment.

## 12 Surface Maintenance

Surfaces coated with Nanoman Anti-Graffiti Non-Porous do not need any special cleaning regime. After coating, the surface should be self-cleaning with rain or mechanical water spray.

If cleaning is necessary, we recommend using a low pH soap and water for clean-up. If the surface is attacked with graffiti, chewing gum, etc, we recommend the use of Nanoman Graffiti Remover to remove.

Surfaces coated with Nanoman Anti Graffiti do not need any special cleaning regime. After coating, the surface should be self cleaning with rain or mechanical water spray.

If cleaning is necessary, we recommend using a low pH soap and water for clean-up.

Regular physical inspections are recommended to look for any coating damage and graffiti requiring removal (the sooner graffiti is noticed and action taken the easier it will be to remove).

### 12.1 Graffiti Removal Procedure

There are many forms of graffiti ranging from chalk and water based paints through to permanent markers, lipstick and oil based aerosol paints. The length of time graffiti has been on a surface usually impacts how easily it can be removed - the longer, the more difficult.

Depending on the substance to be removed, each type of graffiti is best removed via a combination of Nanoman Graffiti Remover, "gentle" agitation and **low/medium** pressure water spray.

We recommend the following graffiti removal method, as we know it works on all graffiti:

1. Always wear protective clothing, gloves and goggles when dealing with graffiti removal.
2. Work on a small area at a time as this will prevent the spread of paint as it is being removed. We suggest no more than a few centimeters at a time.
3. Liberally apply by spray bottle Nanoman Graffiti Remover to the graffiti and allow it to react with the paint for 60 seconds. On vertical surfaces, place a cloth under the area sprayed to prevent run-off.
4. Spray again to moisten the area and then, using a clean rag or cloth, GENTLY wipe the paint in the direction of the existing graffiti. (Start at the outer edges of the graffiti and move in.) This will avoid spreading the paint as it is removed.
5. Repeat step 4 until the paint is removed. If some paint remains, apply a bit more pressure to the area or gently agitate using a soft bristle brush. Do not aggressively scrub, as this will potentially damage the coating



and/or substrate itself.

6. When the paint is gone, rinse the area thoroughly with a low to medium pressure water sprayer. Most Graffiti can be removed with water pressure generated from a standard garden hose or spray bottle. For large areas a water blaster may be used to assist with graffiti removal with pressure not to exceed 800 psi.
7. This process may need to be repeated more than once to completely remove stubborn graffiti.
8. Once the graffiti is completely removed rinse the area with water to remove any residues from the wall and ground.
9. Dispose of rags and waste thoughtfully.

### **Graffiti Removal Hints**

1. Always remove Graffiti as quickly as possible, as it is usually easier to remove and deters repeat offences.
2. Always try to identify the graffiti medium to be removed as given the nature of Nanoman Anti Graffiti Coating some graffiti can be removed with just water or water and a mild detergent.
3. Do not attempt to remove graffiti by aggressively scrubbing or by using excessive force. Repeated gentle rubbing and use of Nanoman Graffiti Remover will ensure the paint is removed without damaging the coating
4. Do not use abrasive brushes or tools that could potentially damage the coating.
5. When using a pressure washer always use a fan-type nozzle. A spray fan angle of 15-50 degrees is considered best for graffiti removal and general surface cleaning. Larger angles reduce spray impact but increase area coverage, while a 0 degree pencil jet produces an intense impact harmful to soft or crumbly masonry and wood surfaces.
6. It is recommended that the graffiti to be removed be approached at a steep angle (as close to the wall with the spray wand as possible) to undercut the graffiti as much as possible. This will allow it to "peel" from the surface. Coming straight at the graffiti to be removed may drive it further into the surface.
7. Avoid using pressure power washers if possible, as repeated use of this method will eventually break down the coating. If the Nanoman Anti Graffiti Coating is damaged, lightly sand the surface of the coating (not the substrate) with 220 grit sandpaper being careful not to disrupt the substrate. Then reapply the coating.

## **13 Disclaimer**

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. Users should satisfy themselves that it is suitable for their needs. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. As we cannot control or anticipate the conditions under which this product may be used, each user should review the information in specific context of the planned use. To the maximum extent permitted by law, Nanotech Products Pty Ltd will not be responsible for damages of any nature resulting from the use or reliance upon the information contained in this data sheet. No express or implied warranties are given other than those implied mandatory by law.

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