NanoQuinn:

Nanotechnology Powered – 9H Ceramic Nanocoating

Technical Data Sheet

1 Description

What is a ceramics coating?

NanoQuinn: Nanotechnology Powered – 9H Ceramic Nanocoating is a glass coating based on silanes. The coating can be applied as either a thick layer of approximately 10 microns on to surfaces which are not highly reflective or the coating can be applied and then buffed thus reducing the coating thickness to approximately 2 microns. This latter procedure is normally used in the auto sector. The coating is neither paint, wax nor a sealant, and cannot flake off or be washed off. The coating forms a durable ("covalent") bond with the paint, and it can only be removed by strong abrasive forces. The coating cannot be dissolved by standard chemicals which are commonly used in the auto sector.

The coating provides a highly glossy appearance but like all surfaces abrasion will eventually impact on the coating. The useful life of the coating will depend on the amount of abrasion that the surface is subjected to.

What is 9H?

We use the familiar "pencil hardness" to describe the hardness of a layer. The measuring range is between 6B (smoothest) and 9H (hardest). The **NanoQuinn: Nanotechnology Powered – 9H Ceramic Nanocoating** achieves a hardness grade of *8H (drying at indoor temperature) up to 9H (heat drying).

*The hardness of a coating is measured when the coating is applied to a metal test bed. If the coating is applied to a soft painted surface the hardness of the coating will remain constant but the underlying soft painted surface and the coating can be distorted if point loading pressure is applied.

This highly advanced coating has been specially developed for the demanding requirements of the auto, aviation, marine, military and trans- port sectors. It is extremely resistant to corrosion, abrasion, and temperatures, and can be applied to metal, plastic, powder-coated, and painted surfaces. Curing can occur at ambient temperature but the additional application of heat is also advantageous. The coating forms an extremely strong bond with the surface, and creates an abrasion-resistant finish with very high resistance to solvents.

The thin and transparent coating possesses extreme stability, and a degree of hardness up to 9H can be achieved. Suitable for all kinds of vehicles (including vintage cars), motorcycles, caravans, and boats.

2 Features and Benefits

- Clear, colorless liquid based on silanes. Contains solvents.
- Extremely abrasion-resistant, with very high adhesive properties, and high impact strength
- Hydrophobic, oleophobic and stain-resistant
- Suitable for spray or manual application.

- After polishing the surface will become "ultra shiny"
- "Easy-to-clean" effect surfaces stay cleaner for longer, and all cleaning becomes very easy, thus extending the cleaning intervals and reducing cleaning and maintenance costs.
- Highly effective for 5 years on exterior surfaces & 20 years on interior surfaces.
- Application with electric polishing machine possible Material consumption for an entire car, approx. 50ml

3 Application

Rims, head lights, windscreens, windowpanes, door handles. Also suitable for a wide range of other materials... non-ferrous metals, galvanized (zinc-coated) metals/steel, painted and powder-coated surfaces, anodized aluminium, and plastics.

NanoQuinn: Nanotechnology Powered – 9H Ceramic Nanocoating can be applied to almost any (car) paints. To attain optimum performance, it is essential that the target surface is to perfectly clean; it must be completely free from waxes, silicone coatings, etc., otherwise the coating will not be able to bond to the surface.

Before full application, please always carry out a test on an inconspicuous location (eg. in the engine compartment or the car). Do not apply the coating to freshly painted surfaces as the paint must completely cured before application.

4 Cleaning / Surface Preparation

This product is a product for professionals, therefore it is recommended to practice the application to "get a feel" for the application process. In addition, the polishing process should be practiced so that the desired level of gloss finish is attained.

First, meticulously pre-clean the car paint; for this you may use the bio-intensive organic cleaner. After completion of the general cleaning process, deep clean the surface with alcohol (e.g. at least 70% isopropyl or ethanol alcohol, we supply these liquids if required) so that all contaminants are removed. The use of a clay bar cleaning process is also suitable. The simple message is that the coating should only be applied to surfaces which are free of contamination.
The better you perform the pre-cleaning, the better the adhesion and subsequent longevity of the coating.

5 Directions for Use

Step by step instructions:

1) Prepare the surface as already described.

2) Use a thin and smooth microfiber cloth to apply the finish (a cloth of approximately 25 x 25cm is recommended). Completely moisten the cloth with **NanoQuinn: Nanotechnology Powered – 9H Ceramic Nanocoating.** Apply the finish swiftly and evenly by wiping (always in one direction).

3) Next, (after 1-2 minutes) polish the coated surface, without excessive pressure, using a smooth cotton or microfiber cloth (ensure that a lint free fabric is used).

Do not wait longer than 2 minutes before this first buffing action. You must ensure not to aggressively remove too much of the finish. Ensure that all blemishes are removed. If for some reason you delayed the polishing process, and high spots" occur, immediately apply another layer of the finish; this will soften the layer below, and you may polish anew. Finish the buffing with a fine soft peach skin texture microfiber.

4) In warm conditions the coating becomes dust dry after 2 hours and touch dry after 5 hours. After this, the finishing will be dry enough that you may use the vehicle again but the coating is still far from being fully cured and so avoid brushing against the surface with bags or keys.

The coating will cure faster if the surface is hot and so it will be advantageous to place the car in direct sunlight after the first 2 hours of curing.

Within the following 10 days the vehicle should not be cleaned as complete curing takes at least 8 days (depends on the temperature and the humidity), otherwise the finish may be damaged, especially if a drive through car wash is used.

6 Safety Instructions

The application process.

Please ensure that the application is performed in a well ventilated and dust-free area. We recommend that you use a protective mask during application as the liquid has a strong odour. Wearing protective gloves is also recommended.

The surface to be coated should be not too hot; so do not coat the car paint if the car was located directly under the sun before, otherwise the liquid will "flash off" and initial curing will be too rapid, and the polishing will be considerably more difficult. Ideally the process should be conducted at an ambient temperature of 25°C. (+/-5°C)
Plan your work. Apply the coating in small sections eg, one body panel at a time. We recommend that you work in a team, e.g. one person applies the finishing, and the other person polishes it promptly.

7 Coverage

- Application Temperature: +5°C - +35°C
- m2 per litre: up to 130m*
- Durability of the coating: up to 5 years on exterior surfaces & 20 years on interior surfaces

8 Cure Time

- 7 days at 20°C, 1 day at 60°C, Surface is dust-dry after-2 hours

9 Physical Properties

- **Temperature resistance**

  The coating is heat-resistant up to 750°C, and cold-resistant up to -90°C.

- **Oxidation and corrosion resistance**

  Bare metal will oxidize over time, as will painted surfaces. **NanoQuinn Nanotechnology Powered – 9H Ceramic Nanocoating** is very dense and it protects paint and metal against contact with water and oxygen, and is therefore a highly effective corrosion resistant layer.

- **High resistant against chemicals**

  The coating is 100% resistant against chemicals/solvents, to which vehicles are generally exposed.

10 Shelf Life and Storage

- Shelf life of the liquid: 24 months in the original bottle, 6-12 months after opening
- Storage Temperature: +5°C - +20°C

11 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 the specific context of the planned use. To the maximum extent permitted by law, **Quinn Innovations** 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.