




# DIAMOND PROTECH<sup>+</sup>

NANODIAMOND COATING TECHNOLOGY

A close-up, low-angle shot of a dark-colored car, focusing on the front left side. The image shows the side mirror, the hood, and a large, multi-faceted headlight. The car's surface is highly reflective, showing highlights and shadows that emphasize its sleek design. The background is a plain, light gray.

**DIAMONDS ARE CAR'S BEST FRIEND**

# TABLE OF CONTENTS

<b>NANODIAMOND COATING TECHNOLOGY</b>	<b>4</b>
<b>COMPOSITE COATINGS PIONEERS</b>	<b>5</b>
<b>THE SCIENCE OF NANODIAMONDS</b>	<b>6</b>
<b>EASE OF APPLICATION FEATURES</b>	<b>8</b>
<b>EFFICIENT LAYERING AND THICKNESS</b>	<b>10</b>
<b>TREMENDOUS DURABILITY</b>	<b>12</b>
<b>CONSUMER PRODUCTS</b>	<b>18</b>
<b>PROFESSIONAL PRODUCTS</b>	<b>22</b>

# NANODIAMOND COATING TECHNOLOGY

DIAMOND PRO TECH's patented technology has revolutionized the way the world's hardest inorganic polymer (perhydropolysilazane – PHPS) is used. We invented a breakthrough method to merge a matrix of enriched nanodiamonds with inorganic PHPS to create a flexible coating appropriate for cars.

DIAMOND PRO TECH offers breakthrough technology for both consumers and professional automotive detailers:

- **Ease of Use** – our products are easier to use than existing technologies, quickly inspiring confidence during the application process.
- **Efficient Application Process** – faster curing times allow for quicker turnaround time.
- **Heat and UV-resistant**
- **Hydrophobic** – amazing water repellency that lasts
- **True 9H Hardness**– highest abrasion resistance that technology can offer
- **Ecologically Cleaner** – minimal environmental impact
- **Tactile Feel** – Super Smooth! Like no other product on the market today.

# COMPOSITE COATING PIONEERS

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DIAMOND PRO TECH's coatings are based on an innovative combination of enriched nanodiamonds and perhydropolysilazane (PHPS).

**Diamonds** are the hardest natural material on the planet. When reduced down to nano size and enriched, they can be blended with polymers. DIAMOND PRO TECH has mastered the mixing of enriched nanodiamonds and PHPS to create an evenly distributed, diamond armored, elastic coating with inherent hydrophobic characteristics.

**Perhydropolysilazane** is the hardest of transparent silicon-based polymers that cure at natural temperatures. It is heat-resistant, UV-resistant, water-repellent, and provides the highest surface hardness and abrasion resistance that technology can offer. Inorganic versions will not react with organic elements, thereby reducing corrosion.

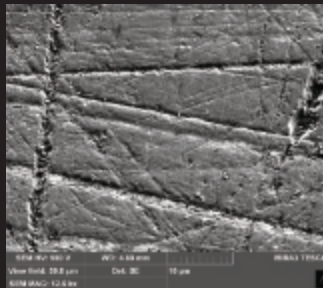
# THE SCIENCE OF NANODIAMONDS

## DIAMOND ARMOR

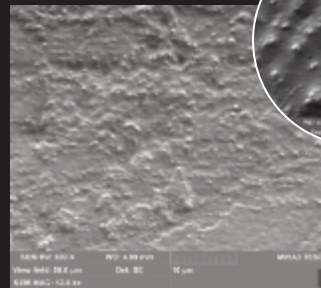
Our enriched nanodiamond coatings fill the micropores of your vehicle's body, creating a smooth, even surface armed with millions of nanodiamond particles locked in a molecular matrix anchored on the car's clearcoat. Whether on a car body or its windows, the dirt and water repellency performance provided by DIAMOND PROTECH coatings will amaze you.

Surface view of car paintwork before and after NGNT® coating

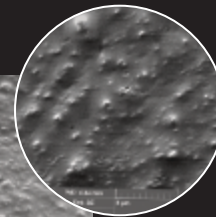
Studies of the samples of the protective coating were carried out using a scanning electron microscope high resolution  
Tescan Mira LMU.



VEHICLE PAINT  
BEFORE NGNT  
COATING



VEHICLE PAINT  
AFTER NGNT  
COATING



NANODIAMOND  
CLUSTERS



## HYDROPHOBICITY

DIAMOND PROTECH coatings have been tested and verified by SGS (sgs.com) the world's leading independent test company. They documented that nanodiamonds, enriched by our proprietary processes, take on superhydrophobic characteristics on top of what hydrophobic characteristics that PHPS already provides.

The pictures below show a  $142^\circ$  contact angle of a drop of water on enriched nanodiamond particles.

Measurement of the contact angle on enriched nanodiamonds

The hydrophobic properties of nanodiamonds were evaluated using an OCA 20 tensiometer (DataPhysics Instruments GmbH). Nanodiamonds were applied to the paper and liquid (distilled water,  $T = 24^\circ \text{C}$ ),  $V_{\text{drop}} = 6 \mu\text{l}$



A DROP OF WATER ON  
ENRICHED  
NANODIAMONDS

**$142^\circ$**   
Contact Angle  
on enriched  
nanodiamond  
particles

# EASE OF APPLICATION FEATURES

## CONTROLLED FLASHING

DIAMOND PROTECH Coatings are designed with the professional detailer in mind.

Our products combine ease of application and high performance without compromising either characteristic.

We have engineered our coatings to flash slowly enough to allow a very controlled and stress-free application process.

No need to worry about difficult to remove high spots ever again!



## ACCELERATED CURING TIME

Many coatings use solvents which evaporate slowly forcing the coated car to be kept for up to 24 hours in a controlled environment so that the coating polymers can bond to the car body.

DIAMOND PROTECH coatings are engineered to minimize downtime during the application process.

We use the cleanest, fastest-evaporating solvents, allowing the polymers to quickly bond with the car body which almost immediately solidifies into the protective layer.

Cars can be prepped, coated and returned to customers in the same day.



# EFFICIENT LAYERING AND THICKNESS

## TRUE LAYERING

DIAMOND PROTECH® coatings are so superior, they don't require more than one application layer but multiple layering provides additional benefits. Some customers may want a deeper finish or even longer performance. For those situations, Diamond ProTech offers professional detailers the most efficient layering in the industry.

Many other products have solvent bases which will partially degrade the previous coating on application so in the end, you only end up with 20% – 50% additional thickness after two layers are applied. Diamond ProTech uniquely offers 1:1 layering.

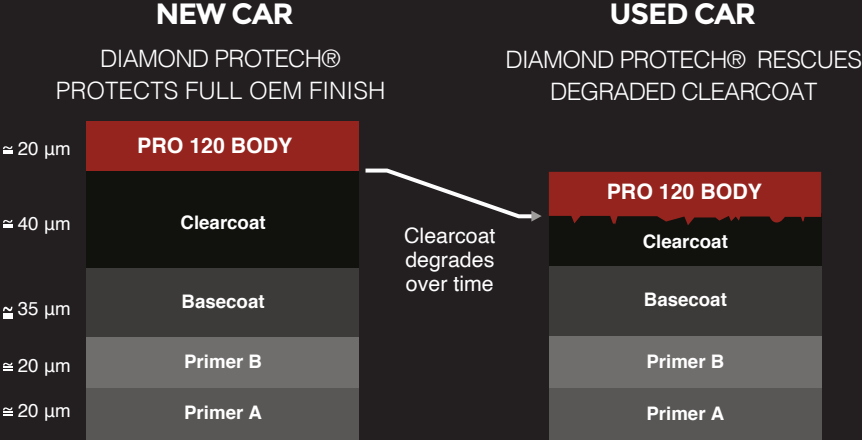
These measurements done under a Tescan® scanning electron microscope shows a sample of a car body with factory paint coated with our Diamond Pro Body 120 package. Measurements were done on coated and uncoated panels to retrieve the coating thickness measurement.



DIAMOND PROTECH® coatings do not degrade their base coatings so that two layers results in a full 2x coating!

# ACTUAL THICKNESS

Our coating technology allows for a 1:1 build up with each layer added. When using DIAMOND PROTECH Nanodiamond Composite Coatings, you will be adding the strongest protection available on the market today. Applying any of our coating products to a new vehicle increases the quantity and quality of protection provided by the car manufacturer. When applied to a used car, you are restoring the sacrificial gelcoat layer protecting the original paint work which degrades over time.



# TREMENDOUS DURABILITY

## PROVEN HARDNESS FROM INDEPENDENT LABS

In the coating industry, a product's hardness or ability to resist scratches can be measured by the Pencil Scale. DIAMOND PROTECH® Nanodiamond Technology has been tested and verified by SGS, the world's leading testing and certification company.

### SGS Test Results:

DIAMOND PRO TECH's nanodiamond coatings have been certified to achieve a Pencil Scale Hardness of 9H.

#### Tests:

Pencil Scale Hardness Test – ASTM D3363.

PHPS +  
Nanodiamonds  
=  
Maximum  
Hardness

## YEARS OF ULTRA-HARD PROTECTION

DIAMOND PROTECH coatings are designed to last for years and years. There are many measures of durability yet one of the most popular tests is the Taber Abrasion Test.

### **SGS Test Results:**

The Taber Abrasion test using NGNT®Composite Coating “increased the abrasion resistance of the original automotive coating by +1017%” which renders as an abrasion resistance similar to glass.

#### **Tests:**

Taber Abrasion Test – ASTM D4060

**+1017%**  
**Abrasion Resistance**  
**compared to**  
**OEM clearcoat**

## OXIDATION & CORROSION RESISTANT

Simulation of tough environmental corrosion and mechanical damage tests on Diamond ProTech Coating applied on OEM automobile coatings showed better abrasion, corrosion and better UV protection characteristics than the original automotive coating.

### SGS Test Results:

Diamond ProTech coatings passed all tests without showing defects, such as delamination, crack, blister, or rust.

#### Tests:

Neutral Salt Spray – ASTM B117 – 480hrs  
Adhesion Grade – ISO240  
Corrosion/ Delamination – ISO4628-8

**No Defects under  
Harsh Weathering**



## CHEMICAL RESISTANCE

Samples of the original car body segment steel base (with original car paint) were provided to SGS laboratories to undergo various comparative testing programs. They were next compared to the same car body segments protected with DIAMOND PROTECH Composite Coating.

### **SGS Test Results:**

DIAMOND PROTECH Composite Coating belongs to the category of “High Level of Chemical Resistance” and is resistant to acids and alkali chemical agents with a pH of 1-14.

#### **Tests:**

Concentrated Acid  
and Alkali Resistance  
Tests – ISO2812-1(modified).

**pH 1-14**  
**Chemical  
Resistant**

## IMPACT RESISTANCE

This test simulates gravel strikes on a coating while driving. Premium Nano Diamond coating protection is applied with a 2.8 microns' thickness.

Tests results show that it reduces the damage by impact by 70%

### Motivex Lab® Test Results:

The test aims at testing the protective capabilities of the coating, when harmed by stones on the road.

Instrument: Gravelometer ID.397

#### Tests:

Test Method: SAE J400: 2012

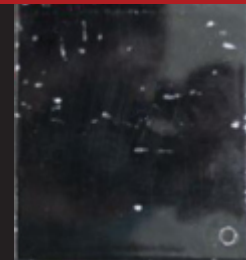
Pressure: 4.8 BAR

Gravel-water-eroded alluvial road  
gravel 8 mm to 16 mm in size

WITHOUT  
NANODIAMOND  
COATING



WITH  
NANODIAMOND  
COATING





## TEN YEAR TESTED

Diamond ProTech based its claims on scientific & physical-mechanical results.

Our main mission is total protection while preserving a car's beauty. We have also designed and included all other characteristics that car coatings need to be successful in the market.

Our strength is based on empirical tests.

# DIAMOND PROTECH CONSUMER PRODUCTS

## VEHICLE PROTECTION WITH PROFESSIONAL RESULTS

Our easy to apply coatings allow car enthusiasts to coat their vehicles at home. We have products for first timers, as well as advanced users. Check out our line of coatings and get started immediately!



## Diamond Body

### Super-Hydrophobic 18 Month Coating

Diamond Body is our breakthrough nanodiamond coating that doesn't require professional training to achieve amazing, hydrophobic results on your vehicle. Prep the car then apply with ease. Diamond Body will yield up to 18 months of hydrophobic protection.

## Diamond Body 36

### Intense Candy Apple Shine and Slick Feel

Diamond Body 36 offers many characteristics of professional vehicle coatings yet doesn't require professional training. With proper preparation, Diamond Body 36 will yield up to 36 months of hardened, hydrophobic protection while your car exhibits an intense candy apple shine.



## Diamond Glass

### Lasting Glass Protection

Diamond Glass offers your car windows extreme repellency to water, ice, and dirt. This nanodiamond coating is easy to apply with long-term professional results offering up to 12 months of hydrophobic protection.



## Diamond Interior

### Plastic/Vinyl/Synthetic Material Protection

Diamond Interior is formulated for interior surfaces such as vinyl, plastic and trim. Diamond Interior will restore and enrich vehicle interior surfaces while providing up to 12 months of UV, water, and stain resistance.



## Diamond Leather

### Natural Leather Protection

Diamond Leather is a nanodiamond coating that is specially formulated for leather surfaces. Creating a transparent protective layer, Diamond Leather will repel oil, grease and water for up to 12 months.

## Diamond Wheels

### Beautify and Protect Your Wheels

Diamond Wheels nanodiamond coating is resistant to high temperature exposure while providing all the benefits of a paintwork coating. With proper preparation, Diamond Wheels will provide up to 12 months of brake dust and road grime protection and make your wheels always stand out!





## **Diamond Quick Body**

### **Fast and Effortless Protection**

Diamond Quick Body is an effortless, nanodiamond hybrid SiO<sub>2</sub> spray coating which yields 6 months of hydrophobic protection. This spray and wipe formula will maintain and enhance our coating systems - protecting from UV oxidation and hydrophobicity. Immediately results in a slick, caramel gloss appearance on any coated or non-coated vehicle.



## **Diamond Glass Prep**

### **Prep Solution for Ideal Glass Bonding**

Diamond Glass Prep uses nanodiamond cleaning power to remove dirt, streaks and oily residue from glass surfaces. This is a necessary preparation step prior to applying Diamond Glass coating.



## **Diamond Body Prep**

### **Prep Solution for Ideal Paint Bonding**

Diamond Body Prep is our ideal paint surface cleaner that will remove all polish residues, waxes and sealants to prep for optimal bonding of nanodiamond protective coatings.

# DIAMOND PROTECH PROFESSIONAL PRODUCTS

## PROVEN VEHICLE PROTECTION

Diamond ProTech professional products benefit your business: Quick & Easy Installation + Fast Curing Times = Same Day Client Service



## PRO 36

### Our 3 Year Coating System

PRO 36 offers superlative results in every coating performance category yet applies quickly and easily. With proper preparation, PRO 36 will yield up to 3 years of hardened, hydrophobic protection while your car exhibits an intense candy apple shine.

## PRO 60

### Our 5 Year Coating System

PRO 60 is a composite of inorganic polysilazane infused with millions of nanodiamond particles, creating the most extreme scratch resistant coating available on the market. Combined with PRO HYDRO, our long-lasting hydrophobic topcoat, this package creates an intense mirror-like gloss and irresistible slickness.





## PRO 120 & PRO 120 SPRAY

### Our 10 Year Coating System

PRO 120 is a multi-stage, top-of-the-line nanodiamond coating. Utilizing our most sophisticated, nanodiamond formula, PRO 120 creates immense protection, scratch resistance and rich color depth. Combined with PRO HYDRO, our long-lasting hydrophobic topcoat, this package creates an intense mirror-like gloss and irresistible slickness. With proper preparation, PRO 120 will yield up to 10 years of hardened, hydrophobic protection.







## PRO WHEELS SPRAY

### Beautify and Protect Your Wheels

PRO WHEELS SPRAY is a protective composite that can withstand temperatures of over 1000°C/1832°F. Use it to coat wheel rims, brake calipers and even exhaust systems. It will prevent brake dust corrosion and keep rims glossy and beautiful for 1 year.

## MAINTENANCE KIT

### The Ideal Maintenance Combo

Diamond Body Prep is an ideal paint surface cleaner that will remove all polish residues, waxes and sealants to allow an optimal bonding for nanodiamond protective coatings.

Diamond Quick Body is an effortless, nanodiamond hybrid SiO<sub>2</sub> spray coating which yields 6 months of hydrophobic protection. This spray and wipe formula will maintain and enhance our coating systems - protecting from UV oxidation and hydrophobicity. Immediately results in a slick, caramel gloss appearance on any coated or non-coated vehicle.



DIAMOND ARMORED  
(9H+)

SCRATCH  
RESISTANT

OLEOPHOBIC  
& DIRT REPELLING

CORROSION  
& OXIDATION  
RESISTANT

TREE SAP &  
BIRD DROPPINGS  
RESISTANT

ENHANCED  
WATER BEADING

CHEMICAL  
RESISTANT

UV  
RESISTANT

# DIAMOND PROTECH

27

DIAMOND PROTECH IS A BRAND BELONGING TO  
NGNT MATERIAL SCIENCES S.A. SWITZERLAND



**NGNT OPERATES ON RESEARCH & DEVELOPMENT ON NANOTECHNOLOGY COMPOSITES.**

The laboratory and production facility is based in Switzerland, surrounded by the Swiss alps, at the Y-Parc Swiss Technopole, within a flourishing ecosystem dedicated to the latest technological innovations.

NGNT operates from a dedicated laboratory where R&D and production are executed. Similarly, we partner with The Engineering University of Yverdon Les Bains to enlarge the scope of our inventions and develop additional innovative products.

NGNT is the first materials science company to successfully use enriched nanodiamonds in protective coatings. This breakthrough allows coating formulations to achieve significantly greater hardness and durability whilst still being easily applied by both consumers and professionals.



# DIAMOND PROTECH

DIAMOND  
PROTECH 

## NGNT HEADQUARTERS

NGNT Material Sciences SA  
Y-PARC Swiss Technopole SA  
Rue Galilée 7  
CH-1400 Yverdon-les-Bains  
Switzerland  
Tel. +41 (0) 583001080

## NGNT U.S.A.

NGNT USA Inc.  
P.O Box 2002  
New York  
New York 10185  
U.S.A.  
Tel. +1 (917) 694 3011

## NGNT EUROPE

NGNT Material Sciences SA  
(EU)  
Schoffel 6  
1648GG, De Goorn  
The Netherlands  
+41 79 824 9885