

# Product Description

## AVAILABLE PRODUCTS

- **Diamon-Fusion® ULTRA**
  - Chemical Vapor Deposition
  - Hand-Applied Liquid
- **Diamon-Fusion®**
  - Chemical Vapor Deposition
  - Hand-Applied Liquid
  - NanoPax®
- **Clear-Fusion™**
  - Hand-Applied Liquid
  - NanoPax®
- **Revitalizer**
  - Hand-Applied Liquid
  - NanoPax®
- **Retail Products**
  - Express Care Kit
  - Consumer Maintenance Kit
  - Do-It-Yourself (DIY) Kit
- **Restoration Products**

## POTENTIAL APPLICATIONS

- Architectural Glass
- Automotive Glass
- Ceramic Tile
- Granite & Other Stones
- Marine Glass
- Optical Glass
- Porcelain
- Solar Panels



DIAMON-FUSION INTERNATIONAL  
*"Innovation that Ignites Business"*

DFI develops chemical nanotechnology (nanotechnology) that reacts with all silica-based (silicon dioxide) surfaces such as glass, ceramic tile, porcelain, and granite.

DFI's nanotechnology, patented in dozens of countries worldwide under the trade name **Diamon-Fusion®** is an award-winning technology which can be easily installed on existing surfaces in homes, businesses, automobiles, as well as being applied in industrial volumes via our proprietary chemical vapor deposition (CVD) process.

The chemical bond created with our patented process is a covalent bond – meaning that the coating shares electrons with the surface itself – and is approximately 10 times stronger than hydrogen-bridge bonds which are commonly present in most other water repellent coatings.

Diamon-Fusion International (DFI) is a global technology developer and supplier of protective coating solutions to select companies at both the retail and wholesale levels.

Throughout our history, the core strength of DFI has been in its research and development (R&D) function. A high allocation of resources toward R&D activities will continue to provide innovative products, unique technology, and new intellectual assets.

Surfaces treated with DFI's products will exhibit characteristics that include:

- Water Repellency (Hydrophobicity)
  - Up to 118° contact angle that reduces maintenance and increases visibility among other key advantages
- Oil Repellency (Oleophobicity)
  - Protection against graffiti, dirt, stains, and fingerprints – up to 4x more than untreated surfaces
- Impact and Scratch Resistance
  - Weight of particle required to crack a piece of glass treated with **Diamon-Fusion®** is 10x heavier than with untreated glass
- Increased Brilliance and Protection Against Calcium and Sodium Deposits

# Testing Results for DFI Coatings \$2B Solar Panel Manufacturer

## SOLAR PANEL BENEFITS

- Reduced Cleaning Cycles
- Improved Performance  
Through Reduced Soiling
- Added Impact and Scratch  
Resistance
- Protection Against:
  - Hard Water Stains
  - Environmental Pollutants
  - Weathering

For More Information On The  
Uses of DFI Products In Solar  
Applications Please Visit Us On  
The Web At:

<http://www.diamonfusion.com/en/applications/solar.aspx>

Unweighted Data				
	Sample Name	Prewash Soiling (Trans % Loss Abs)	Soiling after Rinse (Trans % Loss Abs)	Rinse Recover (%)
Green glass with no coating applied	Clear 1	<b>22.29</b>	<b>19.77</b>	<b>11.3%</b>
Green glass with coating applied	Clear 2	3.44	0.13	96.1%
Green glass with Clear Fusion Coating	CF1	2.33	0.12	94.7%
Green glass with Clear Fusion Coating	CF2	1.51	0.06	96.2%
Green glass with Diamon Fusion Coating	DFI1	2.12	0.24	88.9%
Green glass with Diamon Fusion Coating	DFI2	1.99	0.03	98.7%
Float glass with Diamon Fusion Coating	PPGnAR1	2.95	0.07	97.6%
Float glass with no Coating	PPGnAR2	<b>2.76</b>	<b>0.95</b>	<b>65.7%</b>

### Notes

<sup>1</sup> Samples used for testing included those provided by DFI using hand-applied and chemical vapor deposition methods as well as samples treated in the field for testing purposes

<sup>2</sup> Green glass represents soda-lime glass, also called soda-lime-silica glass used for windowpanes, and glass containers (bottles and jars) for beverages, food, and some commodity items.

## Solar Reflectance Testing Results

Coated with Diamon-Fusion®	Uncoated
0.743	0.743

### Notes

<sup>1</sup> Samples used for testing was 12"x12" half coated mirror

<sup>2</sup> Testing conducted in September 2010 by Architectural Testing, Inc. in accordance with *ASTM C 1549 – Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer*.