

	NG 1010	Diamond Fusion	Enduroshield	PPG	Aquapel	Notes
Chemical binder/composition base	Inorganic	Organic	Organic	Organic		
Repellent effect base on	self-assembly process creates a monolayer. Water repellent effect after 10 - 15 minutes. Acceleration with heat or UV radiation possible.(seconds)	Hydrophobic water repellent chemicals. Instantly water repellent	Hydrophobic water repellent chemicals. Instantly water repellent	Hydrophobic water repellent chemicals. Instantly water repellent		
Solvent	Ethanol Alkohol	Alcohol IPA + Methyl Alcohol	IPA alcohol	Naphtha		
Flammable	Yes	Yes	Yes	Rated compustable		
UN Number for transport	1170	1170	1170	N/A		
Product Coverage rate	400 m2 / litre / gallon      16,000 sq. ft	80 -100 m2 / litre / gallon 3,000 - 4,000 sq. ft / gallon	64 m2 / litre / gallon 2,600 sq. ft / gallon	40 m2 / litre / gallon 1,600 sq. ft / gallon		
Hardness MOHS	MOHS 6 - 7	Soft Coating not hardness improvement can be measured	Soft Coating not hardness improvement can be measured	Soft Coating not hardness improvement can be measured		

<p>Abrasion Reistant Taber test brush and 2.5 % abrasive slurry AISi At contact angles of less than 80°, the coatings are no longer referred to as easy-to-clean Measurements were discontinued when this figure was reached.</p>	<p>40,000 to 80,000 cycles stopped at 90° 12,000 cycles abrasive slurry stopped at 90° - 500,000 windscreen wiper cycle test , no other producer</p>	<p>5,000 cycles &lt; 80° , DF own test with the DF premium product: after 3200 cycles sponge scourer, 45 ° After 400 cycles 76° Coating cannot handle abrasion. DF recommend to avoid any abrasion. At contact angles of less than 80°, the coatings are no longer referred to as easy-to-clean. Why they tested to as low as 45° ? DF claims glass becomes 10 x harder. No evidence of that claim can be found. Test link: <a href="http://www.dfisolutions.com/media/47080/Architectural-Product-Guide-Specifications.pdf">http://www.dfisolutions.com/media/47080/Architectural-Product-Guide-Specifications.pdf</a></p>	<p>700 - 900 brush cycles &lt; 70° Not tested with slurry . Coating cannot handle abrasion. Enduroshield recommends to avoid any abrasion. At contact angles of less than 80°, the coatings are no longer referred to as easy-to-clean.</p>	<p>800 - 900 cycles brush &lt; 70° not tested with slurry</p>	
<p>UV resistance according to EN 1096-3</p>	<p>1000 hours / &gt; 90° tested by the Glass Research Institute in Italy</p>	<p>Exposed sample testing comparison NG 1010 vs DF on Solar panels with Solyndra USA showed complete loss of function after 12 months. Diamon Fusion sells revitaliser as part of the warranty for that reason. <b>DF own published test with the DF premium product:</b> after 672 exposure hours contact angle 68° <a href="http://www.dfisolutions.com/media/47080/Architectural-Product-Guide-Specifications.pdf">http://www.dfisolutions.com/media/47080/Architectural-Product-Guide-Specifications.pdf</a></p>	<p>Exposed external samples showed reduced contact angle after 8- 12 months. &lt; 80 °</p>	<p>Not tested in detail</p>	
<p>Salt Spray Test</p>	<p>21 days Saltspray test (504 hours) by the Glass Research Institute in Italy</p>	<p>DF no detailed result: just that the coating remained more water repellent than untreated glass . So about &gt;20-25° ? <a href="http://www.dfisolutions.com/media/47080/Architectural-Product-Guide-Specifications.pdf">http://www.dfisolutions.com/media/47080/Architectural-Product-Guide-Specifications.pdf</a></p>	<p>Not tested</p>	<p>Not tested</p>	

SO2 Acid Resistance Test	Acid Test ( Acid rain ) 120 hours in SO2 saturated chamber with 6.5 hours in 40 C .Tested by the Glass Research Institute Italy . Contact angle after 120 hours 94° Competition coating coating 68° .	Not tested	Not tested	Not tested	
Adhesion test of silicone sealant	Coating does not prevent adhesion of sealant material .Tested by the Glass Research Institute Italy	adhesion failure	No info available	adhesion failure	
Cost / m2 / sq. ft .	Trade and applicator \$ 212 / litre 5 litre \$ 180 sq. ft. trade \$ 0.05	\$ 380 Standard grade ? Premium ? Cost sq. ft \$ 0.50 . Not all pricing available.	0.5 Litre \$ 179 cost sq.ft \$ 0.30	No info	