

EXO

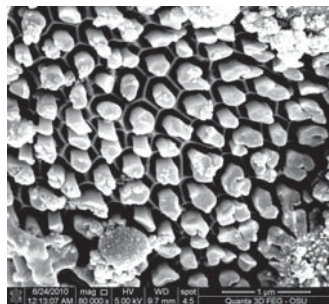
Presentation of Gtechniq EXO Ultra Durable Hybrid Coating

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SMART SURFACE SCIENCE

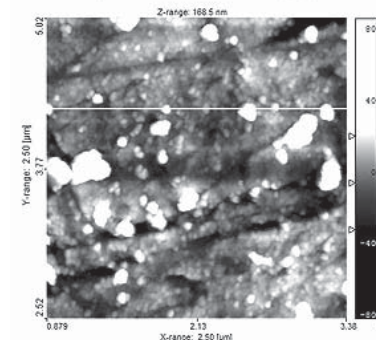
www.gtechniq.com

Comparison with Gtechniq C1 Crystal Lacquer

	Gtechniq EXO	Existing Glass Coating
Hydrophobic function	2-3 years	8-12 months
Application	Can be applied by non professionals	Professional application only
Hardness	7h	7h
Surface feel	Slick to the touch	Glassy
Gloss level	100%	96%
Substrates	Paint, GRP, plastics, uncoated metal, fabric, glass, stone	Paint, GRP, uncoated metal
Stain resistance	★★★★★	★★★★★
UV resistance	★★★★★	★★★★
Acid resistance	★★★★★	★★★
Alkali resistance	★★★★	★★
Easy clean durability	★★★★★	★★★
Bond strength	108 Kcal/mole	83 Kcal/mole
Chemistry	Inorganic, organic hybrid	Organic

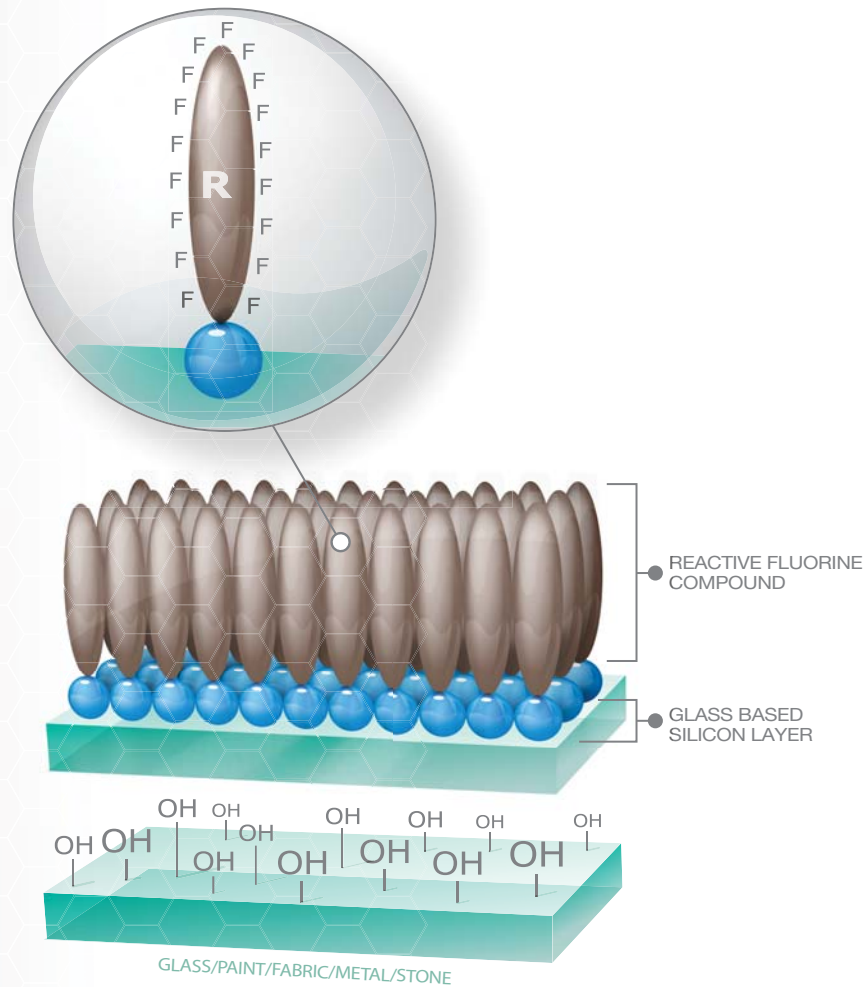


Electron microscope images of EXO and existing glass coating
NB the head of a pin measures ≈1,000 µm across



Hybrid Coating Technology

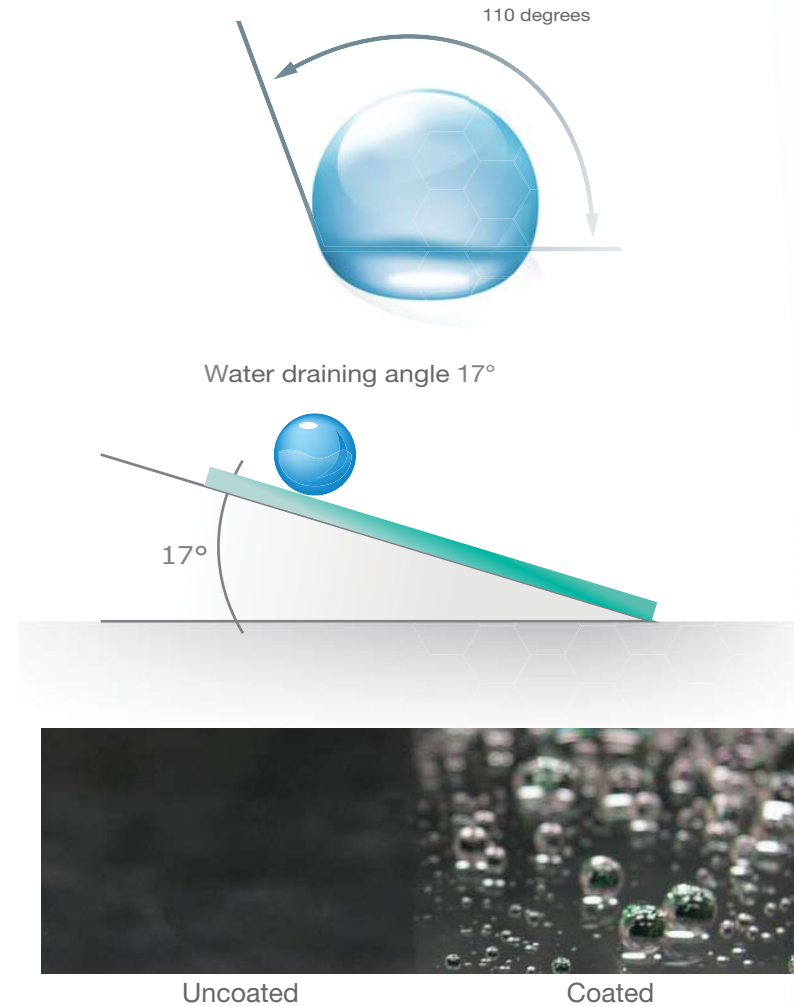
Inorganic element forms permanent bond with substrate
Organic element imparts desirable functionality to surface



Contact Angles

Oil repellency angle 76°

Water repellency angle 110°



Durability Tests (Overview)

>> Wiper-wear Resistance (Accelerated Test)

After 400,000 wipes, more than 80° water repellency angle is sustained representing a **durability equivalent to more than 5 years** for a private car. (see attached results)

>> Wash Durability (Accelerated Test)

After washing 600 times, 80° water repellency angle is sustained. 600 washes represents 5 years real world equivalent assuming x2 weekly washes.

- Both above-mentioned tests were conducted using the BYK washer shown
- Pad round trip distance: 300±5mm
- Speed: 37±2 round trips/minute



>> Weatherability Test

- South 75° outdoor exposure
- Washing down with tap water every 2 weeks
- Ongoing, see intermediate results attached

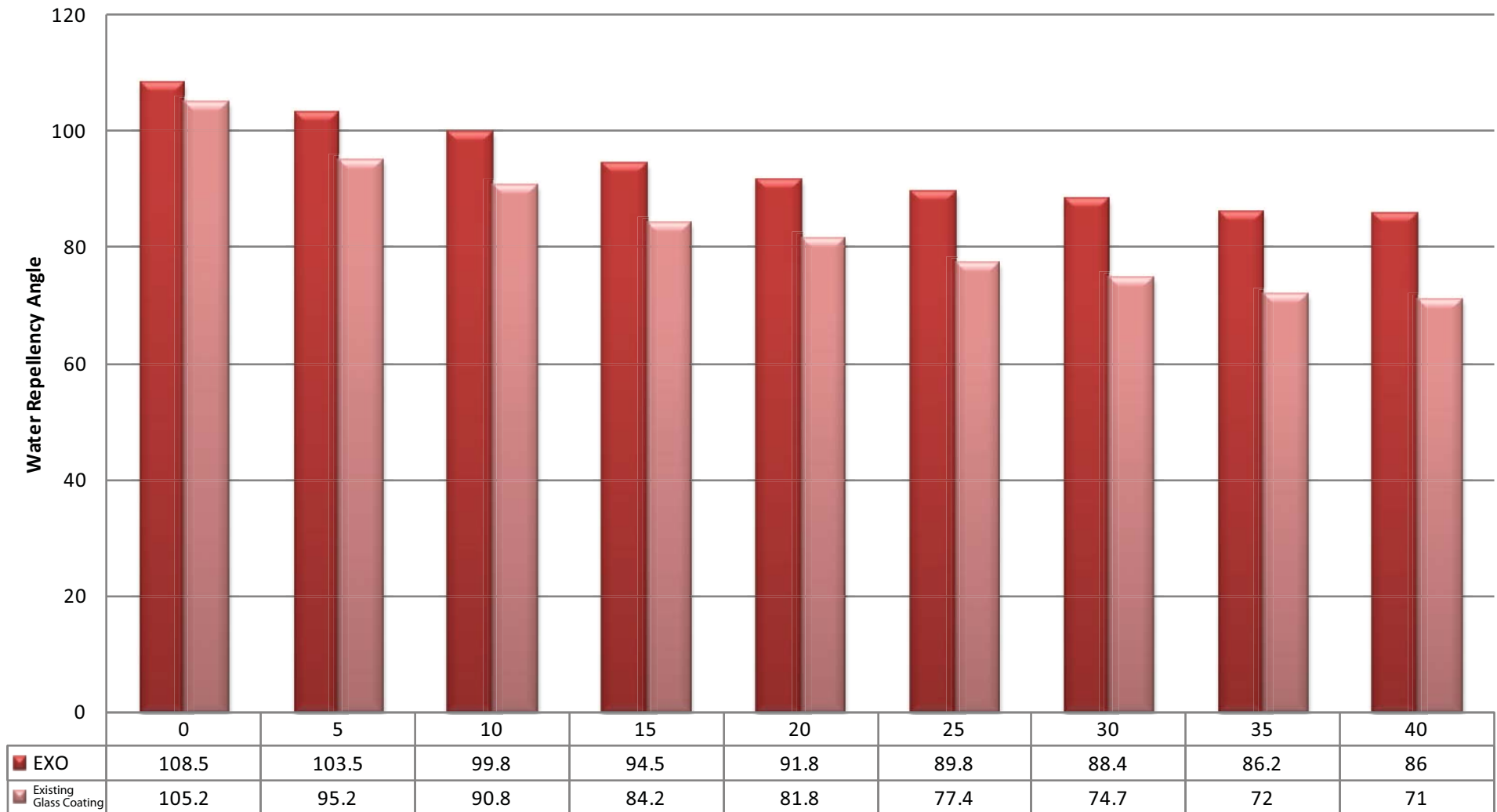
Note: Accelerated Weatherability Test (JIS K-2396) Results: Contact angle after 500 hours (glass base material) 100°

Wiper-wear Durability (Accelerated Test)

Wiper-wear Durability Test

Test equipment: BYK washer
Load: 150g
Frequency: Roundtrip

Blade: Graphite
Water: Spray

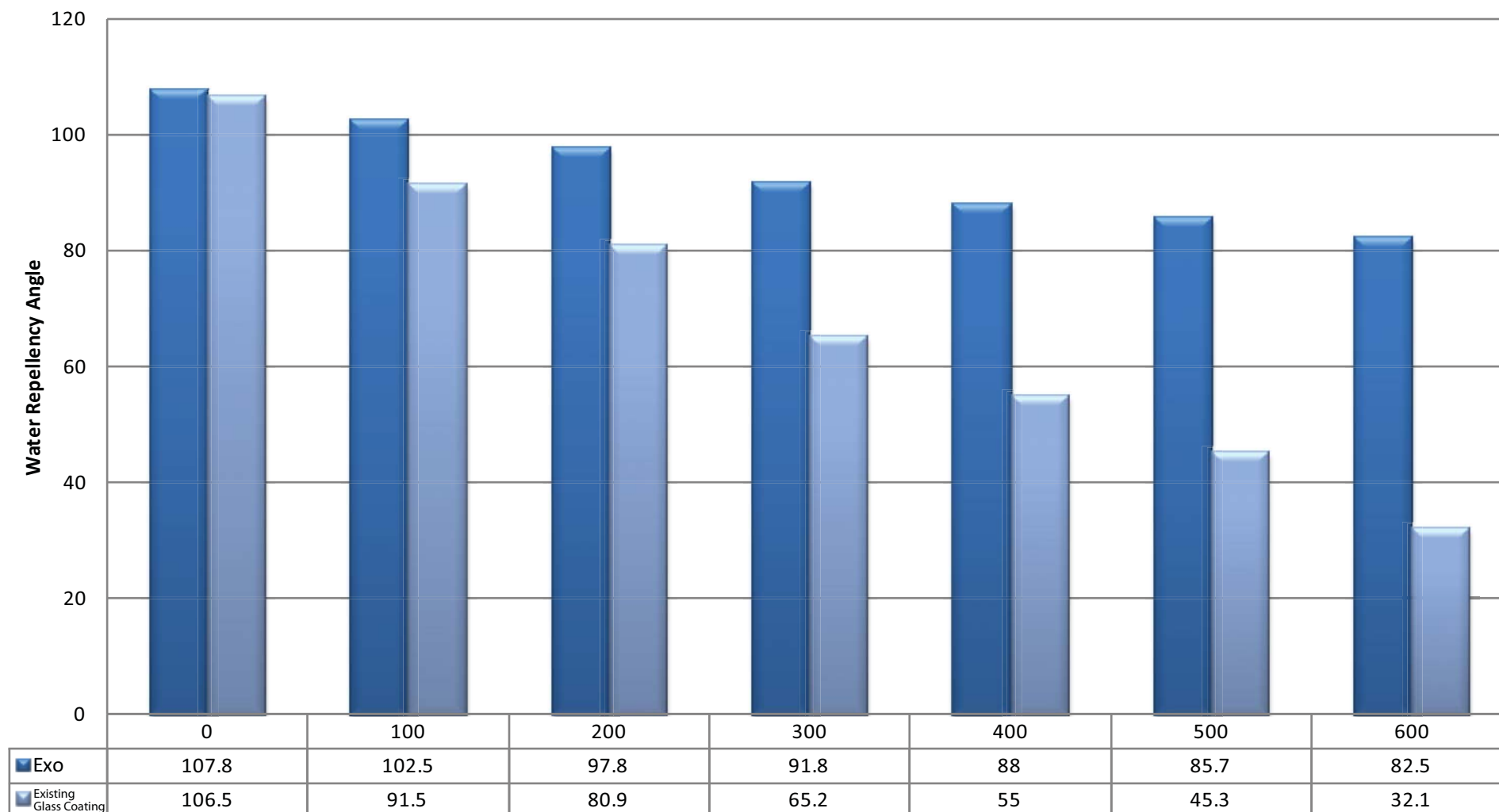


The wiper durability test was conducted using a typical graphite rubber blade. Assuming a wiper usage frequency for commercial vehicles is 140,000 times/year and 90,000 times/year for private cars. These results show water repellency of greater than 80° is maintained for between 2.5 and 4.5 years. NB if water repellency angle is maintained at above 80° the surface is classified hydrophobic.

Wash Durability (Accelerated Test)

Accelerated Wash Cycle Test

Test equipment: BYK washer Pad: Sponge
Load: 400g Frequency: Round trip
Polishing agent: Fine granule polishing agent 10x dilution, ph neutral car shampoo 800:1 dilution, sponge pad immersion.

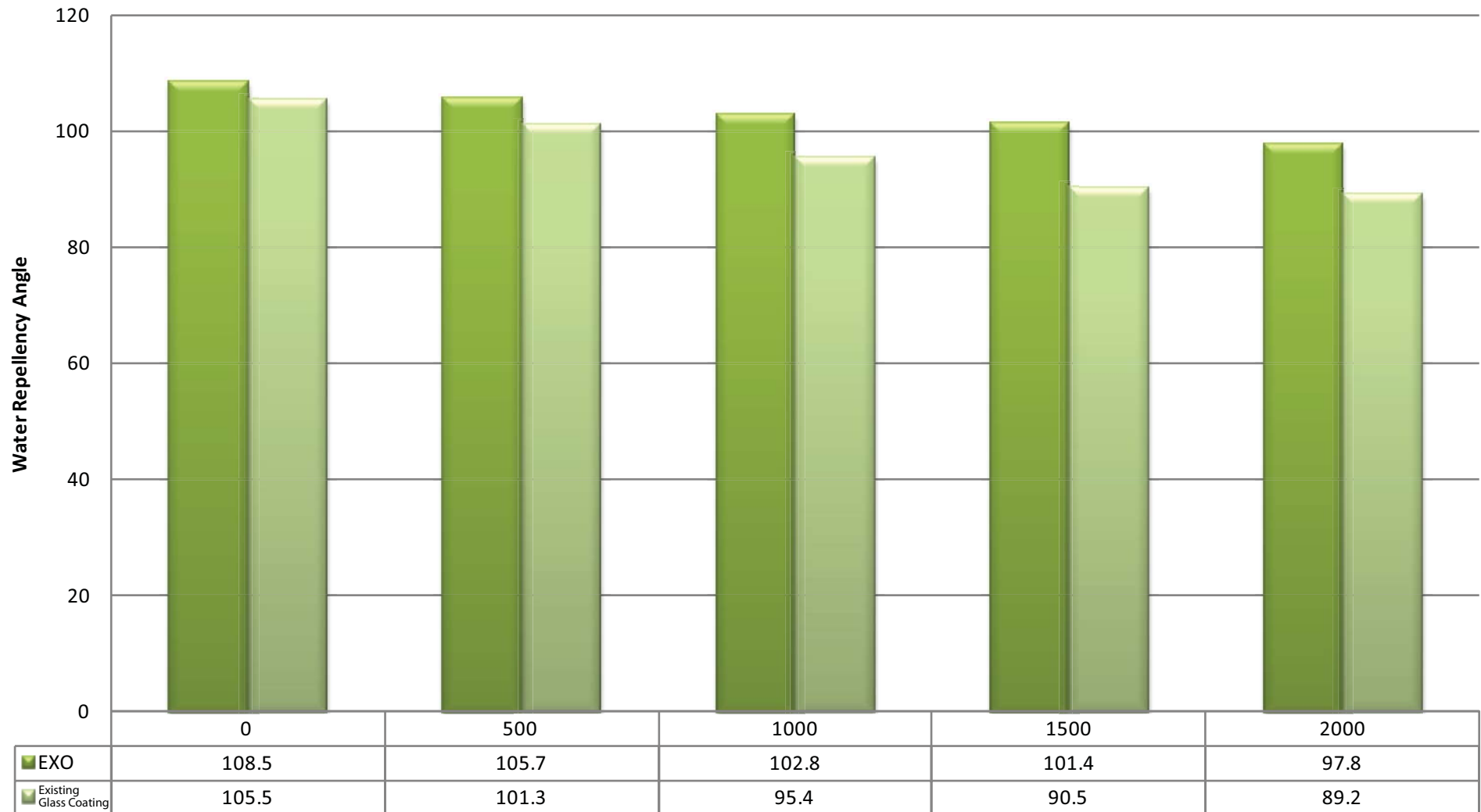


Assuming adherence of dust and contaminants for the wash durability test by including ultrafine particle polishing agent in wash mixture. Measurements taken every 100 repetitions. 600 repetitions represents 5 years of wash downs assuming vehicle is washed 2 times per week.

Accelerated Weatherability Test (Sunshine)

Test equipment: Carbon Arc Weather-Ometer

Accelerated Weatherability Test



Carbon Arc tests the entire spectrum of sunlight. X axis represents hours. 2,000 hours Carbon Arc represents approximately 4 years sunshine in the UK.

Range of Applications for Gtechniq EXO

Auto

- Paintwork (including matte finishes and vinyl)
- Rims (including uncoated polished rims)
- Glass
- Carpets
- Engine bay
- Exhaust tips
- Soft-tops

Marine

- Topsides and superstructure
- Sails, biminy covers, tarpaulins etc.
- Stainless steel, brass and steel fittings
- Marble
- Interior fabrics
- Glass and perspex

Aviation

- All exterior surfaces
- Leading edge contamination prevention
- Interior fabrics

RVs and Caravans

- All exterior surfaces
- Interior fabrics
- Canvas Covers

Household

- UPVC door and window frames
- Household glass
- Fabric
- Toilets, baths and shower basins
- Fabric sun shades





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