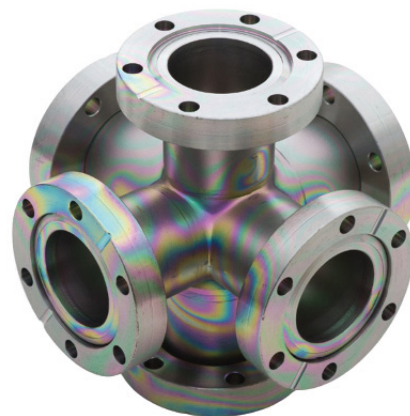




A versatile coating solution ideal for corrosion and durability, chemical inertness, and anti-stick properties.

Overview

Dursan® (patent info at www.silcotek.com/IP) is a chemically protective barrier of amorphous silicon, oxygen and carbon that is further functionalized to resist adsorption of corrosive, reactive, and otherwise unwanted molecules. Applied via chemical vapor deposition (CVD), Dursan® is a required coating when both a robust and chemically inert surface are critical.

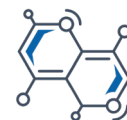


Key Applications and Benefits

- Achieve corrosive performance similar to exotic materials at a fraction of the price
- Increase system durability
- Improve instrument accuracy and response time
- Easy release and cleaning



Corrosion



Chemical Process



Oil & Gas/Refining



Hydrophobicity



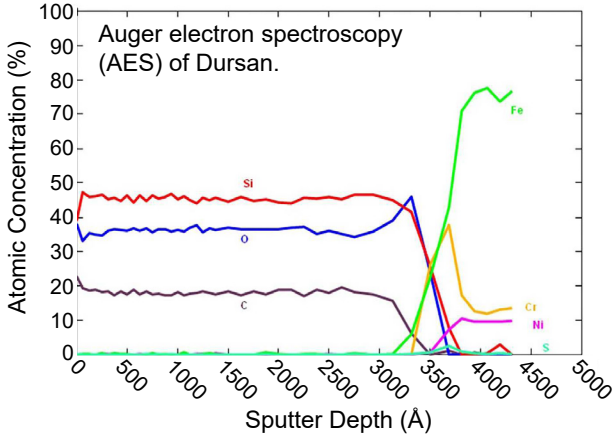
Lab Analysis

Dursan® Specifications

Coating Structure:	Functionalized silica-like coating ($\alpha\text{-SiO}_x\text{:CH}_y$)
Deposition Process:	Thermal chemical vapor deposition (not plasma-enhanced)
Maximum Temperature:*	500° C (inert atmosphere) 450° C (oxidative)
Substrate:	Compatibility: Stainless steel, exotic alloys, ceramics Size: Up to 78" (198 cm) Geometry: Any shape, including complex geometrics
Typical Thickness:	400 - 1600 nm
Hydrophobicity (contact angle):	$\geq 81^\circ$
Allowable pH Exposure:	0 - 14

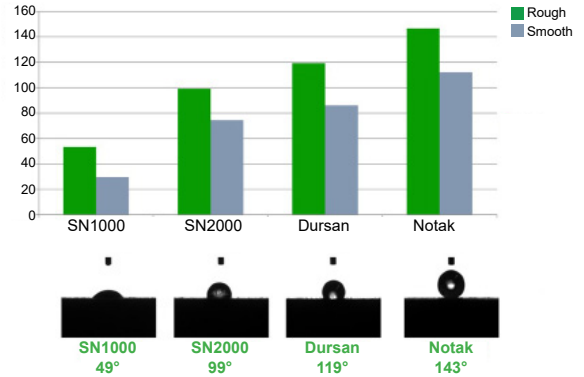
CHEMICAL COMPATABILITY

Dursan's silica-like structure is a robust and inert barrier suitable for several process environments.



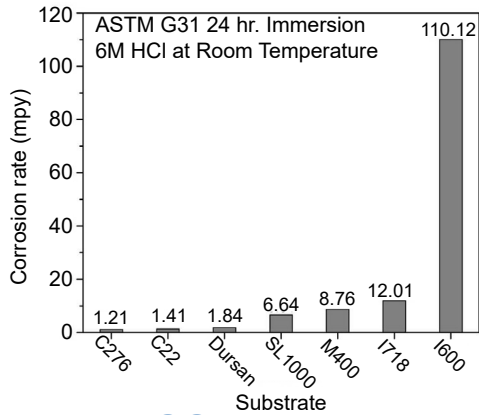
HYDROPHOBICITY

Dursan's low energy surface is hydrophobic, non-stick, and easy to clean.



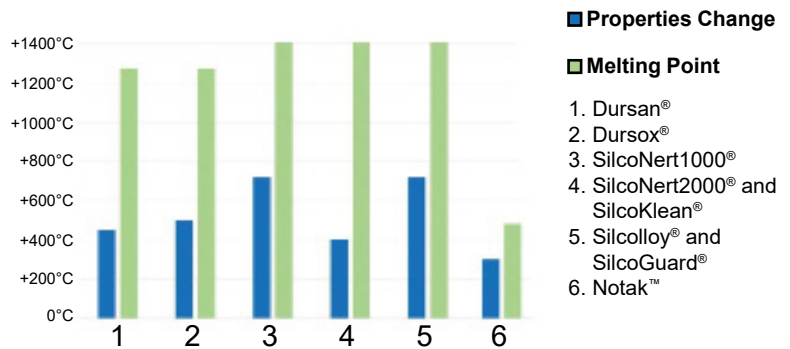
CORROSION RESISTANCE

Dursan-coated stainless steel can provide exotic alloy performance at a fraction of the price.



TEMPERATURE STABILITY

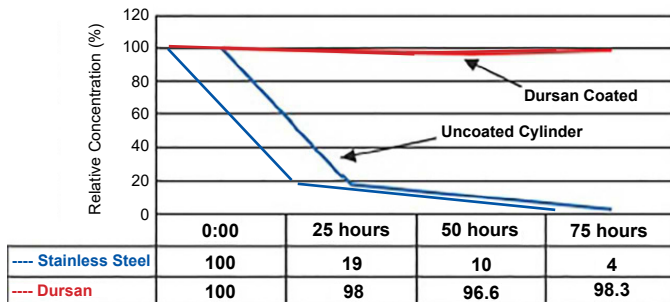
Dursan's versatile properties are stable at temperatures well above the limits of fluoropolymers.



INERTNESS

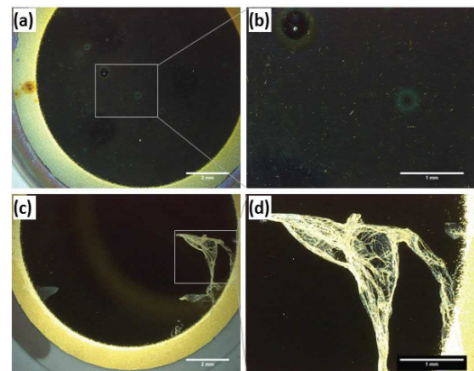
Dursan-coated sample flow paths enable low parts-per-million sensitivity to sulfur compounds.

H₂S Stability: Dursan vs. Stainless Steel
50 ppmv, 300cc cylinder



DURABILITY

Dursan (top row) has twice the wear resistance of 304 stainless steel and won't crack or flake like PTFE (bottom row).



Dursan (top row) and PTFE (bottom row) after cleaning and sonication.



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