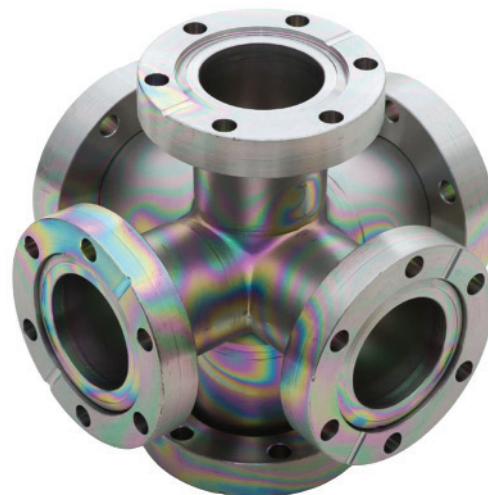


# Dursox®

Providing corrosion resistance for high purity process environments.

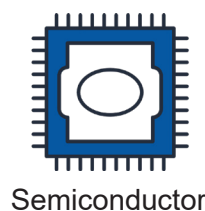
## Overview

The Dursox® coating process results in a chemically protective hydrophilic barrier of amorphous silicon and oxygen that prevents substrate ions from leaching into process streams (patent info at [www.silcotek.com/IP](http://www.silcotek.com/IP)). Applied via chemical vapor deposition (CVD), the Dursox® process is required when both a robust and chemically compatible surface are critical.

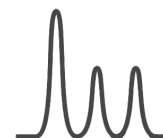


## Key Applications and Benefits

- Achieve the performance of exotic materials at a fraction of the price
- Fight corrosion and chemical interaction
- Lower instrument detection limits
- Improve surface wetting



Semiconductor



Research



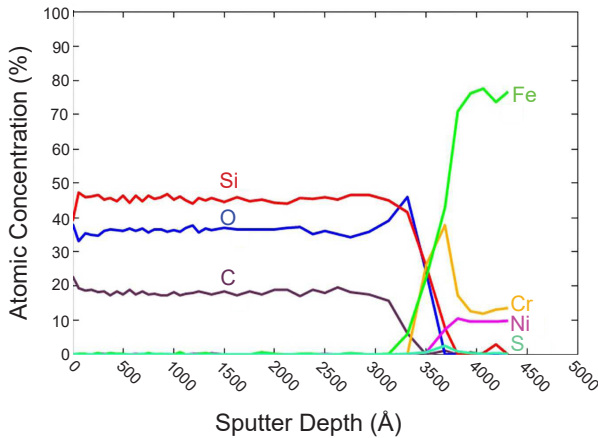
Corrosion

## Dursox® Properties

<b>Coating Structure:</b>	Silica-like coating (a-SiO <sub>x</sub> )
<b>Deposition Process:</b>	Thermal chemical vapor deposition (not plasma-enhanced)
<b>Maximum Temperature:*</b>	Melting: 1275° C
<b>Substrate:</b>	Compatibility: Stainless steel, exotics alloys, ceramics Size: Typical parts up to 80" (203 cm), contact us for larger jobs. Geometry: Any shape, including complex geometries
<b>Typical Thickness:</b>	400 - 1600 nm
<b>Hydrophobicity (contact angle):</b>	≤60°
<b>Allowable pH Exposure:</b>	0 - 14

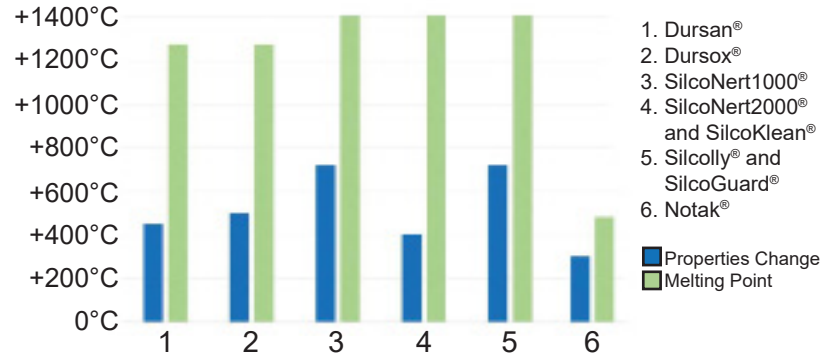
## CHEMICALLY COMPATIBLE

The silica-like structure provided by the Dursox process is a robust and inert barrier suitable for several process environments.



## HIGH-TEMPERATURE STABLE

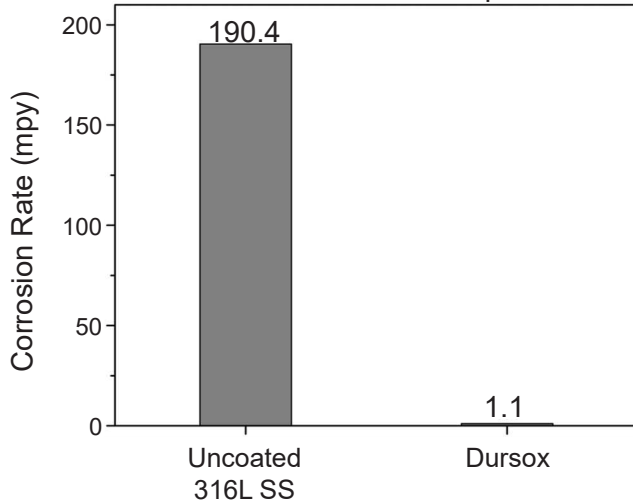
The Dursox process produces versatile properties that are stable at temperatures well above the limit of fluoropolymers.



## CORROSION RESISTANT

The Dursox process provides a corrosion resistant barrier in any pH conditions.

ASTM G31HCl 6M  
Immersion at Room Temperature



## ROBUST

Dursox has twice the wear resistance of 304 stainless steel and won't crack, delaminate, or flake like PTFE.

	Avg. Coeff. Friction	Wear Rate (x10 <sup>-5</sup> mm <sup>3</sup> /Nm)
Uncoated SS	0.589	13.810
Si <sub>x</sub> O <sub>y</sub> - base(functionalized)	0.378	6.129
Si - base(corrosion)	0.7	14.00



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