

# InnerArmor Corrosion Control Coating Specifications

InnerArmor®

InnerArmor Corrosion Control is a multi-layer coating that protects against corrosive and aggressive media, including acids, salts and hydrogen sulfide (H<sub>2</sub>S)

<b>Environment</b>	Hydrogen sulfide (H <sub>2</sub> S), hydrofluoric acid (HF), hydrochloric acid (HCl), nitric acid (HNO <sub>3</sub> ), sulfuric acid (H <sub>2</sub> SO <sub>4</sub> ), salt, methane (CH <sub>4</sub> ), CO/CO <sub>2</sub>
<b>Corrosion Resistance</b>	
18% HCl Test (submerged at 200°F for 8 hours):	No undercutting, passed 67.5 volts holiday test
Sour Autoclave Test (NACE TM 0185):	No undercutting, passed 67.5 volts holiday test
Salt Spray Test (ASTM B117 >500 hours):	No effect
<b>Hardness</b>	1200 HV / 12 GPa (1000–1500 HV, to suit application)
<b>Young's Modulus (E-Modulus)</b>	100 GPa (100–120 GPa)
<b>Adhesion to Steel</b>	Excellent
<b>Coating Thickness</b>	30–80 microns (to suit application)
<b>Color</b>	Grey-Black
<b>Applicable Substrates</b>	Carbon Steel, Stainless Steel, Inconel® 718, Ti/Ti Alloys, Ni/Ni Alloys
<b>Max Environment Temperature</b>	Up to 752°F (400°C)
<b>Deposition Rate</b>	Typical > 0.6 micron/minute
<b>Deposition Temperature</b>	248°F–392°F (120°C–200°C) (substrate dependent)