



CORROLON IX™



Product Code # SOL-XG92H

Pioneered For Engineered Tolerances:

Combining Non-Stick Performance With Thin-Coat Technology And Cryogenic Properties

- ▶ Thin coat application prevents undersize designs
- ▶ Continuous Operating Temperature 550°F (290°C)
- ▶ Non-stick characteristics reduce galling & seizing
- ▶ Provides corrosion protection and chemical resistance
- ▶ Petrochemical & Gas Service Compliant
- ▶ Allows engineers a variety of metal substrates
- ▶ Reduces wear and friction on metal substrates
- ▶ Application allows custom masking to parts

CORROLON IX™ is a versatile and thin resin bonded, one-coat finish with enhanced non-stick properties. This pioneered coating system protects metal substrates against corrosion, wear, friction, and galling. By impregnating the metal substrate, this coating (a part of the CORROLON family of industrial coatings) inhibits galvanic response, reduces nuclei site formation, and improves corrosion resistance in most industrial service environments.

This thin coating permits engineers to specify protective enhancement without affecting critical tolerances in their designs. In addition, this innovative coating provides a strong cryogenic barrier for service temperatures up to 600°F (°315C). Its chemical matrix bonds equally well to ferrous materials and non-ferrous substrates, thereby enabling most industrial applications the flexibility to work in materials suited to their specific requirements.

Custom Coating Solutions for Thin-Coat Tolerances

Engineering Data & High Performance Characteristics:



Thickness

CORROLON IX™ provides an very thin and even application that provides protective enhancement without affecting critical engineering tolerances in designs. This coating system is uniform in thickness and ranges from 0.0005" to 0.001" (+-0.0001").

Temperature Specifications

CORROLON IX™ operates very efficiently in extreme temperature environments. The thermosetting resins in this innovative coating enable it to perform in both a cryogenic and high temperature setting. Coated parts exhibit strength and non-stick properties, remaining highly flexible in demanding industrial use.

CORROLON IX™ is applied by means of a patented process that evenly coats metal surfaces and ensures a completely uniform coating for all of your specifications.

Specializing in thin coat applications and extreme temperature service conditions.

Continuous Operating Temp 550°F (290°C)
Intermittent Temperature 600°F (315°C)





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Corrosion Protection

CORROLON IX™ resists organic and inorganic compound attacks by means of a thin barrier that impregnates the metal substrate. In environments where corrosion protection is important, process equipment and function-to-success parts are enhanced by reducing oxidization, galvanic corrosion, and increasing chemical resistance in most Petrochemical and Gas services.

Hardness

CORROLON IX™ has a hardness rating (ASTM D 785) of Rockwell 60 (+-2.0) and Pencil Hardness 3-4 H.

Wear Resistance

As an innovative solution in reducing wear to parts, **CORROLON IX™** prevents asperities (metal surface peaks) from making physical contact. The coating acts as a cushion by spreading high point loads in bearings and reducing element fatigue. Another advantage of this coating is its ability to reduce "boundary lubrication failure", caused when equipment is frequently started and stopped; thereby allowing oil films to become too thin to function as a lubricant.

Noise Reduction

CORROLON IX™ absorbs energy and transmits reduced resonance to surfaces under impact and in various conditions of industrial vibration. In most cases, noise is effectively dampened by coatings of 25 to 40 microns/0.001 to 0.0015 in.



Non-Stick (Release) Properties

Distinct from friction, release is the property of a metal surface that affects the ability of a substance to adhere to it. **CORROLON IX™** has almost the lowest coefficient of friction known to man. This means that buildup of foreign particles (scale, ice, dirt, food, and the like) will be dramatically reduced on coated parts, resulting in minimal contamination and plugging. Mechanisms that require "fail-safe" operation under critical circumstances are greatly enhanced in security.

Sealing

CORROLON IX™ in particular applications deforms appropriately under high pressure to form a tight thread-to-thread or seal-to-seal union, resulting in lower seating torques as much as 60 percent.



High Performance Applications

- ▶ Engineered Oilfield Components
- ▶ Gas Stems & Seats
- ▶ Calibration Blanks
- ▶ Military Applications
- ▶ Pipes & Tubing
- ▶ Nuts & Bolts
- ▶ Industrial Housings & Blades
- ▶ Processing Rollers
- ▶ Blower Components
- ▶ Gears & Springs
- ▶ Instrumentation
- ▶ Aerospace & Aeronautical
- ▶ Fasteners and Threaded Parts
- ▶ Medical Instruments
- ▶ Valve Linings
- ▶ Automotive Engine Parts & Components
- ▶ Fail-Safe Mechanisms



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CORROLON IX™ is thin enough that it will not impede critical tolerance areas, such as threaded surfaces.

Pioneered in order to protect metal substrates from extreme temperature exposure, the CORROLON IX™ system provides a barrier for hostile down-well service, sour gas operations, fail-safe gears and components, and industrial mechanisms.

CORROLON IX		
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APPROVAL BY:	M. FEARON	
REVISION 1.2.1	ISO DATA SHEET #742-B-3	

Chemical Corrosion Guideline Table:

Chemical	Concentration %	Hours	Effect on Coating Function
Water			
Deionized—Boiling	100	1000	none
Salt (immersed)	30	4000	none
Salt (Spray)	5	1000	none
Tap—250°F (120°C) @ 10,000 psi	100	24	none
Acids			
Hydrochloric	36	24	none
Hydrochloric	15	150	slight
Hydrochloric	2 pH	300	none
Hydrochloric 125°F (50°C)	2 pH	300	none
Sulfuric	25	1500	none
Nitric	35	24	none
Picric	saturated solution	120	none
Base			
Caustic	2	24	none
Caustic	100	336	slight
Caustic	12.5 pH	150	slight
Caustic	9.5 pH	300	none
Caustic 125°F (50°C)	9.5 pH	300	slight

Chemical	Concentration %	Hours	Effect on Coating Function
Solvents			
Acetone	100	1500	none
Benzene	100	1500	none
DMAC	100	1500	none
Ethanol	100	1500	none
Fluorocarbons (12, 22, 113)	100	1000	none
MEK	100	120	none
Methanol	100	1500	none
Methylene Chloride	100	1500	none
Perchloroethylene	100	1500	none
Phenol	5	120	none
Toluene	100	120	none
Xylene	100	1500	none
Other Fluids			
Skydrol (hydraulic fluid)	100	1500	none
JP-4 (jet fluid)	100	1500	none
Break Fluid (auto)	100	1500	none
H ₂ O + gas at 250°F (120°C), @ 2000 psi	79% CH ₄ , 6% CO ₂ , 15% H ₂ S	24	none

* All data reflected above was conducted in room temperature and assumes pinhole-free coating film.