



CORROLON V™



Product Code # SOL-XG52L

Pioneered For High Pressure Environments: Combining Non-Stick Performance With Bonded Lubricant (MOS₂) And Thin Film Properties

- ▶ Provides a bonded lubricant (MOS₂) for surfaces in extreme pressures up to 150,000 psi
- ▶ Continuous Operating Temperature 500°F (260°C)
- ▶ Non-stick characteristics reduce galling & seizing; ideal for threaded surfaces and premium components

- ▶ Thin coat application prevents undersize designs
- ▶ Reduces wear and friction on metal substrates
- ▶ Allows engineers a variety of metal substrates
- ▶ Application allows custom masking to parts

CORROLON V™ is a pioneered resin bonded, one-coat finish with industrial non-stick properties. This thin-coat system is formulated specifically for high pressure environments and chemical wear applications. **CORROLON V™** employs unique chemistry that provides a bonded lubricant (MOS₂) for bearing surfaces subjected to extreme pressure up to 150,000 psi. This coating permits engineers to specify protective enhancement without affecting critical tolerances in their designs.

This thin, hard coating remains functional under extreme environments because its dual lubricants are evenly distributed in the most durable, thermoset polymer available. By impregnating metal, **CORROLON V™** (a part of the CORROLON family of industrial coatings) inhibits galvanic response, reduces nuclei site formation, and improves corrosion resistance. Its chemical matrix bonds equally well to ferrous and non-ferrous materials, in materials suited for engineering requirements.

Engineering Data & High Performance Characteristics:



CORROLON V™ is a thin film coating system with a bonded lubricant (MOS₂) for corrosion resistance and extreme pressure environments up to 150,000 psi.

Pressure Rating Specifications

CORROLON V™ is designed specifically for extreme pressure conditions and mechanical wear applications. This premier coating's unique chemistry provides a bonded lubricant (MOS₂) for threaded and bearing surfaces subjected to hostile pressures up to 150,000 psi.

The innovative dual lubricant system contained in this coating process is evenly distributed to provide the most durable, thermoset polymer available. Conventional lubricants ("Molly") are inadequate under such adverse conditions and fluorocarbon finishes (FEP, PTFE, PFA) have a tendency to "cold flow" in aggressive petrochemical and industrial environments.

Custom Global Coatings for Extreme Pressure Applications



Custom Global Coatings



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Thickness

CORROLON V™ provides a thin film application that enables protective enhancement without affecting critical engineering tolerances in designs. This coating system is uniform in thickness and range from 0.0005" to 0.001" (+0.0002").

Temperature Specifications

CORROLON V™ 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.

Continuous Operating Temp 500°F (260°C)
Intermittent Temperature 555°F (290°C)

Wear Resistance

As a pioneer in reducing wear to parts, **CORROLON V™** 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.

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 V™** 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.

Corrosion Protection

CORROLON V™ resists organic and inorganic compound attacks by means of a barrier which impregnates the metal substrate. In environments where corrosion protection is important, process equipment and function-to-success parts are enhanced by reducing oxidization, fretting (vibration), galvanic corrosion, and increasing chemical resistance.

Hardness

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



High Performance Applications

- ▶ Threaded Surfaces
- ▶ Downwell Packer Systems
- ▶ Fasteners
- ▶ Pipes & Tubing
- ▶ Nuts & Bolts
- ▶ Military Applications
- ▶ Pressure Rings
- ▶ Gears & Springs
- ▶ Actuators
- ▶ Valve Internals
- ▶ Gates & Ram Blocks
- ▶ Fail-Safe Mechanisms
- ▶ Dielectric Insulation
- ▶ Gas Stem Components
- ▶ Raised Flanges
- ▶ Aerospace & Aeronautical



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Lubricating Solids

CORROLON V™ contains a number of high pressure (EP) lubricating solids selected to increase the load-bearing capability and life of the primary coating while maintaining an extremely low coefficient of friction. It performs successfully in industrial and petrochemical application at pressures up to 150,000 psi (and in one instance up to 350,000 psi).

Unsurpassed in industrial performance against conventional dry film lubricants and PTFE loads for high pressure service.



CORROLON V™ applied to motor group pieces for tight tolerances and dielectric protection from dissimilar metals.

CORROLON V		
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TECHNICAL MANGER:	R. HUIZINGA	
APPROVAL BY:	M. FEARON	
REVISION 2.3.5	ISO DATA SHEET #737-B-5	

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.

