

CORROSIONX HEAVY DUTY

High performance, thick-film version of CorrosionX
Provides long-term lubrication and protection against rust.

GENERAL INFORMATION

CorrosionX HD is an extremely effective corrosion inhibiting coating. Compared to other, conventional products, many advantages can be put forward. CorrosionX HD does not contain any Lead, Isocyanides or Cr6. Thanks to its Polar Bonding Technology it provides maximum adhesion to steel and extraordinary dielectric abilities isolating the anode and the cathode. It does not require sandblasting before the treatment and is easy to apply. This means a great cost benefit!

Was developed specifically to provide maximum protection against moisture intrusion and resulting rust and corrosion.

Will slowly penetrate existing rust and corrosion, remove moisture and stop electrolysis, while sealing out moisture.

CorrosionX Heavy Duty forms a dripless, dynamic, non-hardening, self-healing film that stubbornly resists erosion by splash or spray, including the complete submersion in saltwater.

Unlike wax-based coatings, it will not dry out, stiffen, or crack under stress.

DESCRIPTION OF APPLICATION

CorrosionX HD forms a wet film, providing ultra long term protection against corrosion in most environments, exceeding 2000 hours in salt spray testing (ASTM B-117). It is designed for virtually all kinds of uses, even new machinery, vehicles, ships, drilling rigs and other industrial installations, as well as for lubrication application in extremely severe corrosive environments.

CONDITIONS

Equipment may be used in all weather conditions, except under the waterline of ships and other constantly immersed application.

PREPARATIONS

Remove any rough soiling, if existent.

APPLICATION

Just spray CorrosionX HD inside the machinery, so that a long-term protection is achieved. If you have existing corrosion, we recommend a treatment with CorrosionX, on affected areas first, for a better penetration. CorrosionX will penetrate through it and stop the corrosion process!

For even better efficiency, we recommend our Spray System.

Application temperature

+5°C to 50°C

Permanent Processing Temperature

-60°C up to +120°C



TESTING

Dulux conducted an international salt spray test, this test proved that no rust formed for 1008 hours in a salt spray bath at 35 degrees Celsius.

The German Army lab shows 2,000 hours no rust in salt spray cycles of 6.

(All test results are available on request)

TECHNICAL CONSIDERATIONS

Boiling point of CorrosionX HD is > 210°C / 400°F at which point the base oil will drip and/or cook off. This will not diminish the corrosion protection properties of the product since the base oil is merely a carrying agent for the active ingredient package. However, this will shorten the product's lifespan as dripping/cooking off will remove the excess product, thereby removing the coating's ability to self-cure. So once the layer that is bonded to the metal surface is consumed by the environment, there would be no product to replace that which was removed. Recommend monthly visual inspection and annual re-application if exposed to temperatures higher than 200°C

There is really no operational low limit (because again, the base oil is merely a carrying agent for the active ingredients), but at -6°C / -21°F the product will thicken, which makes it more difficult to apply.

Additional Product Data

Specific Gravity: @15.6°C 0.911

Viscosity, cSt: @ 40°C 393.84 cSt @ 100°C 275.80

Flash Point c.o.c.: >142°C

Pour Point: -7°C

Boiling Point: >100°C

Volume Solids: 91.5%

VOC: 3 g/L

Solubility in Water: Insoluble

Film Thickness: 0.012mm

Salt-spray, hrs: >2000h

Humidity Cabinet hrs: >1008h

Dielectric Strength: >20000V

Anti-Wear: 0.40mm

(The smaller the number the better the performance. Standard lubricating oil have a value of 1.0 – 1.2)

Storage: Bulk: Store at room temperature (10°C and more) Aerosols not more than 50°C

Shelf Life: Bulk: Indefinite as long as container remains capped. Aerosols: 2 years.

Resent Case Studies

Launching Tractor

A tractor pulls brings a commercial boat trailer twice a day into salt water on the west coast of NZ- Northland. The tractor drives through mud and backs down into salt water at least twice a day.

The vehicle is then stored outside.

Severe rust and lubrication problems on the 3 point linkages, electrical connections and the winch pulling the boat onto the trailer were the result. Since the complete tractor was sprayed with HD, the lubrication problems are solved. As a Corrosion Inhibitor, the HD is topped up about every 8 months where the tractor is submerged, once a year on all other parts.

Gentry Crane

An old Gentry Crane runs underneath the roof of a large shed used to paint yachts and trucks. Sanding dust, sand blast garnet and glass bead-blast used to clog up the greased parts like drive chains and cable winch parts. The grease was replaced with CorrosionX HD which does not accumulate the dust and garnet. Being a far better lubricant than the grease, the chains also run much better and the winch cable lasts longer.

Boat Trailers

The boat club members of a Northland Sailing Club were upset about the fact that the leaf springs on their submergible trailers were rusting out within 3 years' time, giving the boats a bumpy ride, causing embarrassment on the regattas and finally fail or break all together.

Since the trailers springs, some already rather rusty, were sprayed with HD, the boats get a smooth ride under transport and the rust has stopped to progress all together. The HD coating on the springs is topped up once a year at minimal cost

Aquarium

The winch operating the shark cage sunk into the large salt water Aquarium was rusting out on a regular basis. Standard greases and traditional rust preventers could not be used because of their toxicity. CorrosionX HD is not only a superb lubricant and corrosion inhibitor, it is also MPI approved for such applications and even IF some product would get into the Aquarium, there would be no damage to the aquatic life.

Shackles

Massive shackles used on the back of fishing trawlers working in the roaring 40 in pretty much any weather conditions had developed a habit to rust shut in a matter of only days. As fresh fish is handled in the same area on the boat, traditional, kerosene based lubricants were not applicable.

The other, environmentally friendly, lubricants, would quickly wash out and fail as a rust preventing measure. Introducing HD solved both problems of lubrication and long term rust protection.

HD is now available to the majority of the Antarctic Fishing Fleet.

<i>Machine/Part Applied:</i>	<i>Can Used as:</i>
Throttle Linkage/Cables	Corrosion Inhibitor, Lubricant
Frozen Couplers	Penetrant
Attachment Pins	Penetrant
Rollers	Lubricant
Bushings	Lubricant
Ramp Bars on Trailers	Lubricant
Cables	Corrosion Inhibitor, Lubricant
Pulleys	Corrosion Inhibitor, Lubricant
Trencher Chains	Corrosion Inhibitor, Lubricant
Hood Hinges	Corrosion Inhibitor
Key Switches	Corrosion Inhibitor
Battery Terminals	Corrosion Inhibitor
Wear Pads	Lubricant
Fittings/Hoses	Lubricant
Pumps	Corrosion Inhibitor
Chains, Groove	Lubricant
Transmission, Clutch	Corrosion Inhibitor
PTO Cable	Lubricant, Corrosion Inhibitor
Starters, Alternators	Lubricant, Corrosion Inhibitor



PRODUCT DATA

PHYSICAL CHARACTERISTICS

Color:	Light Brown	Volume Solids:	97%
Appearance:	Thin grease	VOC Content g/L (%):	30 (3)
Odor:	Petroleum	Vapor Pressure, mm Hg @ 23°C:	>1
Specific Gravity @ 15.6°C:	0.911	Pour Point:	-30°C / -22°F
Viscosity, cPs (#6 spindle at 6 rpm):	10,000 – 12,000	Solubility in water:	Negligible
Flash Point (COC):	132°C / 270°F	Boiling Point/ Range:	>218°C / 425°F
Coverage per gallon:	up to 320 sq ft	Evaporation Rate (BuAc=1):	<0.01
Weight per gallon:	7.3 lbs	Film Thickness:	0.005"

PERFORMANCE PROPERTIES

Corrosion Protection:	Salt Spry, hrs.	>2,000 ASTM B117
	(Film Thickness)	5.5 mils
	Humidity Cabinet, hrs.	>2,000 ASTM D1748

Panels were pulled from both the salt spray and humidity cabinets at 2,000 hrs. with no sign of rust.

COMPATIBILITY WITH MATERIALS

Rubber: No visible effect on Buna-N, Viton[®] or Neoprene products. Slight swelling and/or softening of butyl rubber items.

Adhesives and Sealants: Usually no effect but some adhesives may soften and sealants with silicone may experience slight swelling. Recommend a small test sample prior to widespread application.

Painted Surfaces: Paints typically used on aircraft, automobiles and machinery are unaffected by CorrosionX Heavy Duty. Polishes and some wax coatings may soften by the application of any hydrocarbon product.

Plastics: CorrosionX Heavy Duty is compatible with most commonly-encountered plastics such as: Acrylic, Polyester, Nylon, Vinyl, Delrin^{®*}, PTFE, Formica^{®**}, Polyethylene and Polypropylene. Should there be any question when other types of plastics are involved, it is suggested a small sample be tested.

Fabrics: CorrosionX Heavy Duty will be absorbed into the fibers of most fabrics, thereby creating slight staining. The stain is not permanent and may be removed with naphtha or mineral spirits.

Storage: Bulk: Store at room temperatures (50°F or more). Aerosols not more than 120°F.

Shelf Life: Bulk: Indefinite (as long as container remains capped). Aerosols: 3 years

*Registered trademark E. I. Dupont de Nemours

**Registered trademark of Formica Corp.

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CORROSION[®]X HD

HEAVY DUTY



For those really tough jobs, like those involving direct exposure to rain, snow or seawater, use CorrosionX Heavy Duty. It's a high-performance, thick-film version of CorrosionX providing maximum protection against serious rust and corrosion. There is simply no other product like it!

WHAT IT DOES

CorrosionX Heavy Duty forms a dripless, non-hardening, self-healing film that stubbornly resists removal – even by complete immersion in salt-water. CorrosionX Heavy Duty slowly penetrates existing rust and corrosion, removes moisture and then seals the moisture out.

Field & Stream magazine editor Bob Sterns, considers it a must for boat trailers:

“An annual coating of CorrosionX Heavy Duty will help protect the leaf springs from rusting. This coating will also help protect the trailer frame and ensure easy removal of nuts and bolts.”

HOW IT WORKS

Unlike wax coatings, its non-hardening film will not dry out, stiffen or crack. Under stress, it bends as the metal surface flexes or twists beneath it. It won't wash off even after being submerged in water for hours.

LONG-LASTING

CorrosionX Heavy Duty will still be there long after other products have disappeared. And, it will protect your equipment and save you money more effectively than anything else.

MORE GREAT CORROSION[®]X PRODUCTS

Starting with the core CorrosionX formula, we then applied specialized, advanced component technologies to optimize the product for these specific uses:

REEL[®]X

The ultimate lubricant for fishing reels and the choice of top reel manufacturers worldwide. ReelX provides the same corrosion protection as CorrosionX while keeping reels optimally lubricated for longer, smoother casts.

SPEED[®]X

SpeedX takes the science of lubrication to a whole new level! SpeedX chemically modifies metal and metal oxide wear surfaces whenever heat from friction is present. This modified surface is both very smooth and has an ultra-low coefficient of friction. SpeedX excels under heavy loads and high temperatures, so it's ideal for inline skates, skateboards, precision equipment and applications where any friction is too much.

CORROSION[®]X FOR GUNS

Our customers asked for a special CorrosionX applicator for their firearms, and now they have it. CorrosionX for Guns comes in a 4 fl oz applicator-tip bottle that allows pinpoint treatment of specific lubrication points. It cuts through stubborn bore deposits for easier, more thorough cleaning, and it decreases fouling even after hundreds of rounds. The product outperforms and outlasts other lubricants, making it ideal for semiautomatics.



For more information about all the great products by Corrosion Technologies, please visit our website:
www.corrosionx.com

CORROSION[®]X

Eliminates Rust & Corrosion
Lubricates and Penetrates



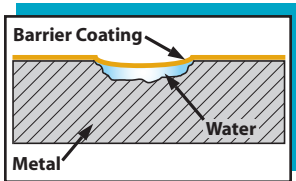
CORROSIONX[®]

The 'Can-Do' Can

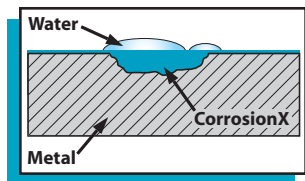
STOPS RUST AND CORROSION FOR GOOD

In controlling rust and corrosion, the traditional approach has been to cover metal surfaces with a barrier coating such as paint, wax or oil. It's a good theory in principle (and until now, there weren't many other options), but there are major drawbacks. Barrier coatings can't do much besides keeping moisture off the metal surface thereby slowing the corrosion process – that's why they're called 'corrosion inhibitors'.

Unfortunately, moisture inevitably displaces or penetrates through barrier coatings – allowing water and oxygen to contact the metal surface that's supposedly being protected. Once this happens, barrier coatings tend to lock in moisture, and corrosion can grow unchecked.



CorrosionX uses a revolutionary technology that causes the product to stick to metal almost like a magnet. This **Polar Bonding** technology puts CorrosionX's effectiveness light-years ahead of the competition. Because CorrosionX is attracted to metal, it displaces moisture and electrolytes that accelerate the corrosion process – even saltwater. It then leaves an ultra-thin, self-healing film that actively seals metal from the environment.

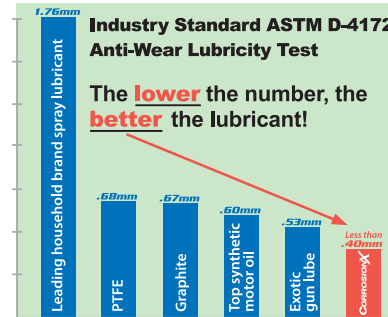


This unique ability makes CorrosionX more than just a 'corrosion inhibitor'; it's a true corrosion stopper.

With regular application, CorrosionX has proven to be unmatched in controlling corrosion even under the most extreme conditions.

LUBRICATES

Without adequate lubrication, surfaces grind together, which creates friction and results in wear. CorrosionX stays bonded in place so wear surfaces are separated by a super slick, self-healing Fluid Thin Film Coating (FTFC) that dramatically reduces friction and wear.



SOURCE: All data published on competitors' websites.

PENETRATES

The attraction between metal and CorrosionX is so strong that CorrosionX molecules 'leapfrog' each other in order to contact clean metal – defying gravity and penetrating through rust and corrosion. This is why CorrosionX penetrates faster and further than any other penetrant.

ELECTRONICS SAFE

CorrosionX won't short sensitive circuits or interfere with electrical connections. CorrosionX displaces moisture and existing corrosion, cleans contact points, and often improves connectivity – restoring electronics that have been damaged by environmental exposure.



THOUSANDS OF USES

Marine

- Power drives, engines, generators and A/C units
- Throttle cables and steering mechanisms
- Winches, furling systems, windlasses, cleats, hatches, stanchions, downriggers and all other deck hardware
- Battery terminals, wiring harnesses, circuit breakers and fuse holders
- Instrument and nav light connections, electrical panel and ignition switch
- Often restores electronic gear exposed to moisture, including electric motors, radios, radar and GPS

Industrial

- Bearings and bushings, pulleys, winches and rolling stock
- Air tools and power tools
- Stuck valves
- Wire rope and cable, including brake and throttle cables
- Electric motors, pumps, alternators and starters
- Switches, breaker and fuse holders

Household, Lawn & Garden

- Locks, hinges, door and window slides
- Tools
- Garage door openers, casters and tracks
- Fans
- A/C units

Automotive

- Unpainted metal parts
- Frame and body
- Lugs, nuts and bolts
- Battery terminals

Sporting Equipment

- Bearings
- Fishing reels
- Firearms and hunting gear