

Fluorokote #1[®] Fastener



metal
COATINGS CORP.

ISO 9001 Certified

Corporate Overview

Since the founding of Metal Coatings Corp. in 1974, our mission statement has never wavered: Provide outstanding quality, give personal service and meet the customer's needs.

By providing coating services for fastener manufacturers and distributors, we have established a reputation for being the industry leader in fluoropolymer fastener coating with our FluoroKote#1® process. This process provides exceptional corrosion resistance, a low coefficient of friction, consistent tensioning and subsequent ease of installation and removal. Major manufacturers and oil, gas and chemical companies have recognized these superior characteristics by specifying Metal Coatings Corp. and the FluoroKote#1® process above all others.

With over 80,000 square feet of production space, we are able to handle more than 40,000 pounds of fasteners every day. A variety of fastener types and sizes are coated at our facility; from those weighing only a fraction of an ounce to fasteners weighing in excess of 1,000 pounds each. Orders large or small, are processed quickly. Next or same day service is available. Our plant houses state-of-the-art, computerized process equipment which, along with our research and development department, enables Metal Coatings Corp. to continually improve the coating process. Thanks to our advanced equipment, fasteners are coated to a precise, uniform thickness with a high quality fluoropolymer coating.

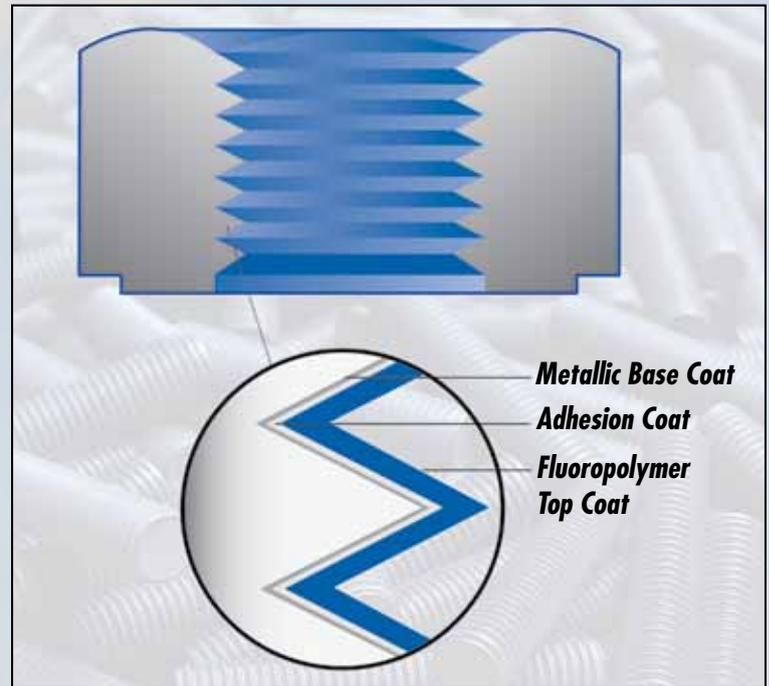
All orders are quality checked at every stage of the process to make certain the job is done right the first time. In recognition of our quality efforts, we have earned the ISO 9001 certification for application of industrial coatings. This certification, through written procedures and extensive record keeping, demonstrates consistent quality throughout the coating processes. Annual audits, performed by independent auditors, make certain that our quality system operates to the highest industry standards.



FluoroKote#1[®] Coating Process

Metal Coatings Corp. has perfected the fluoropolymer fastener coating process. Surface preparation of the fastener prior to coating is a very important step. We use the latest industry accepted methods to thoroughly clean all the contaminants from the fasteners. Manufacturing oils, rust and scale are removed to ensure the highest quality coating.

Superior corrosion resistance is created by the application of a series of coatings. A metallic base coat is applied first, followed by an adhesion coat. The adhesion coat creates a chemical bond between the base coat and the top coat. The top coat, a heat cured fluoropolymer coating containing PTFE, is used to seal the two under coatings and give easy on/easy off characteristics. This combination of coatings creates the FluoroKote#1[®] process.



FluoroKote#1[®] fully protects fasteners by guaranteeing 100% coverage of the surfaces, even inside the nuts.

Fluoropolymer coatings are extremely durable, but during assembly of fasteners in the field, the coating can sometimes be damaged. With most other fluoropolymer coatings, this results in exposed bare metal that quickly begins to show corrosion and causes the coating to fail. Our metallic base coat ensures superior corrosion resistance and continues to provide protection even under the harshest conditions.

All orders receive the highest quality control at Metal Coatings Corp. Each order of FluoroKote#1[®] coated fasteners is checked for cure, thickness, adhesion and overall coverage. Concentrations and temperatures of all solutions and chemicals used in the process are strictly controlled and written records are maintained. Our advanced, computer controlled, automated equipment keeps the coating thickness precise and extremely uniform. Great care is taken during the process so

that fasteners with a specified minimum hardness of Rockwell C32 or higher are not exposed to the absorption and entrapment of hydrogen which can cause hydrogen embrittlement failure.

Metal Coatings Corp. is the sole licensee and exclusive applicator of FluoroKote#1[®]. Competitors may claim to have a similar coating but cannot match our quality control and efficiency of operation. With state-of-the-art equipment, fasteners are coated with FluoroKote#1[®] at a more competitive cost without sacrificing quality. Acceptance of this revolutionary process has been steady and fast. Some of the world's largest companies recognize the superiority of this process and have placed Metal Coatings Corp. on their preferred supplier lists. They don't just ask for coated bolts... they specify FluoroKote#1[®] coated fasteners!





FluoroKote#1[®] Comparison



Fluorokote#1[®] Technical Data:

Use Temperatures:
-100 to 500 F

Corrosion Resistance:
Nuts not frozen after 4000 hrs
salt spray (ASTM B117)

Pencil Hardness:
5H-6H (ASTM) D3363-92A)

Kinetic Friction Coefficient:*

Thickness:
Nominal 0.001" (1 mil)

Impact:
160 in lb
(ASTM D2794-93)

Adhesion:
5B (ASTM D3359-95)

Dielectric Strength:
500 Volts per mil

Elongation:
35%-50%

Tensile Strength:
4,000 psi

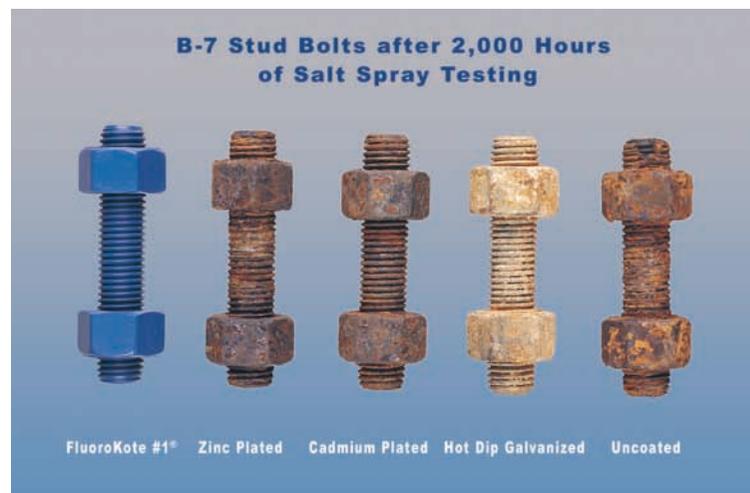
Operating Pressure:
Up to 100,000 psi

Kesternich Test:
Nuts not frozen after 30+ cycles
(DIN 50018)

Thread Fit:*

Overtapping of nuts 0.010"
(Recommended)

Extensive testing and field use have proven the superiority of FluoroKote#1[®] coated fasteners. Previously, hot dipped galvanized, cadmium or zinc plated fasteners were considered the standard. But these coatings could not stand up to the corrosive atmospheres prevalent in many industries. After 2,000 hours of salt spray testing (ASTM B117), fasteners coated with these conventional methods showed severe corrosion and in some cases failure. Fasteners coated with FluoroKote#1[®] fluoropolymer coating withstood these harsh conditions with no noticeable deterioration. Even after as many as 4,000 hours, FluoroKote#1[®] coated fasteners still could be easily disassembled.



Corrosion Resistance

ASTM	TEST	DURATION	RESULTS
D1308	Muriatic Acid 31% HCL	24 Hours	No Effect
D1308	Sulfuric Acid 93% H ₂ SO ₄	24 Hours	No Effect
D1308	Caustic Soda 100% NaOH	24 Hours	No Effect
D1308	Methyl Ethyl Ketone MEK	24 Hours	No Effect
D1308	Toluene	24 Hours	No Effect
B117	Salt Fog	2,000 Hours	No Effect

* Additional information available upon request

FluoroKote#1[®] Benefits



FluoroKote#1[®] possesses a low coefficient of friction which reduces torque requirements. When FluoroKote#1[®] coated fasteners are used, galling and seizing become problems of the past. Due to the absence of nut locking oxides after extensive exposure to corrosive environments, fasteners coated with our process do not need to be removed by torching, cutting or nut splitting. The easy on/easy off properties exhibited by these fasteners provide safe removal with wrenches. The costs entailed with other coatings can be staggering when factors such as man-hours, down time, safety and equipment damage are considered. Fasteners coated with FluoroKote#1[®] prove to be longer lasting, safer and more cost effective than any other coated fastener. Lower your plant maintenance cost and increase safety by using FluoroKote#1[®] coated fasteners.

FluoroKote#1[®] Applications

Oxygen Service • Phosgene gas lines

Boiler rooms • Water lines • Aniline

Gas meters • Monochlorobenzene (MCB)

Formaldehyde • Steam • Anhydrous HCL

Insulated piping • Non-insulated Piping

FluoroKote#1[®] has solved problems in many different industries and applications. Due to its unique benefits, FluoroKote#1[®] is applied to various types and grades of fasteners. The most widely used application is on B7 studs with 2H nuts. These fasteners are commonly used by turnaround groups, operations and maintenance departments and contractors at many chemical plants, refineries, and offshore platforms. The coating's chemical resistance and easy on/easy off characteristics are excellent for these environments. Water utilities take advantage of FluoroKote#1[®]'s superior corrosion resistance by coating T-head bolts for underground service. Stainless steel fasteners used in many different industries are coated for lubricity and anti-galling. The uses for FluoroKote#1[®] are limitless.

Wherever corrosive environments exist, FluoroKote#1[®] coated fasteners will continue to solve problems and offer superior performance.

Service All The Time

Metal Coatings Corp. is dedicated to servicing the needs of our customers. We realize how valuable your time is and will respond to your needs as quickly as possible. Our service representatives are on call 24 hours a day and can be reached easily by calling our main office. Every order is handled promptly with attention to quality and customer satisfaction.



***Metal Coatings Corp. and FluoroKote#1® ...
always providing outstanding service and quality
to our customers.***



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