ZPEX

by ecoat.us

Extreme Environment
Corrosion Control Coatings

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ZPEX by ecoat.us Coating Properties:

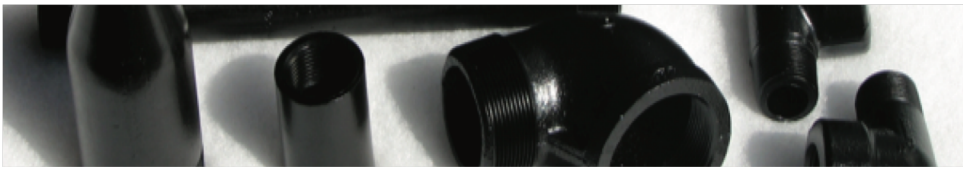
Dry Film Thickness:	1.3 - 2.0 Mils
Max Operating Temp:	550 Deg F.
Pencil Hardness:	6H
Coefficient of Friction:	.016 to .08
Tabor Abrasion (1000 Cycles)	7.3 mg lost.
Tensile Strength:	3,000 - 4,000 PSI
Salt Spray (ASTM B117):	4000 Hrs Minimum
H2O (10,000 PSI, 200 Deg. F.)	No Effect at any angle.

Abrasion Resistance (D4060)	16,200
Direct Impact:	100 lbs.
Indirect Impact:	120 lbs.
Gloss:	45-55
Color:	Dark Grey
Cross-Hatch Adhesion:	5B
Gravelometer:	6 Minimum

Z-PEX is resistant to the following chemicals:

Acetone	Fructose	Ozone
Acetic Acid	Gasoline	Perchloric Acid
Acetates (ALL)	Glucose	Phenol 85%
Amines (ALL)	Glycol	Phosgene
Ammonia	Glycol Ether	Phenolphthalein
Ammonium Hydroxide	H2CO3	Phosphoric Acid
Amino Acids	Hydrochloric Acid	Potassium Chloride
Benzene	Hydrochloric Acid	Potassium Hydroxide
Borax	Hydrogen Peroxide 5%	Propyl Alcohol
Boric Acid	Hydrogen Sulfide	Propylene Glycol
Butyl Alcohol	Hydrazine	Salicylic Acid
Butyl Cellosolve	Hydroxylamine	Salt Water
Butyric Acid	Iodine	Sodium Bisulfite
Calcium Chloride	Isobutyl Alcohol	Sodium Chloride
Calcium Hypochlorite	Isopropyl Alcohol	Sodium Hypochlorite 5%
Carbon Tetrachloride	Kerosene	Sodium Hydroxide <10%
Cetyl Alcohol	Lactic Acid	Sodium Sulfate
Chlorides (ALL)	Lauryl Acid	Stearic Acid
Chlorine Gas	Magnesium	Sucrose
Chromic Acid (NR)	Maleic Acid	Sulfuric Acid 25-28%
Citric Acid	Menthol	Sulfates (ALL)
Creosol	Methanol	Sulfates (ALL)
Diesel Fuel	Methylene Chloride	Sulfates (ALL)
Diethanolamine	Methyl Ethyl Ketone	Starch
Ethyl Acetate	Methyl Isobutyl Ketone	Toluene
Ethyl Alcohol	Mustard Gas	Triethanolamine
Ethyl Ether	Naphthol	Xylene

*100 Hour exposure time at ambient temperature. No Effect.



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Corrosion & Chemical Resistance

Z-PEX is a revolutionary new coating system. Unlike single-component coatings in the oil and gas industry, Z-PEX has been designed as a system of interdependent thin-film coatings working in concert to provide the ultimate protection for extreme environments. Z-PEX is the first holistic coating system designed to exceed the needs of the oil and gas industry.

Z-PEX provides the highest level of base-metal corrosion protection on the market today. It does this by electrodepositing an eighth generation hybrid polyepoxide coating over a Zirconium Oxide pretreated surface. This creates a chemical resistant base-coat that forms an electro-molecular bond with the substrate. The superior bond created in our proprietary cross-link application prevents the coating from chipping or peeling and prevents corrosion from "creeping" under the coating.

Electrodeposition ensures a uniform film-build across the entire surface of a component.

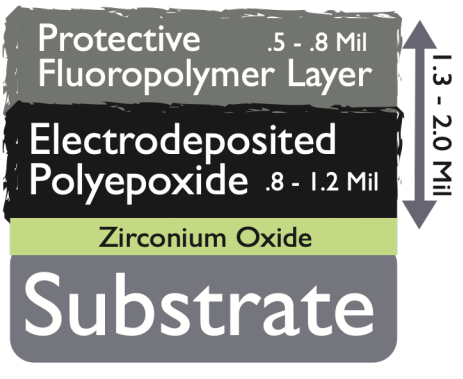
Chemical resistance is key to survival in the oil and gas industry. ZPEX is unaffected by a diverse array of Hydrocarbons, H2S Gas, HCL, Chlorine, Salt Water and Carbonic Acids that currently cause most system failures.

By utilizing a single system capable of surviving a wide array of environmental situations, a wide array of environmental situations, customers can drastically reduce the costs associated with sourcing various systems and materials for each application.

Z-PEX over carbon steel can outperform Stainless Steel and exotic alloys for a fraction of the cost. Unlike Stainless, Z-PEX is capable of surviving long-term in H2S rich environments.

Although high density polyepoxide coatings have long been known to have superb adhesion and chemical resistance, they typically lack the abrasion resistance needed to survive in mechanically harsh environments. Z-PEX overcomes these limitations by incorporating a fluoropolymer layer over the electrodeposited epoxy base-coat. Z-PEX combines the desirable characteristics of both technologies into a single, uniform layer of protection.

Unlike other products used in the oil and gas industry, Z-PEX provides corrosion protection to 100% of the component. Even in hard to reach recesses and threads.



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Coefficient of Friction

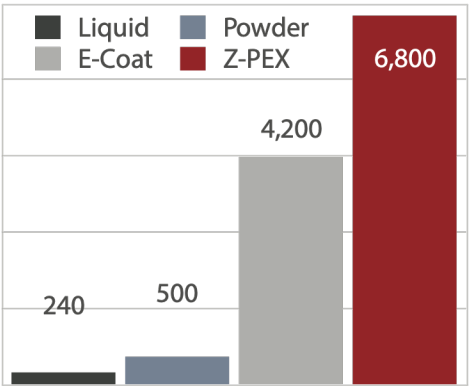
And Why it Matters.

- Erosion is an unstoppable force. In time, it can cut mountains into valleys and wear holes through steel. Erosion is the continual loss of material from a surface by the physical interaction between that surface and the fluids passing over it. Fluids with a high content of solids accelerate this effect due to increased abrasion. Z-PEX counteracts this force by significantly reducing the coefficient of friction on the surface. This allows the fluids to move through components more freely and creates less wear.

- Z-PEX decrease the energy required to move fluid by lowering its resistance against the components.

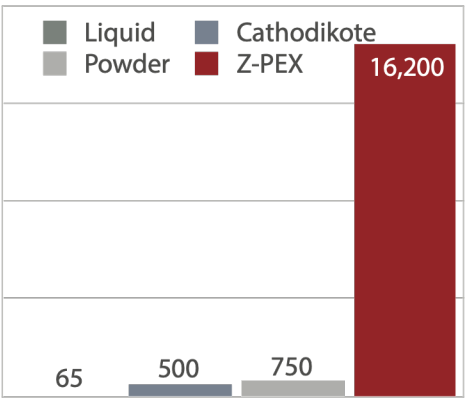
- Z-PEX prevents galling of threads.

- Fluoropolymers are commonly used in the Oil & Gas industry, but have been hindered by their porosity and poor adhesion. In chemically-rich environments, corrosive agents often permeate through them and release the bond between the coating and the substrate. Or worse, the substrate corrodes beneath the coating and compromises the substrate. Only Z-PEX can provide the advantages of floropolymer-based coatings without limitations.

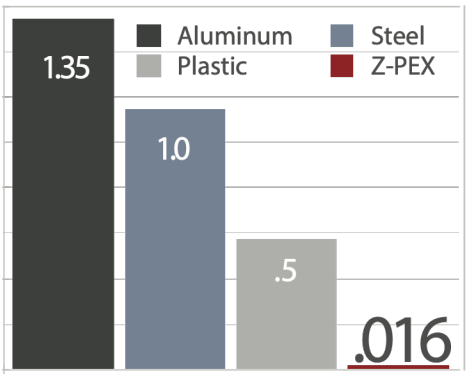


Corrosion Resistance

(ASTM G85 Salt Water Acidification Test)



Abrasion Resistance (ASTM D4060)



*Two like surfaces, based on pressure.

*Average Coefficient of Friction