



Dielectric Polymer Composite Coating

HART Dielectric Insulating Unions

HART Industrial Dielectric O-Ring Unions are engineered to provide the most effective and efficient method of preventing electrolytic deterioration. The Union design and thermo-baked epoxy polymer coating provides insulation against galvanic corrosion and current flow eliminating any stray corrosion.

A coating certified to NSF/ANSI/CAN-61 is available upon request for potable water applications.

All HART Unions are made in the USA!

Coating Features (ASSE Standard #1079-2005):

- Excellent resistance to wear, abrasion, and shipping.
- Provides resistance to rust/corrosion per ASTM B-117 Salt Fog Tests.
- Operating temperatures from -100°F to +400°F.
- Superior adhesion to a variety of substrates including Carbon Steel, Brass, Copper, Stainless Steel, Monel, and Titanium.

Physical Properties:

• Typical Coating Thickness:	3-6 mil	
• Volume Resistivity (DC Voltage)	1.1 x 10¹⁵ ohm-cm	(ASTM D257)
• Pencil Hardness:	F	(ASTM B3363)
• Gloss Finish:	High	
• Cross cut	Gt 0	(DIN EN ISO 2409)
• Impact resistance	> 5 Joule	(DIN 30677-2 / ASTM D2794)
• Abrasion resistance	< 40 mg	(ASTM D4060 / CS-17, 1000 g, 1000 cycles)
• Shear Adhesion	> 35 MPa	(ASTM D1002)
• Heat aging in air (90 days), water	fulfilled	(DIN EN 14901)
• Weathering (Xenon test), 100 days	pass	(ASTM D2596-99)
• Salt spray resistance, 2000 h	No blistering, no loss of adhesion	(BS 3900:F4)
• Salt spray test, 4000 h	no under-rusting on the cut	(DIN EN ISO 9227 - steel substrate)
• Water absorption, 100 d, 74 °F (23°C)	pass	(AS/NZS 3862)
• Chemical resistance	fulfilled	(EN 598)



Questions? Call us at 1-800-769-0503. Our Customer Service and Engineering Teams are available to assist you with any needs!



HART Dielectric Coating Environmental Resistance Data

Chemical	Duration	Result	Chemical	Duration	Result
Acetic acid 10 %	2 years	no change	Lactic acid 10 %	1 week	no change
Ammonia 10 %	2 years	no change	Methanol	1 week	no change
Ammonia 36 %	1.5 years	no change	Methyl tert-butyl ether 100%	6 months	softening
Antifrogen L 50 %	1 year	no change	Nitric acid 10 %	1.5 years	no change
Antifrogen N 50 %	1 year	no change	Nitric acid 25 %	1 year	no change
Benzol	1 month	no change	Oxalic acid 5 %	6 months	no change
Bore oil	1 year	no change	Palm oil at 90° C	7 days	no change
Butanol	6 months	no change	Petrol	2 years	no change
Carbon tetra chloride	1 year	no change	Petroleum	1 year	no change
Caustic soda sol. 10 %	2 years	no change	Phosphoric acid 10 %	2 years	no change
Caustic soda sol. 50 %	2 years	no change	Phosphoric acid 50 %	2 years	no change
Chlorine cleanser and disinfectant	1.5 years	no change	Potassium hydroxide 10 %	1 year	no change
Citric acid	2 years	no change	Potassium hydroxide 25 %	1 year	no change
Deicer Safeway KF HOT	1 year	no change	Potassium hydroxide 50 %	1 year	no change
Deicer Safeway SF (solid)	1 year	no change	Propanol	1 year	no change
Deicer Safewing MP II 1951	1 year	no change	Sea water	2 years	no change
Dichromatic potassium 10 %	1 year	no change	Sodium acetate 10 %	1 year	no change
Diesel	2 years	no change	Sodium carbonate 20 %	1 year	no change
Engine oil SAE 20	1 year	no change	Sodium hypochlorite (15 % Cl ₂)	10 weeks	no change
Ethanol	1 year	no change	Sodium chloride 2 %	1 year	no change
Ethyleneglycole	1 year	no change	Sodium chloride 20 %	1 year	no change
Formaldehyde 37 %	6 months	no change	Sodium formiate 10 %	1 year	no change
Formic acid 5 %	2 years	no change	Suds 1 %	1 year	no change
Formic acid 10 %	1.5 years	no change	Sulphuric acid 2 %	2 years	no change
Glycerol	1 year	no change	Sulphuric acid 20 %	2 years	no change
Glystantin	1 year	no change	Sulphuric acid 50 %	2 years	no change
Hydrochloric acid concentrated	1 week	no change	Tartaric acid 5 %	1 year	no change
Hydrochloric acid 10 %	2 years	no change	Toluol	1 year	no change
Hydrochloric acid 25 %	1.5 years	no change	Turpentine oil	1 year	no change
Hydrofluoric acid 1 %	1 day	no change	Urea 10 %	1 year	no change
Hydrogen peroxide 3 %	1 year	no change	Urine	1 year	no change
Hydrogen peroxide 10%	1 year	faded	Xylol	1 year	no change

Disclaimer: The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product at the date of this TDS. The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others whose methods we have no control. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. It remains the responsibility of the user to test thoroughly if the product is applicable for the intended use. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. The TDS shall be updated from time to time.

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