

FUNCTIONAL



The functional market targets specific applications in which not only is the coating functional in nature, but the parts themselves that are being coated are actually functional in their usage.

Our formulations offer a full range of vibrant colors and custom color-matching capabilities for instant identification for emergency, power, healthcare, electrical systems, and other solutions. Our coatings are fit for a wide range of tube and pipe dimensions, and can be applied using various techniques such as spray, dip or brush.





AG-KOTE™

FEATURED SOLUTIONS

THERMOSET POWDER COATINGS

AG - KOTE™

AG-KOTE™ is a polyester-based coating formulated to be cured at temperatures as low as 160°C. It promotes energy savings and higher productivity without sacrificing the quality and properties of the coating.

- Low temperature curing promotes energy savings and higher productivity when painting large objects.
- Possibility to coat thin and thick materials at the same time without color and effect differences.
- Excellent UV, chemical, and corrosion resistance.
- Can be formulated with most Protech Group coatings.

THERMOSET POWDER COATINGS

EF-SERIES™

EF-SERIES™ is a fusionbonded epoxy coating that was specifically formulated to provide maximum corrosion resistance in the most demanding conditions. It is available in single, dual, and multilayer systems.

- Superior corrosion and chemical resistance.
- Low porosity and fast curing time.
- Can be used as a single layer or as the primer in a dual layer or in a multilayer system.
- Compliant with many construction and engineering standards worldwide.
- Can be formulated with some Protech Group coatings.



EF-SERIES™

FEATURED SOLUTIONS

THERMOPLASTIC COATINGS

WATERARMOR™

WATERARMOR™ is formulated with functionalized polyethylene copolymer that is controlled, tested and certified for marine or water infrastructure. It can be applied by fluidized bed, electrostatic spray, flame spray, or extrusion.

- Impermeable barrier for increased durability.
- Unique one layer, primer-less coating.
- Chemical, corrosion, and abrasion resistance.
- Little-to-no maintenance for reduced costs.
- Certified by the National Sanitation Foundation (NSF).
- Repairable coating for extended product life.
- Can replace several layers of conventional protective coating.

SPECIALTY MATERIALS

PLASTISOL

PLASTISOL is a liquid dispersion of PVC resin in plasticizer. It is formulated based on processing parameters, end-use applications, and desired product specifications. By utilizing an extensive group of raw material additives, PLASTISOL is an incredibly versatile polymer choice.

- Can be custom-formulated for a wide variety of market applications and processing methods.
- Optimized for applications including dip coating, dip molding, rotational molding, slush molding, hot melts, inks, textile coatings, and adhesives.
- Performs as a protective, functional, and decorative coating for a variety of end products with many available resistance properties.
- Formulated without solvents and low in Volatile Organic Compounds (VOCs).



WATERARMOR™

APPLICATION MATRIX

	ELECTRONICS	ELECTRICAL INSULATION	VALVES & FITTINGS	REBARS	PIPELINES
THERMOSET POWDER COATINGS					
AG-KOTE™	✓	✓	✓	✓	✓
AUTO-COAT™	✓	✓	✗	✗	✗
CURVECOAT™	✓	✓	✗	✓	✗
E-BOND™	✓	✓	✓	✗	✗
EF-SERIES™	✓	✓	✓	✓	✓
STERILCOAT®	✓	✗	✓	✗	✗
VELVACOAT	✓	✗	✗	✗	✗
Z-SERIES™	✓	✓	✓	✗	✓
THERMOPLASTIC COATINGS					
DURAVIN™	✗	✓	✗	✗	✗
POLYARMOR®	✗	✓	✗	✗	✗
WATERARMOR™	✗	✗	✓	✗	✓
SPECIALTY MATERIALS					
PLASTISOL	✗	✓	✗	✓	✗
NATLEX	✓	✗	✗	✗	✗

PROVEN PERFORMANCE

We are constantly striving to improve by researching new chemistries to solve whatever challenges our customers present to us. If our current product lines do not suit your exact requirements, we have the ability to custom engineer one that will. Through development, we always deliver the right mix.



THERMOSET POWDER COATINGS

Thermoset powder coatings, such as SOL-AR™, X-GRAF®, and Z-SERIES™ are developed and manufactured with state-of-the-art chemistries that comply with the latest environmental and operational regulations.

PRE-TREATMENT	For steel and Aluminum–Phosphating or Zirconium or other suitable surface treatment
APPLICATION CONDITIONS	Electrostatic powder spray 40 to 100 kv
FILM THICKNESS	For normal usage 2.0 to 4.0 mils (Color and finish type related)
HARDNESS	HB to 4H (Formulation related)
SPECIFIC GRAVITY	1.2 to 1.75 (Color related)
COVERAGE	160 to 110 ft ² / lbs / mil at 100% efficiency (Color related)
BAKING SCHEDULE	METAL TEMPERATURE (Formulation related) 8-10 minutes at 280°F (138°C) Super low temperature cure 8-10 minutes at 320°F (160°C) Low temperature cure 2-6 minutes at 400 (205°C) Fast cure 7 minutes at 400°F (205°C) Regular cure 8+ minutes at 400F (205°C) Slow cure

PROVEN PERFORMANCE

THERMOPLASTIC COATINGS

Thermoplastic coatings, such as WATERARMOR™, can be formulated to be compliant with certain guidelines.

TYPE	METHOD	RESULT
Tensile Strength	ASTM D638	3496 psi (24 MPa) 414%
Elongation	ASTM D638	162 °F (72 °C)
Vicat Softening Point	ASTM D1525	160/160
Impact, Direct/ Reserve (inch lbs)	ASTM D2794	<77 in.lb. if tup weight 3.2 lb.
Impact Resistance	ASTM G14 - 04	28 mg loss, CS10 wheel & 61 mg loss, CS17 wheel
Taber Abrasion	ASTM D4060	>2000 psi (13.78 MPa)
Adhesion	ASTM D4541	5 mm Average Radial Dispondment
Cathodic Disbondment	ASTM G95-07	1/8 in (3.2 mm), no cracks (>32%) (Conical Mandrel)
Flexibility	ASTM D522	>2000 hrs. No significant undercut or creep
Salt Spray	ASTM B117	>2000 hrs, No significant change in color or gloss.
Q-Panel UltraViolet (QUV)	ASTM G53	>1000 hrs, No significant change in color or gloss.
High Irradiance Xenon-Arc	JIS K 5600-7-7:2008	No blistering or loss of gloss after 1000 hours.
Humidity Resistance	ASTM D2247	
Volatile organic compounds (VOCs)		ZERO

SPECIALTY MATERIALS

Specialty Materials, such as PLASTISOL, can be tested on demand for various properties:

- Tensile
- Tear
- Elongation
- Density
- Gelation temperature
- Flame retardancy
- Fineness of grind
- Gloss
- Viscosity
- Dielectric strength
- Hardness
- Bond strength
- Heat ageing
- Phthalates

FORMULATING THE RIGHT MIX.

Since 1976, the Protech Group has been developing and manufacturing coatings, paints, and specialty materials. Through quality and innovation, we formulate the right mix to protect and enhance what matters most to our customers. Protech Group products are manufactured in more than 20 sites worldwide. We serve our customers in countless markets and industries, including construction, infrastructure, transportation, consumer goods, and healthcare.



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