Protecto-Coat 705

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Graphite Flake-filled, polyester Coating
Designation	A polyester resin formulated specifically as a non-sparking, silica-free lining that utilizes graphite flake fillers for resistance to many of the harshest chemicals, including nitric acid and methylene chloride.
Description	This coating is designed to offer a wide range of high performance, suitable for many different industrial and manufacturing applications. Graphite flake fillers enhance the protection necessary for specific chemical environments. The coatings are formulated for brush, roller or spray application.
Features	• Low Permeability • Conductive • Non-Sparking • Excellent resistance to fluorinated chemicals • Excellent abrasion resistance and hardness
Color	This product is pre-pigmented from factory in Dark Gray (F748), this color can be found in the Universal Color Pack section of Dudick Flooring Color Chart
Primer	Primer 27 is designed to prevent abrasive-blasted metal from developing rust bloom prior to the application of a Protecto-Coat 700/705 systems. For maximum performance, all metal surfaces should be primed, but primer may not be needed for mild, non-immersion service. Concrete must be primed to aid in the “wetting out” required for good bonding. Primer 27C is designed for applications on concrete where spark testing is required or specified.
Dry Film Thickness	15 - 20 mils (381 - 508 microns) per coat 2 coats will produce a 30-40 mils (750-1000 microns) total dry film thickness which is recommended for immersion service.
Solids Content	By Volume 100%
Theoretical Coverage Rate	1604 ft²/gal at 1.0 mils (39.4 m²/l at 25 microns) 107 ft²/gal at 15.0 mils (2.6 m²/l at 375 microns) 80 ft²/gal at 20.0 mils (2.0 m²/l at 500 microns) Allow for loss in mixing and application.
Dry Temp. Resistance	Continuous: 250ºF Intermittent: 300ºF
Chemical Resistance	• Organic Acids • Oils • Inorganic Acids • Salts • Chrome Plating Solutions

SUBSTRATES & SURFACE PREPARATION

General	Surfaces must be clean and dry. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating.

SUBSTRATES & SURFACE PREPARATION

Concrete

Concrete must be prepared mechanically to remove surface laitance. Oils, grease or other contaminant must be removed prior to surface preparation. Concrete must be free of curing compounds and form release agents. Surface texture should be similar to 40-60 grit sandpaper or the visual standard, CSP-5 from the International Concrete Repair Institute with pea gravel exposed. Additional surface preparation will be required if 40-60 grit texture with exposed pea gravel is not achieved and the surface laitance not completely removed with the first mechanical preparation procedure. The prepared surface shall have a tensile strength of 250 PSI per ASTM D-7234.

All concrete substrates must be checked for moisture prior to product application using the Plastic Sheet Test, ASTM D-4263.

Metal

Immersion and heavy spillage service: White Metal, SSPC SP 5 or NACE #1, minimum 3.0 mil profile.
Heavy non-immersion service (i.e. fumes and spillage): Near white, SSPC SP 10 or NACE #2, minimum 2.0 mil profile.
Atmospheric service: Commercial SSPC SP 6 or NACE #3, minimum 2.0 mil profile.

PERFORMANCE DATA

All test data was generated under laboratory conditions. Field testing results may vary.

Test Method	Results
Adhesion to Steel ASTM D-4541	2,000 PSI
Electrical Properties	1.5-2.0 Megaohms
Flame Spread ASTM D-635	<5 mm
Flexural Strength ASTM C-580	5,000-5,200 PSI
Shore D Hardness ASTM D-2240	75-80
Taber Abrasion ASTM D-4060	42 mg.
Tensile Strength ASTM C-307	2,500-2,800 PSI
WVT ASTM E-96	0.0022 perm.in.

MIXING & THINNING

Mixing

Add the correct amount of PH-2 Red or Clear Hardener to the Protecto-Coat 700/705 and mix thoroughly until a uniform color is achieved. Apply at 15-20 mils WFT using a brush, spray or roller to an even, smooth finish.

Primer 27C must be mechanically mixed for 1-2 minutes prior to adding the correct amount of PH-1 Hardener; apply by roller only. Use brush application for touch-up or repair.

Ratio

For maximum performance, prime all metal surfaces with Primer 27, mixed with the correct amount of PH-1 Hardener. Apply at 3-4 mils WFT with a brush, spray or roller. For mild non-immersion service, priming of metal may be omitted. The basecoat must be applied before rust bloom occurs.

Pot Life

60 Min @ 50ºF
40 Min @ 75ºF
25 Min @ 90ºF

APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

Airless Spray

Pump Ratio: 45:1 or greater, capable of at least 1 GPM. Hopper or siphon feed is preferred.
Filters: Ensure all filters are removed. Material Hose: 1/2" I.D. (min.), 4500 psi or greater rated.
Tip Size: .25-.31"
Output PSI: 3000-3500 psi (min.)
Gun: Airless gun rated for at least 4500 psi. Filter-free or front-fed gun is preferred. PTFE packings are recommended and available from the pump manufacturer.

When siphon feed is used, change the pail out as frequent as necessary to avoid exotherm of the catalyzed material.

Brush & Roller (General)

Brush or roller application may require additional coats to meet the specified dry film thickness.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	75°F (24°C)	50°F (10°C)	50°F (10°C)	0%
Maximum	90°F (32°C)	110°F (43°C)	110°F (43°C)	90%

CURING SCHEDULE

Surface Temp.	Chemical Service	Maximum Recoat Time
50°F (10°C)	96 Hours	120 Hours
75°F (24°C)	24 Hours	72 Hours
90°F (32°C)	20 Hours	48 Hours

CLEANUP & SAFETY

Cleanup

Use S-10 Cleaning Solvent to clean tools and equipment.

Safety

Read and follow all caution statements on this product data sheet and on the SDS. Employ normal safety precautions. Keep container closed when not in use.

Ventilation

Ventilation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapor concentration from reaching the lower explosion limit for the solvents used. User should test and monitor exposure levels to insure all personnel are below guidelines. Use MSHA/NIOSH approved air respirators as needed.

Caution

Fire and explosion hazards: This product contains less than 1% volatile components, however, vapors are heavier than air and can travel long distances, ignite and flash back. Eliminate all Ignitions sources. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workers should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

PACKAGING, HANDLING & STORAGE

Packaging	**1 Gallon Kits:** Part A: 0.97 Gallons (in a 3.5 gal. steel pail) Part B: 0.03 Gallons (in a 1 gal. metal/Box) **5 Gallon Kits:** Part A: 4.85 Gallons (in a 5 gal steel pail) Part B: 0.15 Gallons (in a 1 gal metal/Box)
Shelf Life	Part A: 6 months Part B: 6 months
Storage	Warning: All Dudick products classified with DOT labels as either white, yellow or red labels must not be mixed or stored together as an explosive reaction can occur. All products should be stored in a cool, dry area away from open flames, sparks or other hazards.
Shipping Weight (Approximate)	1 gallon kits: 16.9 lbs 5 gallon kits: 62.5 lbs

WARRANTY

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