STEEL-IT®

Application Instructions

STEEL-IT 1012B Polyurethane Aerosol – Black

System

- 4 coats STEEL-IT 1012B Polyurethane Aerosol – Black
- For harsh conditions, an additional 2 coats are recommended.
- A single coat is 8 mils (0.008"; 205 microns) Wet Film Thickness (WFT) and dries to 1.5 mils (0.0015"; 38 microns) Dry Film Thickness (DFT) when applied at a swift moving speed across the surface.

Surface Preparation

STEEL-IT coatings adhere to metal surfaces through mechanical adhesion and require a rough profile on the bare metal – ideally achieved by grit-blasting or power-sanding. The surface once properly prepared should feel like the striking area on a matchbox.

- Surfaces should be clean and free of all rust, paint, greases, waxes, salts, dirt, scale, etc.
- For best results, grit-blast to SSPC SP-6 (Commercial Blast).
- Anchor pattern should be cut and angular at 1.5 - 2.0 mils deep (0.0015" – 0.0020"; 38-50 microns).
- Power-sanding with a dual-action sander or random orbital sander using #36 grit sandpaper will achieve similar results on steel. After grit-blasting, blow any remaining grit material off using an air hose and/or solvent clean the surface with acetone or alcohol. Avoid using products that leave behind an oily residue (such as mineral spirits).

Ambient Conditions

- Apply when ambient and substrate surface temperatures are 50 °F -120 °F (10 °C - 49 °C)
- Relative humidity less than 85%
- Temperature of substrate surface and coating are at least 5 °F (2.75 °C) above the dew point.
- Climate conditions (e.g. high humidity or high aridity) will impact coating dry/cure time. Longer cure times may be necessary for higher humidity or colder climates. Spraying speed and technique may need to be adjusted.

Agitation

- Shake the can vigorously for 2 minutes, ideally with a power shaker.
- Shake the can periodically while spraying

Application Method

- Spray from a distance of 12-16" (30-40 cm) making multiple passes to achieve proper coating wet film build.
- Overlap the spray paint pattern by 50%.
- Spraying speed should be faster in drier and hotter climates.

1st COAT

AMOUNT TO APPLY:	8 mils (0.008"; 205 microns) Wet Film Thickness (WFT)
AIR DRY TIME AFTER APPLICATION:	30 minutes - 1 hour

2nd COAT

AMOUNT TO APPLY:	8 mils (0.008"; 205 microns) Wet Film Thickness (WFT)
AIR DRY TIME AFTER APPLICATION:	4 - 6 hours

3rd COAT

AMOUNT TO APPLY:	8 mils (0.008"; 205 microns) Wet Film Thickness (WFT)
AIR DRY TIME AFTER APPLICATION:	30 minutes - 1 hour

4th COAT

AMOUNT TO APPLY:	8 mils (0.008"; 205 microns) Wet Film Thickness (WFT)
AIR DRY TIME AFTER FINAL COAT:	5-7 days

Additional Coats	If applying optional additional coats for enhanced durability: • Allow 4th coat to cure for 4-6 hours • Apply 5th and 6th coats with one-hour dry time in between • After applying 6th coat (final coat), air cure for 5-7 days
Wet/Dry Film Build	• For each coat, apply 8 mils (0.008"; 205 microns) Wet Film Thickness (WFT) to achieve 1.5 mils (0.0015"; 38 microns) Dry Film Thickness (DFT) per coat. • Use a Wet Film Thickness Gauge when the coating is wet to measure film build per coat during application. • For proper performance, the end total DFT of STEEL-IT coating applied should be 6 mils (0.006"; 150 microns) DFT. • For parts exposed to harsher conditions, we recommend achieving 9 mils (0.009"; 225 microns) total DFT. • We do not recommend using an electronic gauge to measure Dry Film Thickness. For an explanation, please refer to the FAQs on STEEL-IT.com
Dry Time and Recoat Windows	• Dry to touch: 1-2 hours • Tack-free to handle: 2 hours • Dry to recoat window: 4-24 hours • If more than 24 hours passes between coats, a light scuff-sanding using #400-600 grit sandpaper is required before applying an additional coat
Curing	• **Full cure in 5-7 days after final coat** • Recommended cure time can vary based on ambient temperature and humidity. • Air cure with ambient and substrate surface temperatures of 50 °F -120 °F (10 °C - 49 °C) • Heating to expedite curing time is not recommended and may interfere with proper cure. • Cure time required before part can be packaged or put into service depends on how the part will be used. Please refer to FAQs on STEEL-IT.com for details. • Cure and corrosion resistance is accelerated initially and will continue to improve over 4–6 week period.
Welding	• Allow a full 7-days cure before welding • TIG or MIG welding • Seamless touch-up with STEEL-IT Polyurethane Aerosol
Safety	• Wear a NIOSH-approved respirator with an organic vapor cartridge • Use nitrile gloves • Apply STEEL-IT in a well-ventilated area
Cleanup	• Use mineral spirits for clean up

Physical Properties

Property	STEEL-IT 1012B Aerosol
Color	Black, satin finish
Weight (calculated)	14 oz/can (397 g/can)
Coverage @ 3 mil (0.003"; 75 microns) DFT*	7.5 sq ft/can (0.7 sq m/can)

* Values assume 20% loss due to overspray.

Safety Data Sheets (SDS) and Technical Data Sheets (TDS) are available online at: STEEL-IT.com

Please contact us to discuss your specific application needs: contactus@steel-it.com

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