Technical Data Sheet

STEEL-IT® 1400 Polyurethane Topcoat – Safety Yellow

STEEL-IT® 1400D Polyurethane Aerosol – Safety Yellow

STEEL-IT® Brand 1K polyurethane coatings are durable, offering outstanding resistance to corrosion, abrasion, UV-rays, moisture, salt-spray, and harsh chemicals. Utilizing custom-engineered 316L stainless steel leafing pigment, these single-component coatings create a hard, non-toxic, metallic finish. The weldable STEEL-IT® Polyurethane coating can be applied direct-to-metal and is available as either a liquid or an aerosol.

Applications	• Motorsports/powersports; automotive; architecture and construction; packaging; machinery; industrial maintenance; agriculture; aerospace; marine • Welding; fabrication • Interior and exterior applications: Provides UV/weathering-resistance
Surfaces	• Steel, galvanized steel, aluminum, nickel-plated steel, copper, brass, plastic, fiberglass
System	• 2 coats STEEL-IT® 1400 (150 µm total DFT, 75 µm per coat) or 4 coats STEEL-IT® 1400D (150 µm total DFT, 38 µm per coat) • For particularly harsh conditions 225 µm total DFT are recommended; 3 coats STEEL-IT® 1400 or 6 coats STEEL-IT® 1400D • When welding is not desired, the topcoat or aerosol can be used with STEEL-IT® 2213 Epoxy Ester Precoat, which significantly improves corrosion resistance.

Technical Data

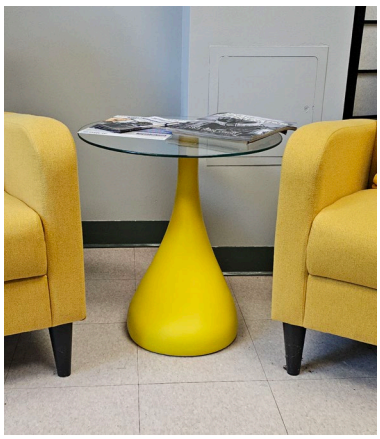
	STEEL-IT® 1400	STEEL-IT® 1400D
Color (Closest Pantone)	7405 C	7405 C
Color (Closest RAL)	1021	1021
Solids by weight	48% ± 2%	23% ± 2%
Solids by volume	43% ± 2%	N/A
Density (calculated)	1,16 kg/L	340 g/can
VOC (calculated)	378 g/L	CA MIR < 1.25
Coverage* at 75 µm Dry Film Thickness (DFT)	4,55 m2/L	0,6 m^2/can

*Values are considered "practical" coverage, calculated for smooth, non-porous surfaces and assume 20% loss due to overspray and waste

Coating Properties†

	Test Method	STEEL-IT® 1400 (2 coats)
Gloss: 60°	ASTM D523	10-20
Maximum In-Service Temperature	Hot Box Stability Testing	max. 93 °C
Corrosion Resistance (Rust at Scribe, 10-0)	ASTM B117/ ASTM D1654	1850 h (7 = 1.0–2.0 mm creepage)
Condensing Humidity	ASTM D4585	240 h - pass
MEK Rub Resistance	ASTM D4752	> 250

†Properties measured on 2-coat (total of 125 - 150 µm) films cured for 14 days at room temperature.



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STEEL-IT® 1400 Polyurethane Topcoat – Safety Yellow and STEEL-IT® 1400D Polyurethane Aerosol – Safety Yellow

Surface Preparation	• 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 38 50 µm deep • Power-sanding with a dual-action sander or random orbital sander using #36 grit sandpaper will achieve similar results
Conditions	• Apply only when ambient and substrate surface temperatures are 10-38 °C • Relative humidity less than 85% • Temperature of substrate surface and of coating at least 5 °F (2.75 °C) above the dew point

Application	• STEEL-IT® 1400 Polyurethane Topcoat – Safety Yellow
	  • Agitate for 5 min with a mechanical paint shaker or a mechanically driven paddle
	  • Preferred method is using an Air, Airless, Air-Assisted Airless, or HVLP spray gun
	• STEEL-IT® 1400D Polyurethane Aerosol – Safety Yellow
	  • Shake the can vigorously for 2 minutes, ideally with a power shaker
	  • Spray from a distance of 30-40 cm, making multiple passes to achieve film build
	  • Shake the can continuously throughout the application

Recommended Wet Film Build	• To achieve 75 µm Dry Film Thickness (DFT), apply
	  • STEEL-IT® 1400 Polyurethane Topcoat – Safety Yellow: 1 coat 200 µm Wet Film Thickness (WFT)
	  • STEEL-IT® 1400D Polyurethane Aerosol – Safety Yellow: 2 coats 200 µm Wet Film Thickness (WFT) applied 30-60 minutes apart

Dry Time and Recoat Window	• STEEL-IT® 1030Polyurethane Topcoat – White
	  • Dry to touch: 2 hours
	  • Tack free to handle: 4 hours
	  • Dry to recoat window: 4-24 hours
	• STEEL-IT® 1030D Polyurethane Aerosol – White
	  • Dry to touch: 1-2 hours
	  • Tack-free to handle: 2 hours
	  • Apply 3rd and 4th coats after air dry 4-6 hours
	  • Apply 5th and 6th coats after air dry 4-24 hours
	• If product is not recoated within 24 hours, a light scuff-sanding using #400-600 grit paper is required before applying an additional coat

Curing	• Cure at ambient temperatures of 10–49 °C • Both temperature and climate conditions (e.g. high humidity or high aridity) will impact cure time • Cure time required before part can be packaged or put into service depends on how the part will be used • Full cure in 5-7 days after final coat. Corrosion resistance continues to improve with prolonged atmospheric aging over a 4-6 week period
Welding	• TIG or MIG welding • Allow a full 7-day cure prior to welding • Seamless touch-up with STEEL-IT® 1400D Polyurethane Aerosol – Safety Yellow
Safety	• Wear a NIOSH-approved respirator with an organic vapor cartridge • Use nitrile gloves • Apply STEEL-IT® in a well-ventilated area

For detailed information on surface preparation, application instructions, and recommended spray gun equipment settings please refer to the Application Instructions available online at STEEL-IT-EUROPE.com.

The latest versions of the Safety Data Sheets (SDS) are also online at STEEL-IT-EUROPE.com.

The information presented in this Technical Data Sheet is accurate at the date of publication, however the data may be revised as new results become available. The reported values fall within the normal range of measured product properties and should not be used to establish specification limits. All users are responsible for conducting testing to determine the suitability of STEEL-IT Brand Coatings for the specific requirements of their applications.

Doc. No.: D00724 Version: 01 Revision Date: NA Issue Date: 09-Jan-26