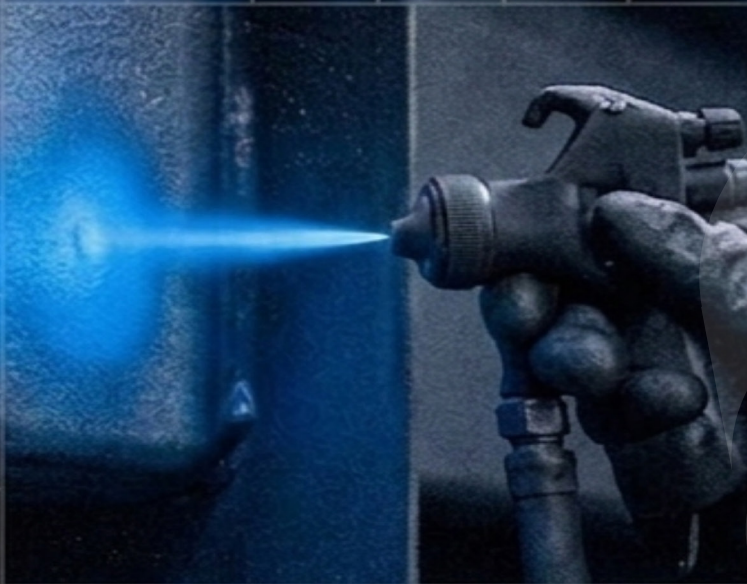




PAINT MANUFACTURING GUIDE



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PROCESS OVERVIEW

Paint Manufacturing Guide

Fluent Conveyors uses a unique painting process that ensures a beautiful and high-quality result, every time. We know what you deserve in premium equipment. We have developed a painting protocol that will exceed your expectations.

Process Overview

01

Primary Phase :

Surface Preparation
& Abrasive Blasting



To achieve an optimal, long-lasting paint covering, all coatings require superior surface preparation. This preparation removes mill scale, rust, oil, and other contaminants, including salt deposits. Media blasting a profile into the substrate is the best method. This method creates more surface area for the primer to adhere to, giving it a super secure bond to aid in corrosion and chip resistance. A GP 80, angular steel shot is used to provide a 1 – 1.5 mil profile prior to priming..



02

Secondary Phase :

Primer Coating Application



We level things up with our high-performance, high-solids Stratum Ultra Urethane Primer. Stratum Ultra Urethane Primer is a two-component, high-performance, high-solids primer for equipment manufacturers who require excellent gloss holdout (wet on wet), adhesion, corrosion, and chip resistance. This primer system includes the latest generation of rust inhibitor technologies and is applied at 1.5–2 mils over profile.

When the primer system is applied over a media blasted profile (which increases the surface area for adhesion), the primer gives excellent adhesion and bond to the surface to create a tight seal. A tight seal assists in the fight against corrosion and chipping,

03

Third Phase :

Top Paint Coating Application



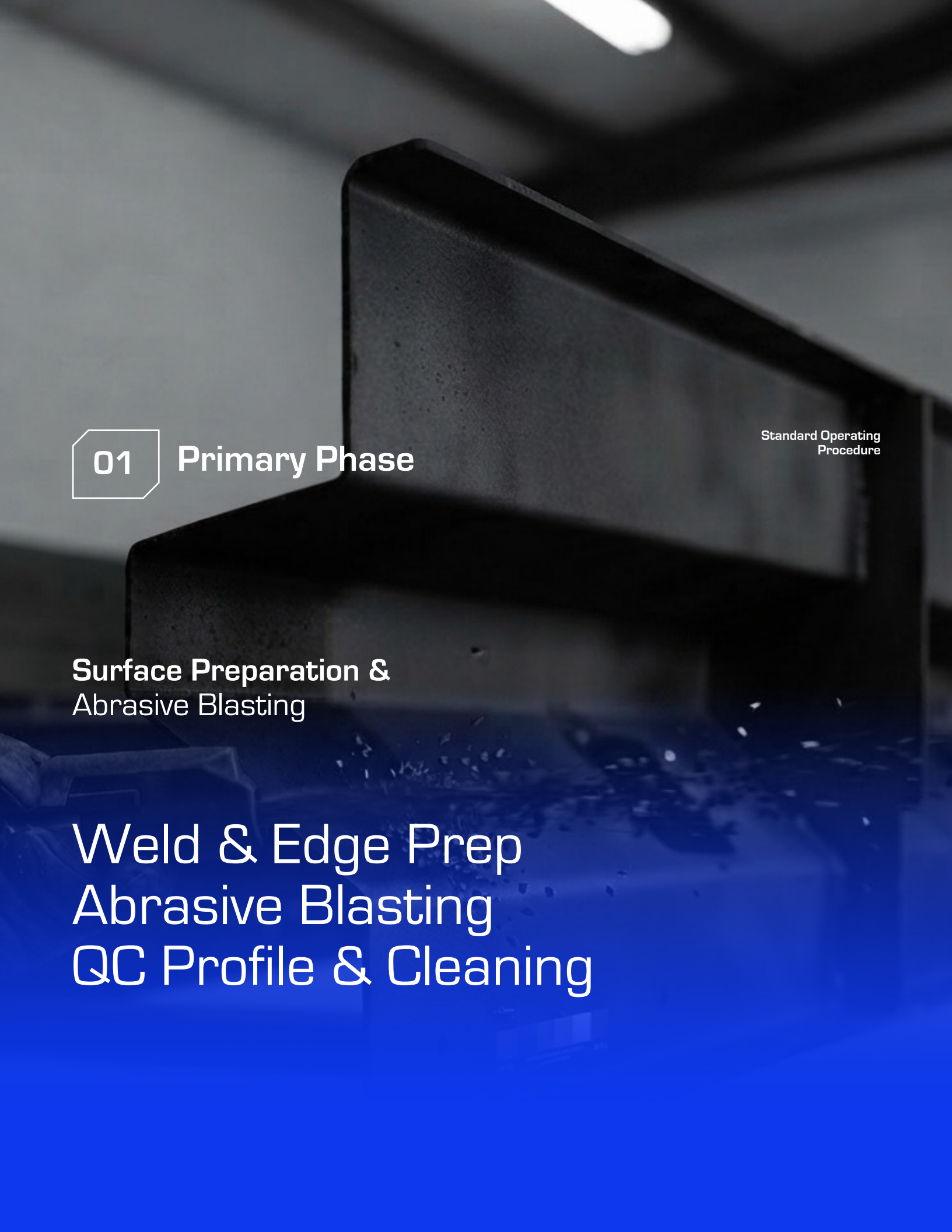
Ensuring machinery remains in optimal condition and fully protected from environmental elements is critical for long-term operational success. Hyperthane 450 is a two-component acrylic polyurethane, high-performance coating system designed for manufacturers that demand excellent gloss retention, mar and chemical resistance, and hardness.

Hyperthane 450 is the system of choice for industrial finishers that require excellent resistance to fading and chalking from exposure to sunlight and chemicals under splash and spill conditions, and is applied at 2-3 mils over the primer. This topcoat combined with the urethane primer creates a durable, high-impact finish that manufacturers such as John Deere, Case, and Caterpillar have relied on for their equipment requirements. We believe in offering you the best.





PAINTING STEP BY STEP



01

Primary Phase

Standard Operating
Procedure

**Surface Preparation &
Abrasive Blasting**

**Weld & Edge Prep
Abrasive Blasting
QC Profile & Cleaning**

01

Primary Phase :

Standard Operating
Procedure

1

Surface Preparation &
Abrasive Blasting

Weld & Edge Prep



1.1

Weld & Edge Prep

Removal of all weld slag and spatter. Sharp edges, fins, and weld protrusions are ground smooth to a minimum 1/16" (1.5 mm) radius to ensure uniform, thin-free coating coverage.

Abrasive Blasting



1.2 Abrasive Blasting

High-pressure blasting using GP 80 angular steel shot to achieve a SSPC-SP 10 / NACE No. 2 (Near-White Metal Blast) finish. This removes mill scale, rust, and contaminants while creating a mechanical profile for maximum paint adhesion.

01 Primary Phase :

Standard Operating
Procedure

1 Surface Preparation & Abrasive Blasting

QC Profile & Cleaning



1.3 QC Profile & Cleaning

Quality control audit using a profile gauge to verify a 1.0 - 1.5 mils surface roughness. After a thorough dust cleanup, the steel must receive its first primer coat within a strict 4-hour window to prevent flash rusting.

2 Engineering Procedures & QC Standards

- **Weld & Edge Prep**

Ensure all welds have been cleaned of slag and spatter. Grind smooth any sharp edges, fins, or weld protrusions to a minimum 1/16" (1.5mm) radius to ensure uniform coating coverage.

- **Blasting Standard**

Blast all specified steel surfaces to SSPC-SP 10 / NACE No. 2 (Near-White Metal Blast) condition. The surface shall be free of all visible oil, grease, dust, dirt, mill scale, rust, coating, oxides, and other foreign matter. Slight shadows, streaks, or discolorations are permitted, but must be limited to no more than 5% of each square inch of surface area.

- **Surface Profile Check**

Achieve a sharp, angular surface profile of 1.0 to 1.5 mils. The profile must be verified using a surface profile gauge (per ASTM D4417, Method B or C). [QC Checkpoint]

- **Post-Blasting Cleaning**

Remove all media residue, dust, and loose particles by brushing, vacuuming, and a final blow-down with clean, dry, oil-free compressed air. Handle cleaned steel with new, clean gloves to prevent skin oil contamination.

- **Time to Prime**

The first primer coat must be applied within four (4) hours of blasting and before any flash rusting occurs. [QC Hold Point]

02

Secondary Phase :

Standard Operating
Procedure

Primer Coating
Application

Material Preparation
Primer Spraying
Flash Off & Recoat Readiness

Material Preparation



1.1

Material Preparation

Stratum Ultra Urethane Primer is a high-solids, two-component system that must be blended strictly to specification. Precise mixing is non-negotiable an off-ratio mix directly compromises adhesion and corrosion protection.

Primer Spraying



1.2

Primer Spraying

Uniform spray application across the entire blasted steel profile. The micro-textured surface must be fully and evenly coated, locking the primer into the substrate for superior adhesion, rust inhibition, and chip resistance.

Flash Off & Recoat Readiness



1.3

Flash Off & Recoat Readiness

At 77°F (25°C), Stratum primer reaches tack-free and recoat-ready condition within 15–30 minutes. This window is strict — exceeding 48 hours without topcoat requires scuff-sanding to restore inter-coat adhesion.

DFT Primer Check



1.4 DFT Primer Check

A mandatory quality control check using a calibrated film thickness gauge. The Dry Film Thickness (DFT) must measure between 1.5 - 2.0 mils over the blasted profile to pass inspection.

2 Engineering Procedures & QC Standards

- **Product Specification**
Stratum Ultra Urethane Primer (Two-Component System).
- **Application Thickness**
Apply to a target Dry Film Thickness (DFT) of 1.5 to 2.0 mils over the blasted profile.
- **QC Check**
Measure primer DFT on all primary surfaces using a calibrated film thickness gauge. [QC Checkpoint]

03

Third Phase

Standard Operating
Procedure

Top Paint Coating
Application



Top Coat & Color Match
Total System DFT Audit
Curing & Final Handling

1 Top Paint Coating
Application

Top Coat & Color Match

**1.1** Top Coat & Color Match

Precision application of Hyperthane 450 (a two-component acrylic polyurethane topcoat) at 2.0 - 3.0 mils thickness. The color is strictly verified against a physical chip or a specific RAL color code before spraying.

Total System DFT Audit



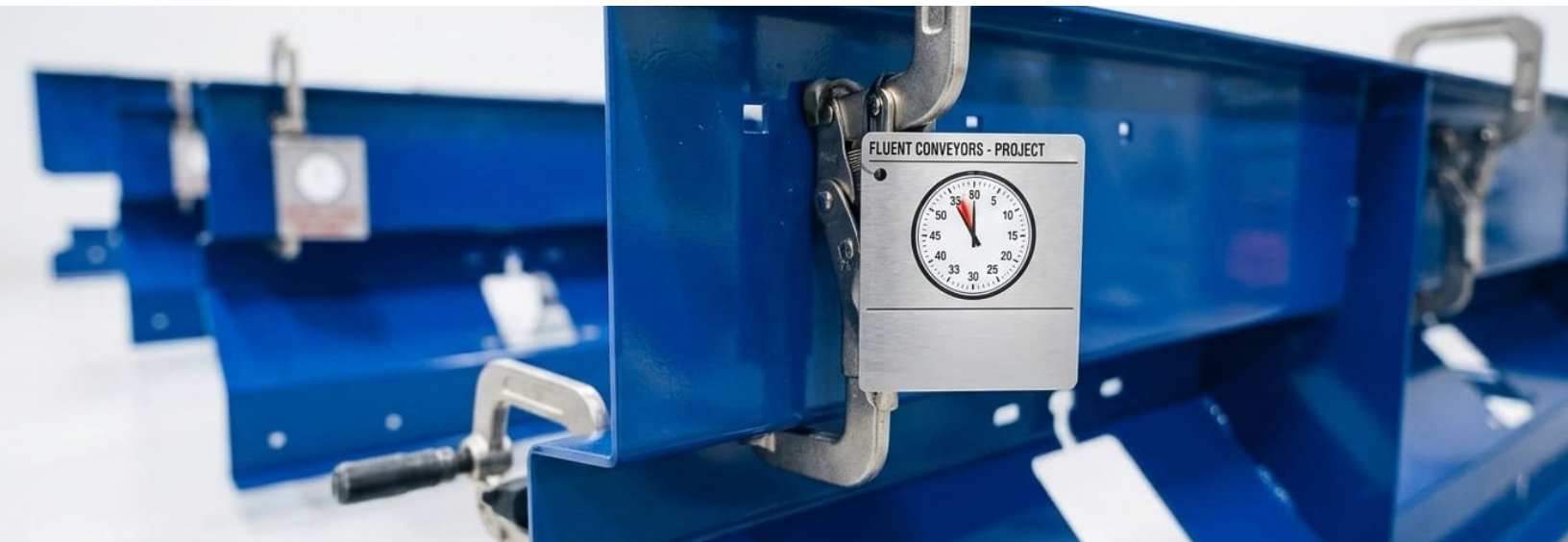
1.2

Total System DFT Audit

A critical quality control hold point where the combined thickness of both the primer and topcoat is audited. The final total system Dry Film Thickness (DFT) must strictly measure between 3.5 - 5.0 mils for approval.

1 Top Paint Coating
Application

Curing & Final Handling

**1.3** Curing & Final Handling

Adherence to the calibrated curing schedule at 77°F (25°C): tack-free in 2 hours and safe for assembly in 4 hours. Components are restricted from full handling and transport until the 24-hour full cure cycle is complete.

2 Engineering Procedures & QC Standards

- **Product Specification**
Hyperthane 450 (Two-Component Acrylic Polyurethane).
- **Application Thickness**
Apply to a target Dry Film Thickness (DFT) of 2.0 to 3.0 mils over the cured primer.
- **Total System DFT**
The total combined DFT for primer and top coat must be between 3.5 and 5.0 mils. [QC Checkpoint]
- **Color Matching**
Color will be specified by a physical color chip or a specific RAL number provided with the work order. The paint supplier must perform a color match and obtain approval prior to application.
- **Recoat Window**
The top coat must be applied within 48 hours of primer application. If more than 48 hours pass, the primer must be scuff-sanded to ensure proper inter-coat adhesion.
- **Handling Restriction**
Do not handle, assemble, or package components until the full 24-hour cure time has been achieved to prevent damage to the finish.

A person wearing a white protective suit and a black mask is using a spray gun to apply powder to a metal structure. The spray gun is held in their right hand, and a fine mist of powder is being emitted from the nozzle. The background is a light blue sky.

Two-Coat
Powder System

Standard Operating
Procedure

Powder Primer Application
Powder Topcoat Application
Powder System Engineering
Specifications

Two-Coat Powder System :

To achieve an optimal, long-lasting paint covering, all coatings require superior surface preparation. This preparation removes mill scale, rust, oil, and other contaminants, including salt deposits. Media blasting a profile into the substrate is the best method. This method creates more surface area for the primer to adhere to, giving it a super secure bond to aid in corrosion and chip resistance. A GP 80, angular steel shot is used to provide a 1 – 1.5 mil profile prior to priming..

1 Powder Primer Application

Customers selecting this upgrade will receive a foundation of Diamond Vogel Peridium Lite Gray XL Epoxy Primer.

- **Application Thickness:** The powder primer is applied to achieve a 1.8 to 2.2 Mils Dry Film Thickness (DFT).
- **Gel Curing Protocol:** Because this is a two-coat system, the primer is strictly gelled before the topcoat is applied, rather than running through its full standalone cure schedule of 10 minutes at 350°F.
- **Performance Standards:** This epoxy base delivers exceptional 5B crosshatch adhesion, a 2H+ pencil hardness, and passes 1,000-hour humidity and salt spray testing.

2 Powder Topcoat Application

The system is finalized with a Vogel Peridium TGIC Polyester topcoat , which can be matched to requested RAL colors.

- **Application Thickness:** The topcoat is applied over the gelled primer to a targeted 1.8 to 2.2 Mils DFT.
- **Full Curing Protocol:** The final cure for the combined system requires 10 minutes at a substrate temperature of 390°F.
- **Performance Standards:** The TGIC Polyester topcoat yields a 95+ glos level at 60°, impact resistance of 160/160 in. lbs., and passes standard 1,000-hour salt spray and humidity benchmarks.

3 Powder System Engineering Specifications

Specification	Primer: Lite Gray XL Epoxy PDF	Topcoat: TGIC Polyester PDF
Specific Gravity	1.55 ± 0.05	1.26 ± 0.05
Theoretical Coverage (@ 1 mil)	124 ± 4 ft ² /lb	152 ± 4 ft ² /lb
Specific Gravity	10 min @ 350°F (Gel only)	10 min @ 390°F
Specific Gravity	Below 80°F	Below 80°F

Coating Curing Schedule

Minimum Curing Schedule calibrated at 77°F [25°C] ambient temperature:

Coating Stage	Required Surface Condition	Minimum Duration
Primer (Stratum)	Tack Free / Ready for Recoat	15 - 30 Minutes
Topcoat (Hyperthane)	Tack Free	2 Hours
Topcoat (Hyperthane)	Dry to Handle / Safe for Assembly	4 Hours
Topcoat (Hyperthane)	Full Structural Cure	24 Hours

Premium Powder Upgrade (Oven Cure)		
Powder Primer (Lite Gray XL Epoxy)	Gelled / Ready for Topcoat	Gel only (Full standalone cure: 10 min @ 350°F Substrate Temp)
Powder Topcoat (TGIC Polyester)	Full Cure	10 min @ 390°F Substrate Temp

DO NOT PAINT :

- Threaded rods, bolts, and studs
- Tapped holes
- Leveling feet
- Set screws
- Turnbuckles and tensioners
- Motor shafts and keyways
- Motor couplings
- Motor terminal box lids and cover bolts
- Gearbox input and output shafts
- Chain, sprockets, belts, and pulleys
- Bearing bores and shaft seats
- Pivot pins and hinge bores
- Idlers and rollers
- Slide rails and guide ways
- Door latches, hinges, handles, cam locks
- Safety interlock switches and actuators
- Ground lugs and bonding points
- Sensor lenses (photo-eyes, proximity switches)
- Limit switch actuators
- Gasketed flange faces
- O-ring grooves
- Tracking and alignment bolts
- Tension take-up screws
- Height and speed adjusters
- Quick-release pins