

# QUANTUM<sup>45</sup> EPOXY SEALER, HIGH BUILD AND SURFACING PRIMERS



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## INTRODUCTION

Quantum<sup>45</sup> Epoxy Sealer, High Build and Surfacing Primers are high performance, two-component, marine grade epoxy primer systems. Quantum<sup>45</sup> Epoxy Primers offer adhesion and protection to a variety of substrates including gelcoat/fiberglass, previous painted surfaces, wood, metals, and most plastics.

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## USES

Quantum<sup>45</sup> Epoxy Sealer, High Build and Surfacing Primers are designed to prime and seal old and new properly prepared surfaces, Quantum Epoxy Fairing Compound, as well as each other to achieve the desired film build. Quantum<sup>45</sup> Epoxy Base and Activator components are interchangeable throughout the system, offering performance uniformity.

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## QUANTUM<sup>45</sup> EPOXY SYSTEM FEATURES

### Quantum<sup>45</sup> Epoxy Sealer

Initial and final sealing of a multitude of surfaces and is an excellent tie coat for Scratch-n-Shoot applications. It may be coated directly with Quantum<sup>99</sup> Polyurethane Topcoat without sanding, or further primed with other Quantum Epoxy Primers or Fillers where higher build and fairing are necessary.

### Quantum<sup>45</sup> Epoxy Surfacing Primer

Adequate filling, excellent adhesion and protection, and superior topcoat holdout. With application properties similar to a topcoat, it is most often used as the finish primer for Quantum<sup>99</sup> Polyurethane Topcoat once sanded to the end user's level of satisfaction.

### Quantum<sup>45</sup> Epoxy High Build Primer

Excellent filling, adhesion, and protection and can be applied directly to properly prepared surfaces or other Quantum Epoxy Primers. Easy to sand and provides excellent holdout, it may be coated directly with Quantum<sup>99</sup> Polyurethane Topcoat once surface is sanded to the end user's level of satisfaction.

*Note: Quantum<sup>45</sup> Epoxy Primers may be used above or below the waterline.*



## PHYSICAL PROPERTIES

	Quantum45 Sealer	Quantum45 SP	Quantum45 HB
Coverage @ 1 mil	550-575 ft <sup>2</sup> /gal	550-575 ft <sup>2</sup> /gal	950-975 ft <sup>2</sup> /gal
Coverage @ 3 mil	175-200 ft <sup>2</sup> /gal	125-150 ft <sup>2</sup> /gal	75-100 ft <sup>2</sup> /gal
Volume Solids (admixed)	35 +/- 2%	52 +/- 2%	60 +/- 2%
Coating VOC (admixed)	<475 g/L	<335 g/L	<335 g/L
Material VOC (admixed)	<510 g/L	<375 g/L	<350 g/L

## SURFACE PREPARATION



Clean and degrease all surfaces with SR-002 Surface Prep Cleaner prior to abrading to avoid forcing contaminants into substrate.

**Fiberglass/Gelcoat:** Abrade with 100-180 grit sandpaper.

**Previously Painted Surfaces:** If no corrosion byproducts are present, abrade w/ 100-180 grit sandpaper to remove gloss.

**Wood:** Abrade with 100-180 grit sandpaper.

**Steel:** Sand blast/grind to minimum SSPC-6 Commercial Blast.

**Aluminum:** Abrade with 180-220 grit sandpaper to water-break free surface. Prep surface with 45-ASC-RTU Quantum Aluminum Surface Conditioner.

**Note:** For maximum corrosion protection for steel and aluminum substrates, apply Quantum<sup>45</sup> Chromated Epoxy Primer to bare steel or aluminum prior to application of other Quantum<sup>45</sup> Epoxy Systems. See Quantum<sup>45</sup> Chromated Epoxy Primer Data Sheet for more information.

Solvent clean all substrates with SR-002 Surface Prep Cleaner prior to application so that surfaces are free from dust, oils, corrosion or any other contaminants using lint free cloth and the wipe-on/wipe-off method. SR-002 is also available in a convenient aerosol for spray-on/wipe-off cleaning. Wax containing tack rags are not required or recommended for Quantum<sup>45</sup> Epoxy applications.

## MIXING



### Components

BASES	
45-ES-CLEAR	Clear Epoxy Sealer
45-SP-WHITE	Epoxy Primer Off-White Base
45-SP-GRAY	Epoxy Primer Gray Base

ACTIVATORS	
45-A-100	Epoxy Surfacing Activator
45-AHB-100	Epoxy High Build Activator



REDUCERS / ADDITIVES	
SR-45	Quantum Epoxy Spray Reducer
SR-350	Quantum VOC Compliant Reducer
SR-002	Quantum Surface Prep Cleaner
45-ASC-RTU	Quantum Aluminum Surface Conditioner
45-X-154	Quantum Epoxy Accelerator



### MIX RATIO - EPOXY SEALER

Spray/Brush	Parts	Example
45-ES-CLEAR	1	8 oz
45-A-100	1	8 oz
Reducer	0 - 0.125	0 - 2 oz



### MIX RATIO - EPOXY HIGH BUILD PRIMER

Spray/Brush	Parts	Example
45-SP-WHITE/GRAY	1	8 oz
45-AHB-100	1	8 oz
Reducer	0.25 - 0.375	4 - 6 oz



### MIX RATIO - EPOXY SURFACING PRIMER

Spray/Brush	Parts	Example
45-SP-WHITE/GRAY	1	8 oz
45-A-100	1	8 oz
Reducer	0 - 0.25	0 - 4 oz

## MIXING



### QUANTUM<sup>45</sup> EPOXY SEALER

- Mix 1 part 45-ES-CLEAR Base with 1 part 45-A-100 Activator by volume.
- Reduction is not normally required, however up to 12.5% reduction by volume of the admixed paint with SR-45 or SR-350 may be used to control film thickness and appearance.
- Induct 15 minutes prior to reduction and application.
- Admixed Viscosity: 14-16" Zahn #2.

### QUANTUM<sup>45</sup> EPOXY SURFACING PRIMER

- Shake or stir 45-SP Base such that there is no material left on bottom or sides of can.
- Mix 1 part 45-SP Base with 1 part 45-A-100 Activator by volume.
- Reduction is not normally required, however up to 25% reduction by volume with SR-45 or SR-350 may be used to control film thickness and appearance.
- Induct 15 minutes prior to reduction and application.
- Admixed Viscosity: 40-50 KU

### QUANTUM<sup>45</sup> EPOXY HIGH BUILD PRIMER

- Shake or stir 45-SP Base **and** 45-AHB-100 Activator so that there is no material left on bottom or sides of can.
- Mix 1 part 45-SP Base with 1 part 45-AHB-100 Activator by volume.
- Reduce 25-37.5% as desired with SR-45 or SR-350.
- Induct 15 minutes prior to reduction and application.
- Admixed Viscosity: 80-90 KU



## APPLICATION



Gun Type	Nozzle	Air Pressure
Conventional Siphon Feed	1.4- 2.0mm	Conventional & HVLP
Conventional Gravity Feed	1.4-2.0 mm	Conventional & HVLP
Conventional Pressure Feed	1.4-2.0 mm	Conventional & HVLP

<sup>1</sup>Refer to the manufacturer's directions for gun specific recommendations.



### BRUSH/ROLL

Use only high quality solvent resistant brushes and roller covers. Preferred roller for small to medium projects is EMC 6.5" Mohair Cigar Roller Cover (CRC-M6-2PK).

**NOTE:** Application of these product systems requires recommended temperature/humidity conditions and film thickness ranges. The material, hangar, and substrate temperature should be no lower than 45°F before, during, and after application. Do not apply paint materials to surfaces less than 5°F above dew point, or to surfaces warmer than 125°F. Substrate temperature should be minimum 45°F to maximum 125°F.

### QUANTUM<sup>45</sup> EPOXY SEALER

Apply smooth, wet coats to fill and cover surface profile. Two to three coats may be needed at 3 - 4 wet mils per coat, waiting 1 hour minimum between coats. Quantum<sup>45</sup> Epoxy Sealer may be coated with Quantum<sup>99</sup> Polyurethane Topcoat or other Quantum<sup>45</sup> Epoxy Primers after 1 hour. Lightly abrade and clean surfaces that have been applied for more than 7 days.



### QUANTUM<sup>45</sup> EPOXY HIGH BUILD PRIMER

In subsequent coats, apply up to 20 total wet mils, waiting 1 hour between coats for spray, 4 hours for brush/roll. Single coat applications (3-4 wet mils) may be lightly sanded in 4 hours. Multiple coat applications should cure 16 hours minimum before sanding. Application of a guide coat is recommended before sanding to ensure a uniform, smooth surface. Abrade the cured system with 220-320 grit sandpaper to ensure optimum adhesion and appearance of subsequent coatings.

### QUANTUM<sup>45</sup> EPOXY SURFACING PRIMER

In subsequent coats, apply up to 12 total wet mils, waiting 1 hour between coats for spray, 4 hours for brush/roll. Single coat applications (3-4 wet mils) may be lightly sanded in 4 hours. Multiple coat applications should cure 16 hours minimum before sanding. Abrade the cured system with 220-400 grit sandpaper, removing all gloss, to ensure optimum adhesion and Quantum<sup>99</sup> Polyurethane Topcoat appearance.

