



product
information

6460 PRIMER SERIES
RUST INHIBITING HIGH SOLIDS
POLYURETHANE

Cardinal's 6460 series primers are high solids two component systems designed to provide increased corrosion resistance with excellent surface and film properties. Topcoat with Cardinal's 6400 series to complete the coating system. Prime bare metal surfaces with Cardinal's 4860 series pre-treatment primer prior to application of polyurethane primer for increased adhesion.

TYPICAL USES:

- Exterior steel enclosures
- Utility trailers
- Heavy duty equipment

BENEFITS:

- UL 1332 recognized
- Low V.O.C.
- Free of heavy metals
- Excellent chemical and solvent resistance
- RoHS / WEEE Compliant

CURED FILM PROPERTIES:

Testing conducted on 6460-4702 flat light gray, catalyzed with 340LASG at 1.5 mils DFT (Dry Film Thickness) over 20 gauge Bonderite 1000®, topcoated with 6409-10 then test panel cured 30 minutes at 180°F and air dried 14 days.

TEST	METHOD	PARAMETERS	RESULT
Adhesion	ASTM D3359	Cross-hatch tape	0% failure
Hardness	ASTM D3363	Pencil	F- H
Humidity	ASTM D2247	168 hrs	No effect
Salt Spray	ASTM B117	500 hrs 95°, 5% salt solution	Less than 3/16" creep - along scribe, otherwise, no effect
Solvent Resistance	ASTM D4752	MEK 50 rubs	No effect
		IPA 100 rubs	No effect

Cure: Air Dry – ambient air temperature @ 78° F

catalyst	dust free	tack free	dry to handle	recoat	dry hard	full cure
340LASG	5 min	20 min	4 hr	4-6 hrs	48 hrs	7 days
340SG	5 min	20 min	4 hr	4-6 hrs	48 hrs	7 days
340HP	10 min	30 min	4 hr	4-6 hrs	48 hrs	7 days

Force Dry - the following will approximate a 72 hour cure @ 78° F

30 min @ 140° F	20 min @ 180° F
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* Some Air quality regulations require a maximum temp. of 194° F to qualify as an "air dry" system which generally have higher VOC limits than baking systems.

**FOR INDUSTRIAL USE ONLY
NOT FOR RESIDENTIAL USE**

TYPE: Polyester polyurethane.

COMPONENTS: Two.

COLORS: Light Gray, Black, White and Red Oxide

GLOSS: Flat 0 - 5° @ 60 ∠

COVERAGE: At 1.0 mil DFT, 65% transfer efficiency(TE)

Mixed paint, 2.8 lbs/gal : 620 ft²/gal.

Mixed paint, 3.5 lbs/gal : 520 ft²/gal.

Calculation: 1604 ft²/gal x % volume solids x TE ÷ DFT

VOC MIXED: 340 grams/liter = 2.8 lbs/gal

420 grams/liter = 3.5 lbs/gal

See mix ratio table below.

VOLUME SOLIDS:

6400 S/G base 60%

340LASG.....66%

Mixed to 2.8 lbs/gal 60%

Mixed to 3.5 lbs/gal 50%

FLASH POINT:

6460-4702	6460-08, 6460-10, 6460-31	method
72° F	24° F	TCC

SHELF LIFE: 1 year from date of manufacture in factory sealed container.

APPLICATION: After preparing the surface, thoroughly mix component 1 before adding catalyst. Mix only the amount of material needed. The base to catalyst proportion must be measured accurately, by volume only, to obtain optimum film properties. Do not use reducers that contain water or alcohol; these react with the catalyst and can cause a variety of problems. Be aware of spray-able pot life. Brushing, rolling and dipping are not recommended.

MIX RATIOS: Two components must be mixed properly to obtain coating performance. Thinning depends on applicator's regulatory VOC limits.

Mix	parts by volume	parts by volume
6460 base	6	8
catalyst	1 part 340LASG	1 part 340SG or 340HP
solvent	N/A	¼ part
VOC =	2.8 lbs/gal	2.8 lbs/gal
solvent	1-1/2 additional	1-1/2 additional
VOC =	3.5 lbs/gal	3.5 lbs/gal

VISCOSITY: At 2.8 lbs/gal, the 6460 series primer will be in the 25"-30" #3 Zahn range. At 3.5 lbs/gal, 35"-40" #2 Zahn can be expected for the primer.

SPRAY-able Pot Life: 2-3 hrs. at 2.8 lbs. VOC/gal
4-5 hrs. at 3.5 lbs. VOC/gal

RECOMMENDED DFT: 1.0 – 3.0 mils

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SURFACE PREPARATION AND PRIMING: The most important steps in a successful coating process are cleaning, pretreatment and priming. The following is a brief outline of some basics for unpainted substrates. It is not intended to be all-inclusive. For more information on your particular application contact Cardinal.

Cleaning the substrate: All surfaces to be coated, must be free of dirt, grease, oil, oxidation, mill scale, and all other contaminants. The surface must be thoroughly dry before painting. Air quality regulations have limited the allowable emissions from cleaning operations.

Steel — A phosphate chemical conversion coating is highly recommended. When this is not possible, a vinyl acid wash pretreatment primer is recommended such as Cardinal's 4860 series primers. UL approval on our product requires the minimum of a three stage iron phosphate pre-treatment.

Aluminum — A chemical conversion coating is highly recommended. When this is not possible, a vinyl acid wash pretreatment primer is recommended such as Cardinal's 4860 series primers.

Galvanized — Cardinal's W-303-A surface preparation solution helps improve adhesion followed by a vinyl acid wash pretreatment primer such as Cardinal's 4860 series primers.

Stainless Steel — Brush-off or blast clean per SSPC-SP 7 to a uniform profile of 1.5 mils. Cardinal's W-303-A surface preparation solution can help improve adhesion followed by a vinyl acid wash pretreatment primer such as Cardinal's 4860 series primers.

Plastic — All mold release should be completely removed. 6400 series polyurethane is compatible with a variety of plastics, however, since there are numerous different formulations of plastic, a trial sample should be painted and checked before running production. If 6400 attacks or weakens the plastic, a barrier coat of 3777-1 clear waterborne acrylic enamel may help.

PRIMER SELECTION:

PRODUCT NO.	DESCRIPTION	FUNCTION
4860 Series	Acid etching pre-treatment primers	Corrosion resistance, some surfacing

RELATED PRODUCTS:

PRODUCT NO.	DESCRIPTION / FUNCTION
1600 Series Reducers	Thinners. Urethane grade. 1600-01, fast; 1600-02, medium; 1600-03, slow; 1600-06, very slow.
EL-005	Accelerator. Speeds up dry time (and shortens pot life).
J-3081	Surfactant. Helps eliminate blisters, bubbles, pin holes, solvent-pop.

TROUBLE SHOOTING:

PROBLEM	CAUSE	REMEDY
Blisters, pin holes or solvent pop	Water contamination. Entrapped air. Entrapped solvent	Eliminate water – Check air lines. Use fresh catalyst. Use urethane grade thinners. Increase atomization, decrease film build.
Craters	Contaminated ambient air, e.g., silicone mist, dust.	Locate and eliminate source of contamination.
Fish-eyes	Substrate contamination.	Clean and prepare substrate.
Not drying	Alcohol in reducer. Wrong catalyst ratio.	Use Cardinal's 1600 series or urethane grade reducers only. Double check mix ratio.
Poor adhesion	Improper surface preparation.	See surface preparation section.
Gloss variation	Variation in application, cure schedule, catalyst ratio, humidity.	Consistent gloss depends upon consistent process, e.g., air dried parts will not have same gloss as force dried parts.

APPLICATION EQUIPMENT: Most air quality regulations require the paint application transfer efficiency to be 65% or better. This generally means using electrostatic or high volume low pressure (HVLP) spray guns. Otherwise, conventional pressure feed, airless or air assisted airless spray equipment can be used. Air supply lines need water and oil traps.

EQUIPMENT CLEAN-UP: Clean up should be done as soon as possible keeping in mind the pot life of the mixed paint. Avoid leaving catalyzed paint in the lines. Air quality regulations have limited the allowable emissions from cleaning operations.

PRODUCT LIMITATIONS:

- 340LASG and 340SG are not recommended for outdoor exposure or UV radiation. Both will tend to yellow and also chalk sooner than 340HP.
- Catalyst reacts with water. Air supply should be dry. Containers should be kept tightly closed. Use urethane grade thinners only.
- Alcohols and glycols interfere with curing chemistry and should be avoided. They can be found in some lacquer thinners and certain synthetic reducers.
- Optimum film properties are dependent upon proper mixing of paint and catalyst.

SAFETY: Refer to the product's Material Safety Data Sheet (MSDS) for complete safety information. Contains organic solvents. Use with adequate ventilation. Do not breathe vapors or spray mists. If component TLVs are exceeded, a NIOSH approved air supplied respirator is advised. See MSDS for TLV information.

Contents are FLAMMABLE. Keep from heat, sparks or open flame.

Allergic reactions are possible. Avoid use by persons with respiratory problems.

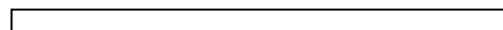
Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

FIRST AID:

Eye contact: flush immediately with plenty of water for at least 15 min. and get medical attention.

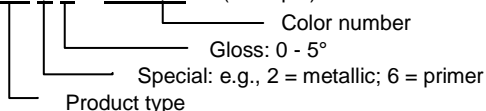
Skin contact: wash thoroughly with soap and water for 5 minutes.

If swallowed, do not induce vomiting and get medical attention immediately.



PRODUCT IDENTIFICATION

6460-4702 (example)



IMPORTANT: Warranty and Disclaimer — The performance characteristics of these products vary according to product application, operating conditions, materials applied to or with and use. Since these factors can affect results, we strongly recommend that you make your own test to determine to your satisfaction whether the product is of acceptable quality, has not been affected by storage or transport and is suitable for your particular purpose under your own operation conditions prior to using any product in full scale production. Seller warrants the products to be free from defects in materials and workmanship. SUCH WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE. No representative of ours has authority to waive or change this provision, which applies to all sales of these products.