



product  
information

**A-6400-SERIES**  
AEROSOL 2K POLYURETHANE

**Cardinal's A-6400-SERIES** is a aliphatic two-component polyurethane coating which is supplied in a plural component aerosol container. This coating is well suited for exterior applications on metal where there are physical, chemical and performance properties required

**TYPICAL USES:**

- Aerosol touch up for decorative and protective use on metal
- General metal finishing
- Electronic enclosures
- Trailers and vehicles
- Machinery

**BENEFITS:**

- Excellent chemical and solvent resistance
- RoHS / WEEE compliant

**CURED FILM PROPERTIES:**

Testing conducted on A-6400-BG500 Flat Beige at 1.5 mils DFT (Dry Film Thickness) over 20 gauge Bonderite 1000® test panels, cured 30 minutes at 180°F and air dried 14 days.

TEST	METHOD	PARAMETERS	RESULT
Adhesion	ASTM D3359	Cross-hatch tape	0% failure
Impact:	ASTM D2794	Direct Reverse	130 in. lbs. 60 in. lbs
Flexibility:	ASTM D1737	1/8" mandrel	No cracking
Hardness	ASTM D3363	Pencil	H - 2H
Abrasion	ASTM D4060	CS-17 wheels, 1 kg, 1000 cycles	Less than 100 mg loss
Humidity	ASTM D2247	168 hrs	No effect
Salt Spray	ASTM B117	1000 hrs 95°, 5% salt solution	Less than 3/16" creep - along scribe, otherwise, no effect
UV Light	ASTM G53	1000 hrs	90.3% gloss retention
Solvent Resistance	ASTM D4752	MEK 100 rubs IPA 200 rubs	No effect No effect
Chemical & Stain Resistance	ASTM D1308 30 min. spot	A – 0.1N HCl, 30 wt. motor oil, ammonia, butyl carbitol, butyl cellosolve, Cascade®, Clorox®, Coca Cola®, coffee, diethyl ether, Drano®, Fantastic®, fiber pen ink, floor stripper, gasoline, IPA, Ivory® Liquid, lanolin lotion, lemon juice, Snap®, Spic & Span®, tap water, vegetable oil, water base ink, WD-40®. B – ball point pen ink, carbon disulfide, correction fluid, Freon TF®, MEK, nail polish. C – chloroform. D – solvent base ink.	A: No effect B: Slight dulling C: Moderate effect D: Discolored & softened

**FOR INDUSTRIAL USE ONLY**

**TYPE:** Aliphatic polyester polyurethane.

**COMPONENTS:** Two.

**COLORS:** Full range including Fed. Std. 595B.

**GLOSS:** GLOSS, SEMI AND Flat.

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

Paint: 5.1 lbs/gal: 200 ft<sup>2</sup>/gal.

Calculation: 1604 ft<sup>2</sup>/gal x % volume solids x TE ÷ DFT

**VOC MIXED:**

576 grams/liter = 4.8 lbs/gal excluding exempt.

443 grams/liter = 3.7 lbs/gal including exempt.

**VOLUME SOLIDS:**

A-6400-SERIES.....18%

**FLASH POINT:** -42°F TCC

**SHELF LIFE:** 6 months from date of manufacture stored in a cool dry environment.

**APPLICATION:** After preparing the surface, follow the application instructions supplied as well as on the aerosol can. Remove the red plug and place it on the receptor on the bottom of the aerosol can. Press the can firmly on to a flat surface to allow incorporation of all ingredients. Shake the can thoroughly for 2 minutes to insure proper mixing. When applying spray 2 to 4 inches from the surface to be coated using a uniform motion. Apply a wet uniform coating to achieve the performance properties of this coating.

**APPLICATION CONDITIONS:**

- Temperature – Apply coating within 55-100 F.
- Relative Humidity – Not recommended to apply in conditions greater than 85%.
- Substrate temperature – 5° above the dew point and a minimum of 55° F.

*If coating is not applied within these conditions then the cured coating properties may not be representative.*

**SPRAY-able Pot Life:** 6-8 hours.

**RECOMMENDED DFT:** 1.5 – 2.5 mils

<b>CURE:</b>	<u>Air Dry</u>	<u>Force Dry</u> *
Tack free	2 hrs.	1 hr at 120° F
Dry to handle	24 hrs.	30 min at 140° F
Dry hard	72 hrs.	15 min at 180° F
	(At 1.5 mils dry film thickness, 78° F, 50% RH)	

\* 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.

*(Continued on page 2)*

**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
6460-4702	Polyurethane Gray	Corrosion resistance, some surfacing
7760-4702	Epoxy Gray	Corrosion resistance, chemical resistance
7063-4702	Epoxy Gray	Corrosion resistance, chemical resistance and high build

**RELATED PRODUCTS:**

PRODUCT NO.	DESCRIPTION
A-7760-GRE15955	2K Aerosol Epoxy Primer

**TROUBLE SHOOTING:**

PROBLEM	CAUSE	REMEDY
Pin holes or solvent pop	Surface tension Entrapped solvent	Be sure the surface of the film is clean and free of residue. Decrease film build.
Fish-eyes	Substrate contamination.	Clean and prepare substrate.
Not drying	Temperature too low. Inadequate mix.	Apply at a minimum temperature of 55F. Mix the aerosol can for two minutes before use.
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.

**PRODUCT IDENTIFICATION**

**A - 6 4 0 0 - B G 5 0 0** (example)

Color number

Gloss: 0 = flat; 1 = 10°; 2 = 20° . . . etc.; 70° - 90°+ = high gloss

Special: e.g., 2 = metallic; 3 = cardtex; 4 = texture; 6 = primer; 7 = clear

Product type

**DISPOSAL:** FOLLOW ALL LOCAL, STATE AND FEDERAL REGULATIONS IN THE DISPOSAL OF THIS PRODUCT. BE SURE THAT ALL OF THE COATING HAS BEEN DISPENSED.

**PRODUCT LIMITATIONS:**

- 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.

