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

**TESTED 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.

<table>
<thead>
<tr>
<th>TEST</th>
<th>METHOD</th>
<th>PARAMETERS</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adhesion</td>
<td>ASTM D3359</td>
<td>Cross-hatch tape</td>
<td>0% failure</td>
</tr>
<tr>
<td>Impact:</td>
<td>ASTM D2794</td>
<td>Direct Reverse</td>
<td>130 in. lbs. 60 in. lbs</td>
</tr>
<tr>
<td>Flexibility:</td>
<td>ASTM D1737</td>
<td>1/8” mandrel</td>
<td>No cracking</td>
</tr>
<tr>
<td>Hardness:</td>
<td>ASTM D3363</td>
<td>Pencil</td>
<td>H - 2H</td>
</tr>
<tr>
<td>Abrasion:</td>
<td>ASTM D4060</td>
<td>CS-17 wheels, 1 kg, 1000 cycles</td>
<td>Less than 100 mg loss</td>
</tr>
<tr>
<td>Humidity:</td>
<td>ASTM D2247</td>
<td>168 hrs</td>
<td>No effect</td>
</tr>
<tr>
<td>Salt Spray:</td>
<td>ASTM B117</td>
<td>1000 hrs 95%, 5% salt solution</td>
<td>Less than 3/16” creep - along scribe, otherwise, no effect</td>
</tr>
<tr>
<td>UV Light:</td>
<td>ASTM G53</td>
<td>1000 hrs</td>
<td>90.3% gloss retention</td>
</tr>
<tr>
<td>Solvent Resistance</td>
<td>ASTM D4752</td>
<td>MEK 100 rubs; IPA 200 rubs</td>
<td>No effect; No effect</td>
</tr>
</tbody>
</table>

**Chemical & Stain Resistance:**
- A – 0.1N HCl, 30 wt. motor oil, ammonia, butyl carbitol, butyl cellosolve, Cascade®, Clorox®, Coca Cola®, coffee, diethy ether, Dranol®, 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® TFE, MEK, nail polish.
- C – chloroform.
- D – solvent base ink.

**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 lb/gal: 200 ft²/gal
- Calculation: 1604 ft²/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 CONDITIONS:**
- Temperature – Apply coating within 55-100 F.
- Humidity – Not recommended to apply in conditions greater than 85%.
- Substrate temperature – 50°F 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

**CURE:**
- Air Dry: Tack free 2 hrs. 1 hr at 120°F
- Force Dry: 24 hrs. 30 min at 140°F
- Dry to handle: 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:

<table>
<thead>
<tr>
<th>PRODUCT NO.</th>
<th>DESCRIPTION</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>6460-4702</td>
<td>Polyurethane Gray</td>
<td>Corrosion resistance, some surfacing</td>
</tr>
<tr>
<td>7760-4702</td>
<td>Epoxy Gray</td>
<td>Corrosion resistance, chemical resistance</td>
</tr>
<tr>
<td>7063-4702</td>
<td>Epoxy Gray</td>
<td>Corrosion resistance, chemical resistance and high build</td>
</tr>
</tbody>
</table>

RELATED PRODUCTS:

<table>
<thead>
<tr>
<th>PRODUCT NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-7760-GRE15955</td>
<td>2K Aerosol Epoxy Primer</td>
</tr>
</tbody>
</table>

TROUBLE SHOOTING:

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>CAUSE</th>
<th>REMEDY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pin holes or solvent pop</td>
<td>Surface tension</td>
<td>Be sure the surface of the film is clean and free of residue. Decrease film build.</td>
</tr>
<tr>
<td></td>
<td>Entrapped solvent</td>
<td></td>
</tr>
<tr>
<td>Fish-eyes</td>
<td>Substrate contamination</td>
<td>Clean and prepare substrate.</td>
</tr>
<tr>
<td>Not drying</td>
<td>Temperature to low. Inadequate mix.</td>
<td>Apply at a minimum temperature of 55F. Mix the aerosol can for two minutes before use.</td>
</tr>
<tr>
<td>Poor adhesion</td>
<td>Improper surface preparation.</td>
<td>See surface preparation section.</td>
</tr>
<tr>
<td>Gloss variation</td>
<td>Variation in application, cure schedule, catalyst ratio, humidity.</td>
<td>Consistent gloss depends upon consistent process.</td>
</tr>
</tbody>
</table>

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 = cardex; 4 = texture; 6 = primer; 7 = clear  

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.

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 OR 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.

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