# General Technical Information
# Polyurethane "U" Series

## Description

Erie's "U" series powder coatings are formulated using a variety of polyurethane resin systems. Urethane coatings are designed for use in a variety of specialty applications requiring excellent chemical resistance, heat resistance or hardness. These coatings have great UV resistance, and can be formulated to meet or exceed AAMA 2603 specifications. Polyurethane coatings tend to be more brittle than alternative coating chemistries, and so they are not recommended for applications requiring post-forming. This line of products contains caprolactam blocked polyisocyanates, so good oven venting and proper handling is essential. Due to the health risks associated with polyiscocyanates, this type of coating is recommended for specialty use only, and not for simple decorative applications.

## Application

These products are used for a range of specialty applications requiring excellent chemical resistance in conjunction with excellent UV resistance.

## Dry Powder Property Ranges

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| Film Build ............................................... | 1.0 to 4.0 mils (25 to 100 microns) |
| Cure Schedule ....................................... | 10 to 20 minutes at 375°F (190°C) metal temperature |
| Particle Size ........................................... | 50% to 65% > 32 micron (Alpine Jet Sieve) |
| Overbake Resistance ............................. | 200% excellent, colour change less than 0.3 units |
| Specific Gravity ...................................... | 1.25 to 1.85 |
| Shelf Life ............................................... | 3 to 12 months |

## Cured Film Property Ranges

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|---|---|
| Gloss at 60° for Smooth Finishes ............ | 2 to 95 |
| Impact Resistance (ASTM D2794) .......... | 60 to 120 inch-pounds |
| Pencil Hardness (ASTM D3363) .............. | H to 3H |
| Cross Hatch Adhesion (ASTM D3359) .... | 5B full pass |
| Flexibility (ASTM D522) .......................... | 180° ½ " conical mandrel with no cracking |
| Salt Spray (ASTM B117) ........................ | 1000 hours with <1/8" creep from scribe line |

Note: This information is given in good faith based upon information believed to be true at the time of issue. However, no warranty expressed or implied can be given as results may vary due to application and other conditions. This table is not intended to give exact specifications for any particular product but to be used only as a general guide.