

**HYPERTHANE<sup>®</sup>460**  
HYPERFORMANCE URETHANE

**ICS 460 Polyurethane Bases**

**PRODUCT CODES:** IG-0230 – Clear Base | IG-1231 – White Base | IG-1232 – Deep Base | IG-2233 – Metallic Base  
IG-3253 – Yellow Base | IG-5259 – Red Base

**DESCRIPTION:** Hyperthane 460 Polyurethane is a two component acrylic polyurethane, high performance coating system designed for manufacturers that demand excellent gloss retention, hardness, mar, and chemical resistance. This is the system of choice for industrial finishers that desire excellent resistance to fading or chalking from exposure to sunlight and chemicals under splash and spill conditions. Hyperthane 460 Polyurethane can be applied with conventional, airless, electrostatic, and plural component equipment.

**PHYSICAL PROPERTIES:**

Weight Solids: 62% to 65%  
Volume Solids: 53% to 55%  
Resin Type: Acrylic Urethane  
Gloss: 90+  
Theoretical Coverage: 850 square feet at 1.0 mil  
Weight per Gallon: 9.7 pounds  
Blended Viscosity: #2 Zahn – 27 to 33 seconds at 77°F  
EPA VOC: 3.5 pounds per gallon

**SURFACE PREPARATION:** The service expectancy of a coating is primarily dependent upon good surface preparation. The surface to be coated should be free of mill scale, rust, oil, and other contaminants, including salt deposits. Hyperthane 460 Polyurethane may be applied over steel, aluminum, fiberglass, or galvanized steel. Due to inconsistencies in galvanizing, please check with your local Vogel Industrial representative for recommendations and substrate testing. The recommended primer to use with Hyperthane 460 Polyurethane is the Stratum two component urethane primer system. For optimum adhesion, hot rolled steel should have the mill scale removed by an abrasive blast to SSPC-SP-6 to an average profile of 1.5 mils and then coated before flash rusting occurs.

Steel: Bare steel areas should be treated with an iron phosphate conversion coatings and adequate rinsing.  
Aluminum/Galvanized: Aluminum and galvanizing should be treated with appropriate metal cleaners and conditioners.

**ACTIVATION:** Hyperthane 460 Polyurethane should be mixed 3 parts A to 1 part B IG-0260 by volume. No sweat in time is necessary. Part A fill level in gallon cans will be 3/4 gallon. This is mixed with a quart of the Part B. The pot life will be approximately 1.5 to 2 hours at 77°F. As temperatures increase, the pot life will decrease.

Mixing Ratio: 3A:1B with IG-0260, IG-0267, IG-0268, IG-0299 by volume  
Sweat-In Time: None  
Pot Life: 1.5 - 2 hours minimum at 77°F

**APPLICATION:**

Airless: For airless application no reduction is necessary. Airless tip sizes should be in the .011 to .015 range. Adjust pressures accordingly for best atomization and transfer efficiencies. Air-assist airless pressures will be in the 800 to 1000 pound range for fluid and 30 to 50 pound range for atomizing air.

**Conventional Air:** For conventional air and electrostatic spray some reduction may be necessary. Use butyl acetate or toluol for reducing purposes. Pressures are dependent upon the type of gun and fluid nozzle, but typically will be in the 45 to 60 pound range for proper atomization.

**In-Line Heat:** In-line heat may be utilized up to 100°F to improve application. Caution must be exercised to turn heat down during breaks and shut downs to avoid locking up the paint lines due to decrease in pot life.

**Dry Film Thickness:** For best results, dry film thicknesses should be 1.0 to 2.0 mils above surface profile. This will require wet film thicknesses of about 3.0 to 4.0 mils. Apply in two medium build coats.

**DRY TIMES:** Hyperthane 460 Polyurethane will typically dry to tack free in 1 to 2 hours. Dry hard times will be 12 to 24 hours. Hyperthane 460 Polyurethane can be recoated at tack free and up to 48 hours. After 48 hours Hyperthane 460 Polyurethane will need to be scuff sanded to ensure inter-coat adhesion. Force drying: 15 to 20 minutes at 160° to 180°F depending on metal thickness and mass. When recoating after force drying, scuff sanding may be required to ensure inter-coat adhesion.

**CLEAN UP:** Use butyl acetate or ketones to flush application lines and equipment.

**PERFORMANCE:** Typical, tested on B-1000 panels.

**Accelerated Weathering:** ASTM G53 and D4587  
2,000+ hours – less than 10% loss of gloss

**Salt Spray:** ASTM B-117  
750 hours - < 3/16" creep

**Chemical Resistance:** ASTM D1308 – 30 minute spot  
Diesel – Pass, no visual change  
Ammonia – Pass  
Hydraulic Fluid – Pass  
30 Weight Oil - Pass

**SAFETY PRECAUTIONS:** Contains aliphatic polymeric isocyanate and butyl acetate when blended. Avoid contact with skin. Vapor and spray mist harmful. Use proper respiratory protection, including positive air supplied respirators. Refer to SDS for specific information. All information subject to change without notice