Diamond Vogel | INDUSTRIAL COATINGS

TECHNICAL DATA SHEET

HYPERTHANE 430
HYPERFORMANCE URETHANE

DTM Acrylic Urethane

PRODUCT CODES: **IG12-41402 – White Base | IG02-41400 – Clear Base**
IG52-41407 – Red Base | IG32-40406 – Yellow Base

DESCRIPTION: The Hyperthane 430 ICS Polyurethane System is a two-component, DTM 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 fade or chalking from exposure to sunlight and chemicals under splash and spill conditions. The Hyperthane 430 ICS Polyurethane System can be applied with conventional, airless, electrostatic, and plural component equipment. **This urethane can be used as a tough, direct-to-metal polyurethane.**

PHYSICAL PROPERTIES: Mixed

Weight Solids:	54% - 63%
Volume Solids:	44% - 48%
Resin Type:	Proprietary
Gloss:	90 at 60º
Theoretical Coverage:	710 to 750 square feet at 1.0 mil
Blended Viscosity:	#2 Zahn – 24-32 seconds at 77ºF
*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. The Hyperthane 430 ICS Polyurethane System 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 430 ICS Polyurethane System is the Stratum two component urethane primer system.

Steel: Bare steel areas should be treated with an iron phosphate conversion coating and adequate rinsing.

Aluminum/Galvanized: Aluminum and galvanizing should be treated with appropriate metal cleaners and conditioners.

ACTIVATION:

Mixing Ratio:	4A:1B by volume with IG-0267, IG-0268, or IG-0299
Sweat-In Time:	None
Pot Life:	1.5 to 3 hours at 77ºF

APPLICATION: This urethane can be sprayed with all types of application equipment.

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.

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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.
Conventional Air:	For conventional air and electrostatic spray some reduction may be necessary. Use N94-50232 Medium Speed Reducer, N-4005 Zero VOC reducer, or MAK. 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. Pot pressure between 10-25 psi.
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 shutdowns to avoid locking up the paint lines due to decrease in pot life.
DRY TIMES:	Hyperthane 430 ICS Polyurethane System will typically dry to handle in 4 to 5 hours. Dry hard times will be 24 hours. The Hyperthane 430 ICS Polyurethane System can be recoated at tack free and up to 48 hours. After 48 hours the Hyperthane 430 ICS Polyurethane System will need to be scuff sanded to ensure inter-coat adhesion. Force drying: 20 to 30 minutes at 160° to 180°F depending on metal thickness and mass. Recoating after force drying: Scuff sanding may be required to ensure inter-coat adhesion.
CLEAN UP:	Use ketones to flush application lines and equipment.
PERFORMANCE:	Typical, tested on B-1000 panels, direct to metal.
Accelerated Weathering:	1155 hours – no change
Florida Exposure:	1 year < 10% loss of gloss
Salt Spray DTM:	500 hours < 1/4" creep
Salt Spray over:	ASTM B-117 – 1,000 hours < 3/16" creep
Chemical Resistance:	ASTM D1308 – 30 minute spot Diesel – Pass, no visible changes Ammonia – Pass Hydraulic Fluid – Pass 30 Weight Oil - Pass
Pencil Hardness:	ASTM D3363 Average F at 72 hours at 3.5 mils DFT Average 2H at 7 days at 1.0 mils DFT
Direct and Reverse Impact:	ASTM D2794 160+ inch pounds
Gravelometer:	ASTM D3170 – SAE-J400 4A Rating - Excellent
SAFETY PRECAUTIONS:	Contains aliphatic polymeric isocyanate and MAK 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.

*VOC varies - depending on color, composition and catalyst selection.
Specific Data Sheets and SDS available upon request.