



VORASTAR HA 6140 Polyol
 VORASTAR HB 6042 Isocyanate

Description

VORASTAR* HA 6140 Polyol / VORASTAR HB 6042 Isocyanate is a two component polyurea spray elastomer system designed for applications in the industrial market. Due to the intrinsic characteristics of the polyurea components and the particular composition of the isocyanate component, the polymer shows a high reactivity and as a consequence, a high level of resistance to temperature and humidity in application. The product cures rapidly and application thickness up to ½ inch can easily be achieved.

Typical
 Component
 Properties

	Units	VORASTAR HA 6140 Polyol	VORASTAR HB 6042 Isocyanate	Test Method
Color		Opaque	Amber	Visual
Viscosity	cPs	500-900 (at 75°F)	1000-1200 (at 75°F)	Brookfield
Specific Gravity	g/cc	1.006	1.10	ASTM D1475-98

Recommended
 Process
 Conditions

	Units	Limits
VORASTAR HA 6140 Polyol	pbv	1.00
VORASTAR HB 6042 Isocyanate	pbv	1.00
Equipment		Gusmer H20-35/H3500/H2000
Spray Gun		GX-7 DI
Component Feed	gm/sec	37
Nozzle Type		Round small for airless spray
Pre-heater Temperature	°F	155-160
Whip Temperature	°F	160
Dispense pressure ⁽¹⁾	psi	1800-2000

1. Data referred to original sealed drums stored in a dry place at the recommended temperature.

Typical Reaction
 Characteristics

	Units	Result	Test Method
Gel Time	s	6-8	Sprayed

Handling and Storage

	Units	VORASTAR HA 6140 Polyol	VORASTAR HB 6042 Isocyanate
Storage temperature	°C	15-25	15-25
Storage stability / Shelf life ⁽²⁾	months	6	6

1. Data referred to original sealed drums stored in a dry place at the recommended temperature

Typical Polymer Properties

	Units	Values	Test Method		
Hardness		48 – 52 Shore D	ASTM D2240		
Density	g/cc	1.00	DIN 53479		
Tensile	psi	2596	ASTM D412		
Elongation	%	390	ASTM D412		
Tear	pli	383	ASTM D624C		
Taber Abrasion	mg/rev. loss	<0.20/1000	ASTM D3389		
Elcometer Adhesion	psi	>2100	Sandblasted steel	Glue failure	ASTM D4541
		>800	Concrete	Substrate failure	
		>400	Asphalt	Substrate failure	

General Installation Recommendations

VORASTAR spray systems should be applied only to clean, dry, sound surfaces. Remove all oil, dust, grease, loose rust, and other foreign material to ensure adequate adhesion. Always stir the resin side prior to application. It is recommended that Vorastar spray systems should be sprayed in multi-directional (north-south/east-west) passes to ensure uniform thickness buildup.

Old concrete

Surface should be clean of any oil or dirt. If the surface is contaminated with oil, grease or chemicals, they must be removed by cleaning with a strong detergent. For selection of suitable cleaning procedures ASTM D4258 (Standard Practice for Cleaning Concrete) should be consulted. Sandblasting, shot blasting or high pressure water blasting is recommended to remove surface contaminants. If a primer needs to be applied, surface may be acid etched (generously rinse with water subsequently!) to open the pores for primer acceptance. Refer to ASTM D4260 (Standard Practice for Etching Concrete) for reference. Primer application will help prevent pin holing and, in some cases, will help fill voids and smooth the surface. If concrete shows extensive surface deterioration, damaged areas need to be patched and resurfaced with epoxy filler type repair materials. Cracks, voids and bug holes should be filled as well.

General
Installation
Recommendations

New concrete

Coating should not be applied before cure time of the poured concrete has been completed, i.e. 30-60 days at 73 F. Laitance, release agents, curing compounds, salts and efflorescence need to be removed by high pressure water blasting or sandblasting. Achieved surface profile should equal 80-100 grit sandpaper. For further reference consult SSPC-SP13, NACE 6 or ICRI guide 03732. Let surface dry thoroughly before primer or spray coating is applied.

Metal (Iron & Steel)

Before applying the spray coating to the metal substrate, ensure that welds are continuous and ground smooth or filled. Surface anomalies like weld splatters must be removed by grinding. The metal surface must be prepared, i.e. usually sand blasted to a near white metal condition per SSPC-SP10 or NACE 2. The surface profile will provide an anchor pattern for improved surface adhesion. Solvent Cleaning in accordance with SSPC-SP1 should be employed to remove all oil and grease. This will aid in the removal of contaminants like oil or moisture, which may have accumulated during the sand blasting operation. If primer application is desired, prime any bare steel the same day as it is cleaned to prevent flash rusting.

Safety
Considerations

Safety Data Sheet (SDS) is available from the Dow Chemical Company. SDS is provided to help customers satisfy their own handling, safety and disposal needs, and those that may be required by locally applicable health and safety regulations. SDS sheets are updated regularly. Therefore, please request and review the most current SDS before handling or using any product. Copies of the SDS are available on request through your nearest Dow Sales office.

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Contact information :
For more information about PU Systems products, call The Dow Chemical Company :
<http://www.dow.com/pusystems/index.htm>

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