



Vorastar HA 6190 Polyol
Vorastar HB 6582 Isocyanate

Description

Vorastar HA 6190 POLYOL / Vorastar HB 6582 ISOCYANATE is a two component 100% polyurea spray elastomer system designed for industrial purposes. Due to the intrinsic characteristics of the polyurea components and the particular composition of the isocyanate component, the developing polymer system 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 HB 6582 Isocyanate	Vorastar HA 6190 Polyol	Test Method
Color		Amber	Red tint	Visual
Viscosity	cPs	900-1200 (at 75°F) (24°C)	200-500 (at 75°F) (24°C)	Brookfield
Specific Gravity	g/cc	1.087	1.001	ASTM D1475-98

Recommended
Process
Conditions

	Units	Limits
VORASTAR* HA 6190 Polyol	pbv	1.00
VORASTAR* HB 6582 Isocyanate	pbv	1.00
Equipment		Gusmer H20-35/H3500 Graco Reactor, Glascraft*
Spray Gun		Gusmer GX-7 DI/Glasscraft Probler/Graco Fusion
Component Feed	Gal/min	3-7
Mixing module	inches	0.04-0.06
Pre-heater Temperature	°F(°C)	155-160 (68-71)
Whip Temperature	°F(°C)	160 (71)
Dispense pressure	psi	1800-2000

* Other heated pressure building proportioning units also suitable.

Typical Reaction
Characteristics

	Units	Result	Test Method
Gel time	Seconds	6-8	Sprayed
Tack free time	Seconds	10-15	Sprayed
Full service use	Hours	24	

Storage Conditions

Keep containers sealed tightly to eliminate any moisture contamination. Do not introduce water into the liquid components. Use desiccant drier cartridges or blanket with nitrogen when in use. Polyol side must be agitated before use and before inserting transfer pumps. Refer to MSDS for additional handling and disposal requirements.

	Units	Vorastar HA 6190 Polyol	Vorastar HB 6582 Isocyanate
Storage temperature	°F (°C)	59-77 (15-25)	59-77 (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	Shore A/D	85/33			ASTM D2240
Density	g/cc	1.02			DIN 53479
Percent Solids	%	100 (0 g/l VOCs)			
Tensile	psi	1891			ASTM D412
Elongation	%	593			ASTM D412
Tear	pli	367			ASTM D624C
Taber Abrasion	mg/rev. loss	225/1000			ASTM D3389
Elcometer Adhesion	psi	>900 >800	Sandblasted steel Concrete	Glue failure Substrate failure	ASTM D4541
Impact Resistance	in-lb	176	Passed		ASTM D 2794
Mandrel Bend	mm	2	Passed		ASTM D 522



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 spall. 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 pinholing 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 bugholds should be filled as well.

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

Material Safety Data (MSD) sheets are available from The Dow Chemical Company. MSD sheets are 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. MSD sheets are updated regularly, therefore, please request and review the most current MSD sheet before handling or using any product. These are available from the 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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