



VORASTAR™ HA 6440 Polyol
VORASTAR HB 6042 Isocyanate

Description

VORASTAR HA 6440 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. This product is certified for potable water contact under the NSF 61 standard.

Typical Component Properties

	Units	VORASTAR HA 6440 Polyol	VORASTAR HB 6042 Isocyanate	Test Method
Color		Clear	Amber	Visual
Viscosity	cPs	500-900 (at 75°F)	1000-1200 (at 75°F)	Brookfield
Specific Gravity	g/cc	1.004	1.16	ASTM D1475-98

Recommended Process Conditions

	Units	Limits
VORASTAR HA 6440 Polyol	pbv	1.00
VORASTAR HB 6042 Isocyanate	pbv	1.00
Equipment		Gusmer H20-35/H3500/H2000
Spray Gun		GX-7 DI
Component Feed	g/s	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
Tack Free	s	15-20	Sprayed
Light traffic	hours	6	
Heavy traffic	hours	24	

Handling and Storage

	Units	VORASTAR™ HA 6440 Polyol	VORASTAR HB 6042 Isocyanate
Storage temperature	°C	15-25	15-25
Storage stability / Shelf life ⁽¹⁾	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 D	48 – 52	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	<200/1000	H-18 wheel, 1000 g load ASTM D3389
Elcometer Adhesion	psi	>1500 >800 >400	Sandblasted steel Concrete Asphalt Glue failure Substrate failure Substrate failure ASTM D4541
Potable water certification	Ft diam Gal	6 min 20k min	Pipe Tank NSF 61

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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Chemical Resistance Evaluation

	Chemical Resistance	ASTM D 543
Complete Immersion at Room Temperature for 168h	Rating	
HCl 37%	NR	
H ₂ SO ₄ 30%	R	
H ₂ SO ₄ 96%	NR	
HNO ₃ 40%	NR	
CH ₃ COOH 100%	NR	
Citric Acid 1%	R	
H ₂ O ₂ 30%	C	
NaOH 60%	R	
NH ₃ 28%	R	
Sodium Carbonate Solution (20%)	R	
Soap Solution (1%)	R	
Demineralized Water	R	
NaCl Solution/Salt Brine (27-30%)	R	
Detergent Solution	R	
Dimethylformamide	NR	
Ethyl Acetate	NR	
Acetone	C	
Methylethylketone	NR	
Toluene	NR	
Mineral Oil	R	
Benzene	NR	
Ethanol	NR	
Methanol	NR	
Tetrahydrofuran	NR	
Diesel Fuel	C	

Rating: R: Recommended (no damage)
 C: Caution (some discoloration, deformation, swelling or cracking)
 NR: Not Recommended