



Building Blocks for Differentiated Construction Formulations



Dow offers a comprehensive range of polyether polyols and methyl diphenyl diisocyanate (MDI) with a full range of functionalities, hydroxyl termination and molecular weights. These products are available as components, prepolymers or systems – standard or custom designed. Here are just a few of Dow’s product offerings for formulators seeking differentiated adhesives, sealants and binders for concrete

Performance Isocyanates

	Functionality	% NCO by Weight	Isocyanate Equivalant Weight	Description
Monomeric MDI				
ISONATE™ 125 M	2.0	33.5	125.5	Pure MDI for high-performance adhesives, sealants and binders.
ISONATE 50 OP	2.0	33.5	125.5	Pure MDI with 50% 2,4'-MDI content for elastomers, sealants and low viscosity prepolymers. High 2,4'-MDI content offers controlled reactivity.
Modified MDI				
ISONATE 181	2.0	23	182	MDI prepolymer with polyether backbone designed for two-component adhesive and sealant formulations. Suitable “as is” for A Side in certain formulations.
ISONATE 143L	2.1	29.2	144.5	Carbodiimide-modified MDI suitable for general adhesive and sealant applications. Liquid at room temperature, allowing ease of handling and processing.
Polymeric MDI				
PAPI™ 94	2.3	32	133.5	Highly versatile polymeric MDI with low viscosity, low functionality and increased 2,4'-MDI content for prepolymers, adhesives and binders.
PAPI 27	2.7	31.4	134	General purpose high-functional polymeric MDI for high modulus adhesives and binders.

Specialty Polyols

	Nominal Functionality	OH Number Range	Average Molecular Weight	Description
Polyether for 1K or 2K Systems				
VORANOL™ 4000 LM	2	26.5-29.5	4000	Raw material for the preparation of low-viscosity prepolymers used in adhesives, sealants and elastomers that require superior dynamic and mechanical properties.
VORANOL 8000 LM	2	14	8000	Raw material for the preparation of prepolymers used in high-elongation construction sealants.
VORANOL 220-028	2	28	4000	High molecular weight polyether polyol that produces soft, high elongation elastomers, prepolymers, caulks and sealants. Suitable for use to decrease modulus.
VORANOL 220-056N	2	54-58	2000	General purpose polypropylene diol for adhesives and sealants. Acidified for enhanced prepolymer stability.
VORANOL 223-060LM	2	59-63	1800	Low-viscosity diol based on propylene oxide and ethylene oxide. EO content provides hydrophilicity and high reactivity, while low monol content makes it suitable for high-performance products.
VORANOL 220-110	2	105-116	1000	Moderate molecular weight polypropylene diol for fine tuning two-component adhesive and binder formulations.
VORANOL CP450	3	370-396	450	Low molecular weight polypropylene triol for high-modulus two-component adhesive and binder formulations.
VORANOL 240-360	4.5	350-370	728	High-functional modulus modifier for adhesives and binders.
VORANOL 220-530	2	520-540	212	Amine-initiated polyol chain extender for two-component adhesives, sealants and coatings requiring quick green strength development. Suitable for systems requiring increased hardness vs. chain extenders such as butanediol or dipropylene glycol.
VORANOL 232-034N	3	32-36	4800	General purpose triol for one- or two-component adhesives and sealants. Acidified for enhanced prepolymer stability.
VORAPEL™ D3201	2	56	2000	Low viscosity diol that adds hydrophobic functionality while maintaining broad compatibility for ease of formulation. Available as a prepolymer for one- or two-component adhesive and sealant applications.
VORAPEL T5001	3	275	600	Low viscosity triol that adds hydrophobic functionality while maintaining broad compatibility for ease of formulation, particularly for structural adhesives and binders.

Differentiated Prepolymers and Systems

	Ask your Account Manager for Additional Technical Information	Description
Prepolymers		
VORAMER™ MN 2314		Versatile, high-performance polyether/MDI prepolymer designed for moisture-cured adhesives and sealants.
VORASIL™ 602		Low modulus/high elongation isocyanate-free silane-modified polymer hybrid technology with tunable performance.
VORASIL 604		Medium modulus and elongation isocyanate-free silane-modified polymer hybrid technology with tunable performance.
Custom Prepolymers		Custom prepolymers based on combinations of ISONATE™ and PAPI™ isocyanates and VORANOL and VORAPEL polyols.
Systems		
HYPERLAST™ LU1011/ LP5046		Two-component MDI/polyether system with physical properties and cure profile essential for polymer concrete binder applications.
HYPERKOTE™ VORASTAR™		Formulated high-performance polyurethane spray elastomers systems for general purpose and waterproofing applications.

Innovating For You

For more information and product samples, contact us at your convenience:

dowpolyurethanes.com
dowpolyurethanes@dow.com

Dow North America

Toll-Free

+1 800-441-4369

Toll

+1 989-832-1426

The Dow Chemical Company

2030 Dow Center

Midland, MI 48674

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