

DOWSIL™ Hybrid Polymer Solution

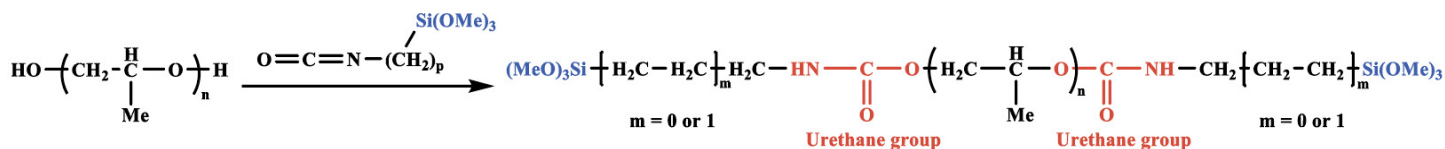
Advancing Sealant Technology



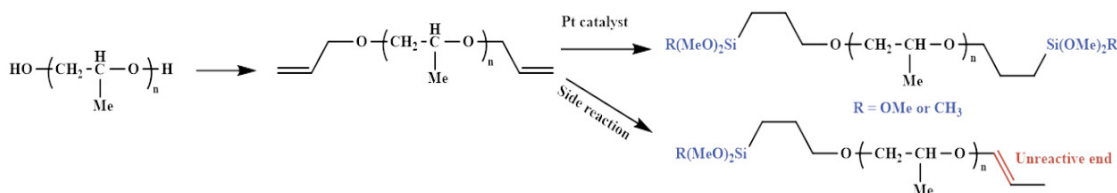
Dual-Technology Toolbox for Superior Performance and Reliability

DOWSIL™ HP Polymers are advanced silane-terminated polyether-based polymers that uniquely combine the key properties of silicone and polyurethane materials in a solvent-free platform. Developed through Dow's dual-technology platform of STPU (Silane Terminated Polyurethane) and STPE (Silane Terminated Polyether), these hybrid polymers are engineered for extensive sealants and adhesives applications, delivering an optimal balance of flexibility, reliability, and environment compliance. The manufacturing process ensures excess isocyanate in STPU polymers is removed in the final product.

- **STPU technology** incorporates urethane groups at the end of the polymer chains, fully capped with trimethylsilyl groups, which **supports fast curing**. STPU based adhesive & sealant offers robust adhesion and weather resistance - **ideal for applications that require fast curing and better elasticity**.



- **STPE technology** is completely free from urethane groups in the polymer chain. It uses a saturated hydrocarbon (propyl) group as the linkage between the polyether and dimethylsilyl group. This structural modification offers **better weather resistance and durability**, making it ideal for applications required higher movement capability and exposed to environmental conditions.



By offering both STPE and STPU, Dow enables formulators to optimize performance characteristics – whether prioritizing cure speed, durability, or regulatory compliance - while unlock synergistic formulation possibilities.

Supported by Dow's backward-integrated supply chain, DOWSIL™ HP Polymers ensure consistent quality, stable supply and technical collaboration that empower formulators to innovate with confidence.

DOWSIL™ HP-600 Polymers Series - Engineered for Faster Curing Speed

Introducing DOWSIL™ HP-600 Polymers series, a patented STPE polymer featuring a linear polyether backbone with advanced terminal trimethoxysilyl silane functionality. This molecular design delivers notable faster curing speed than conventional polymers, which allows formulation with reduced catalyst content, enhancing both performance and cost-efficiency.

Dual-technology Toolbox to Meet Diverse Formulation Demands

Explore 3 series of DOWSIL™ HP Polymers below, designed to offer tailored solutions to address your unique formulation challenges.

Performance

	DOWSIL™ HP-100 Series	DOWSIL™ HP-200 Series	DOWSIL™ HP-600 Series
	TMS-STPU Polymer	DMS-STPE Polymer	TMS-STPE Polymer
		Isocyanate free process and product	Isocyanate free process and product
Paint Ability	Excellent	Excellent	Excellent
Movement / Low Modulus	Better	Excellent	Excellent
Cure Speed	Excellent	Better	Excellent
Tacky (Cured Polymer)	Excellent	Better	Excellent
Mechanical Property	Excellent	Excellent	Excellent
UV/Weather Durability	Good	Excellent	Excellent
Viscosity	Good	Excellent	Excellent
Elastic recovery	Excellent	Better	Good
Shelf-life	Good	Excellent	Excellent

Excellent
 Better
 Good

Viscosity

DOWSIL™ HP-100	DOWSIL™ HP-110	DOWSIL™ HP-200	DOWSIL™ HP-210	DOWSIL™ HP-220	DOWSIL™ HP-610	DOWSIL™ HP-620
10,100	32,900	8,000	7,000	15,000	45,000	57,000

A Comprehensive Portfolio Engineered for Extensive Applications

Application	DOWSIL™ HP-100	DOWSIL™ HP-110	DOWSIL™ HP-200	DOWSIL™ HP-210	DOWSIL™ HP-220	DOWSIL™ HP-610	DOWSIL™ HP-620
Low modulus with high movement capability joint sealant		●	●			●	
Non-structural weatherproofing joint sealant		●	●	●		●	●
Parquet flooring adhesive	●			●			
General purpose indoor decoration sealant	●	●	●	●	●	●	●
Nail free adhesive	●				●		
Container assemble adhesive and sealing sealant	●	●		●	●	●	●
Elevator assemble adhesive	●	●		●	●		●
High strength assemble adhesive	●			●	●		●
Window glazing sealing sealant		●		●	●	●	●
Automotive indoor decoration semi-structural assemble adhesive	●	●		●	●		●

In addition, we offer DOWSIL™ HP 188, a reactive diluent polymer designed to enhance workability and optimize formulation flexibility.

Building and Construction
 Industry
 Mobility and Transportation

Dow is Your Partner in Innovation

Dow stands as your trusted innovation partner through backward-integrated chemistry, ensuring unmatched material consistency and supply chain reliability. With decades of global expertise and localized technical support, we collaborate closely to solve your formulation challenges. Our future-ready solutions anticipate industry needs, from sustainable chemistries to high-performance materials.

The DOWSIL™ HP Polymers portfolio provides flexibility with both STPE and STPU technologies to meet specific application demands—whether optimizing for cure speed, durability, or weather resistance. This dual-technology toolbox, combined with Dow's proven innovation leadership, ensures you have the right polymer solutions for advanced sealants and adhesives.

Contact us to explore how Dow's dual-technology toolbox can elevate your formulations.

Learn More

Learn more about Dow's range of high-performance DOWSIL™ Brand Silicone Sealants. Rely on our materials innovation, application experience, broad technical services, and global supply capabilities with local support. Learn more at dow.com/buildingscience.

Dow has sales offices, manufacturing sites, and science and technology laboratories around the globe. Find local contact information at dow.com/contactus.



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Form No. 63-7502-01-0625 S2D