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## Adhesion **Promoters**

CoatOSil™ and Silquest™ silanes are versatile products that can react with a wide variety of organic and inorganic materials. These products can be considered for use as coupling agents, crosslinking agents, and surface modifiers in applications such as paints, coatings, adhesives, and sealants.

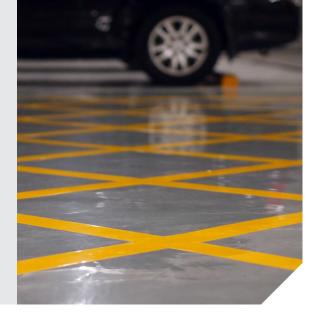


Key	Product	Compatible Re	sin Chemistry	A P. C.
Products	Chemistry	Solvent Based	Water Based	Applications
CoatOSil MP 200 silane oligomer	Oligomeric epoxy silane	<ul><li>Acrylic</li><li>Polyurethane (1K and 2K systems)</li><li>Epoxy</li><li>Polysulfide</li></ul>	<ul><li>Acrylic</li><li>Styrene acrylic</li><li>Polyurethane dispersion and epoxy</li></ul>	<ul> <li>Architectural coatings</li> <li>Wood coatings</li> <li>General Industrial coatings</li> <li>Protective coatings</li> <li>Automotive coatings</li> </ul>
CoatOSil 2287 silane	Glycidoxypropyl dialkoxy silane	Not applicable	<ul><li>Acrylic</li><li>Styrene acrylic</li><li>Polyurethane dispersion and epoxy</li></ul>	<ul><li>Architectural coatings</li><li>Wood coatings</li><li>General Industrial coatings</li></ul>
CoatOSil 1770 silane	Cycloaliphatic epoxy silane	Not applicable	<ul><li>Acrylic</li><li>Styrene acrylic</li><li>Polyurethane dispersion and epoxy</li></ul>	<ul><li>Architectural coatings</li><li>Wood coatings</li><li>General Industrial coatings</li><li>Automotive coatings</li></ul>
Silquest A-Link™ 600 silane	Low-yellowing amino silane	<ul> <li>Polyurethane (1K systems)</li> <li>Epoxy</li> <li>Silylated polyurethane</li> <li>Polyether adhesives and coatings</li> <li>Silicone sealants</li> </ul>	Not applicable	<ul> <li>Moisture curable adhesives and sealants</li> <li>Polyurethane sealants</li> <li>SPUR+™ prepolymer adhesives and sealants</li> <li>Automotive and performance coatings</li> </ul>
Silquest A-Link 25 and 35 silane	Isocyanate functional silane	<ul><li>Polyurethane (1K systems)</li><li>Silylated polyurethane</li><li>Silylated polyaspartics</li></ul>	<ul> <li>Acrylic (2K systems)</li> <li>Polyurethane dispersion (1K and 2K systems)</li> <li>Epoxy (2K systems)</li> </ul>	<ul> <li>Moisture curable urethane adhesives, sealants and coatings</li> <li>Adhesion promoter for all systems where active hydrogen species are available</li> </ul>
Silquest A-Link 235 silane	Aminofunctional silane siloxane	<ul> <li>Hybrid, polyurethane RTV silicone sealants and adhesives</li> <li>Filled and unfilled oxime silicone sealants</li> </ul>	Not applicable	<ul> <li>Moisture curable urethane adhesives, sealants and coatings</li> <li>Adhesion promoter for all systems where active on difficult substrates: plastics, aluminum, wet concrete</li> </ul>

- Improved scrub resistance
- Enhanced dry and wet adhesion on multiple substrates
- Increased corrosion and chemical resistance
- Expanded hardness and mechanical strength

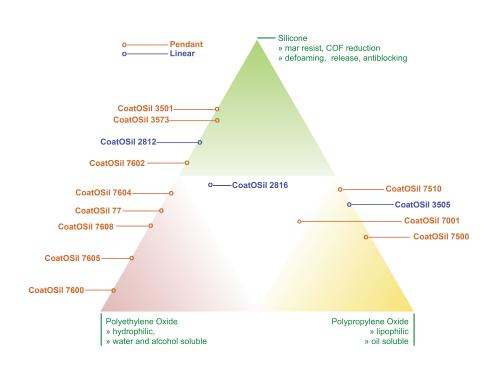
# Wetting, Leveling & Slip Additives & Defoamers

CoatOSil silicone-polyether additives are used in wide variety of applications including waterborne and solventborne coatings, high solids, powder, and UV coatings and inks.



Duaduata	Waterborne			Solventborne & High solids			Radiation cure UV/EB					
Products	Wetting	F/L*	Slip	Defoaming	Wetting	F/L	Slip	Defoaming	Wetting	F/L	Slip	Defoaming
CoatOSil 1211C**	•	•							•	•		
CoatOSil 2812***			•				•				•	
CoatOSil 2816		•	•			•	•			•	•	
CoatOSil 3501**		•	•		•	•		•**		•	•	•**
CoatOSil 3505			•	•			•	•			•	•
CoatOSil 3573							•	•			•	•
CoatOSil 7001	•	•			•	•			•	•		
CoatOSil 7500				•	•	•				•		
CoatOSil 7510				•		•		•				•
CoatOSil 7600		•				•						
CoatOSil 7602		•	•				•			•	•	
CoatOSil 7604	•	•				•				•		
CoatOSil 7605	•	•				•				•		
CoatOSil 7608	•	•			•	•				•		
CoatOSil 77	•	•			•	•			•	•		

- Enhanced flow and leveling (eliminate defects like craters, orange peel, etc.)
- Improved slip (reduced coefficient of friction)
- Increased mar resistance
- Control of foam and enhanced air release
- Improved substrate wetting
- Increased gloss
- Anti-blocking (release)



## Hybrid Prepolymers

Silane-terminated polyurethanes have become increasingly attractive to manufacturers of adhesives, sealants, and coatings. This high-performance hybrid technology is a result of the synergy between the silane-curing mechanism and polyurethane backbone properties.

Formulations based on SPUR+™ prepolymer offer fast room-temperature cure and good durability, as the sealants or adhesives are free of unreacted isocyanate. Typical benefits also include freedom from bubbling during cure and a broadening of the formulation latitude compared to conventional polyurethane technologies.



Key Products	Typical Viscosity at 25 °C (mPas)	Typical Characteristics	Construction	Transportation	Wood Flooring	Roof Coating
SPUR+ 1015 Prepolymer	50,000	Low modulus	•			
SPUR+ 1020 Prepolymer	50,000	<ul><li>Low modulus</li><li>Low yellowing and color stability</li></ul>	•			
SPUR+ 1050 Prepolymer	35,000	Medium modulus	•	•	•	
SPUR+ 1070 Prepolymer	15,000	Medium modulus & low viscosity     Low yellowing and color stability	•	•	•	
SPUR+ 3030 Prepolymer	2,500	<ul><li>Low viscosity</li><li>High hydrophobicity</li></ul>		•		•

- Moisture cure at room temperature
- Primerless adhesion to many substrates
- Excellent water and chemical resistance and weatherability
- Excellent elongation and elastic recovery
- Isocyanate free formulation
- Minimal shrinkage
- Formulation flexibility with 1K and 2K systems
- Easy application characteristics



## Waterborne Silicones

In the coatings market, silicone are known for their durability, water repellency, lower VOC, and resistance to other environmental elements. Momentive's waterborne silicones can help create longer-lasting, protective coatings that maintain aesthetics in interior and exterior architectural applications.



Key Products	Description	Active content %	Interior	Exterior	Concrete Sealer	Wood	Typical Benefits
CoatOSil DRI waterborne resin	Waterborne Silicone Resin	45%					<ul> <li>Improved UV resistance</li> <li>Improved water resistance</li> <li>Compatible with wide variety of waterborne coating systems</li> </ul>
CoatOSil CLEAN Silicone	Functional Silicone Emulsion	45%	•	•		•	<ul> <li>Improved scuff resistance</li> <li>Improved stain resistance</li> <li>Reduced surfactant leaching</li> <li>Improved water resistace</li> </ul>
CoatOSil PRIM-2 Emulsion	Silane/ siloxane emulsion	64%			•		<ul> <li>Excellent water beading and efflorescence resistance</li> <li>Reduced capillary water absorption</li> <li>Low cyclic content</li> <li>Anti-blocking</li> </ul>
CoatOSII 2059 Emulsion	Functional silicone Emulsion	35%			•		<ul> <li>Excellent stain resistance on masonry substrates</li> <li>Improved water beading</li> </ul>
Silblock™ WMS Masonry Water Repellent	Silane/ siloxane emulsion	40%			•		<ul> <li>Excellent water resistance as an admixture and/or penetrating sealer</li> <li>Deep penetration and excellent water vapor permeability</li> </ul>

- Improved scruff/mar resistance
- Enhanced water resistance
- Improved UV resistance
- Increased efflorescence resistance
- Reduced surfactant leaching



# High-Temperature Performance Silicone Resin



Silicone resins are key technologies in high-temperature performance coatings, corrosion protection coatings, weather-resistant coatings, and electrical insulating varnishes.

They offer a variety of typical benefits such as high heat resistance, UV and oxidation resistance, gloss and color retention and good adhesion to aluminum or steel. Methyl silicone resins are excellent candidates to consider for applications requiring long-term heat resistance at 200 °C, whereas methyl-phenyl resins can be considered for applications requiring heat resistance up to 250 °C. For higher heat resistance performance, the use of inorganic color pigments such as titanium dioxide can enable heat resistance to 350 °C, while the use of aluminum and micaceous iron oxides has been shown to enable heat resistance up to 600 °C.

Key Products	Active Substance Content (%)	Solvent(s)	Viscosity at 23 °C, DIN 53 015 & at 25 °C, DIN 52 015	Hardness	Phenyl Containing
CoatOSil M120XB resin	50%	Xylene/ butanol	40-60mPas	Hard	No
CoatOSil P 501 resin	50%	Xylene/ cyclohexanone	220-300mPas	Medium hard	Yes
TSR117 resin	50%	Xylene	150mPas	Medium	Yes
SR 882M resin	80%	Toluene	200-1000mPas	Medium	Yes
SR 141 resin	50%	Toluene	90-220mPas	Medium	Yes

## **Key Features & Typical Benefits:**

- Heat resistance up to 600 °C in certain formulations
- Electrical insulation
- Anti-corrosiveness
- Thermal shock resistance

### Potential Applications:

- High temperature performance paints for industrial use
- High temperature performance paints for consumer use
- Electrical insulating varnishes
- Weather-resistant coatings
- Thermo-set molded parts

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