



Technical Data Sheet

DOWSIL™ RSN-0409 HS Resin

FEATURES & BENEFITS

- High solids/low VOC (Volatile Organic Compound)
- Excellent heat stability
- Good weatherability

COMPOSITION

- 80 percent solids resin in xylene
- Silanol functional

80 percent solids, silanol-functional silicone resin for use in liquid coatings; chemically similar to DOWSIL™ RSN-0805 Resin

APPLICATIONS

- DOWSIL™ RSN-0409 HS Resin can be evaluated for use in heat-resistance applications up to 648°C (1200°F).

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications.

CTM ¹	Property	Unit	Result
0176	Appearance		Clear liquid
0001A	Specific Gravity		1.120
0004	Viscosity	cP	200
0002	Refractive Index		1.510
0021A	Flash Point, Closed Cup	°C (°F)	27 (81)
0208	Nonvolatile Content ²	percent	80
Method 24	VOC	g/L (lb/gal)	228 (1.9)
	Theoretical Residual Silicon Dioxide	%	48
	Phenyl/Methyl Ratio		1.1/1.0
	Degree of Substitution		1.6
	Solubility	Aromatic hydrocarbons, ketones and esters	

¹CTMs (Corporate Test Methods) correspond to standard American Society for Testing and Materials (ASTM) tests in most instances. Copies of CTM procedures are available upon request.

²0.5 g sample for 1 hour at 110°C (230°F) plus 3 mL toluene.

HOW TO USE

Pigmented and clear heat-cured coatings based on DOWSIL RSN-0409 HS Resin can be formulated in conventional equipment currently used for solvent-based coatings. The resin can be used by itself or blended with silicone and/ or organic resins to obtain a wide variety of coatings with polymer characteristics to fit specific applications and properties. A suggested heat cure is 30 minutes at

232°C (450°F). Zinc octate (0.1 percent zinc metal on resin solids) may reduce cure conditions. See Table 1 for starting formulations.

FORMULATION INFORMATION

Sample formulations are provided for your convenience, but Dow does not warrant their merchantability, fitness for use, performance, efficacy, safety or freedom from patent infringement.

Table 1: Aluminum Paint Formulation

Paint Formulation	Parts	
Starting Materials		
Aluminum Paste ¹ , 65 percent	50.0	
DOWSIL™ Silicone Resin, Solids	50.0	
	100.0	
Paint Properties		
Paint Preparation	Low-speed blade	
Pigment: Binder Ratio	65:100	
Viscosity ² , #4 Zahn cup, seconds	30	
<u>DOWSIL™ Silicone Resin (Premix)</u>	<u>DOWSIL™ RSN-0409 HS</u>	<u>DOWSIL™ RSN-0805</u>
	<u>Resin</u>	<u>Resin</u>
Pounds per Gallon	9.1	8.7
Percent Solids (ASTM D 2369)	58	39
VOC, g/L (lb/gal)	455 (3.8)	635 (5.3)
Film Properties		
Substrate	12-gauge, sandblasted steel panels	
Application, 30 seconds, #2 Zahn cup	Spray	
Cure, at 232°C (450°F), minutes	30	
Film Thickness, mils	0.8–1.2	
Performance—Heat Resistance at 538°C (1000°F)		
250 hours	10 ³	10 ³
500 hours	7 ⁴	10 ³

¹Silberline A-6205 or equivalent, Silberline Manufacturing Co., Inc.²Reduced with xylene.³No change.⁴6 to 10 percent film loss.

They are not commercial formulations and have not been subjected to extensive testing. It is your responsibility to thoroughly test any formulation before use.

HANDLING**PRECAUTIONS****PRODUCT SAFETY**

INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT WWW.CONSUMER.DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

USABLE LIFE AND STORAGE

When stored below 27°C (81°F) in the original unopened container, this product has a usable life of 33 months from the date of production.

Partially filled containers of DOWSIL RSN-0409 HS Resin should be sealed tightly after use to prevent contaminants and water vapor from entering the product. Store containers at or below 25°C (77°F).

LIMITATIONS

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

HEALTH AND ENVIRONMENTAL INFORMATION

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, www.consumer.dow.com or consult your local Dow representative.

LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Dow's sole warranty is that our products will meet the sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any

UNRESTRICTED – May be shared with anyone

©™Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

DOWSIL™ RSN-0409 HS Resin

© 2017 The Dow Chemical Company. All rights reserved.

product shown to be other than as warranted.

**TO THE FULLEST EXTENT
PERMITTED BY APPLICABLE
LAW, DOW SPECIFICALLY
DISCLAIMS ANY OTHER
EXPRESS OR IMPLIED
WARRANTY OF FITNESS FOR A
PARTICULAR PURPOSE OR
MERCHANTABILITY.**

**DOW DISCLAIMS LIABILITY
FOR ANY INCIDENTAL OR
CONSEQUENTIAL DAMAGES.**

www.consumer.dow.com



®Trademark of The Dow Chemical Company

Form No. 26-1974-01 A