

DESCRIPTION

This true high-temperature silicone system was developed from a proprietary blend of resins and pigments to provide service up to 1100°F (593°C). It is designed to be a smooth coating for steel substrates.

Product Benefits

- Enhanced charging and handling characteristics
- Thinner film builds
- Provides excellent flow and leveling over a wide range of film thickness
- Great performance at 1000°F (538°C)
- Excellent UV resistance for outdoor use
- Passed the full battery of corrosion performance tests for automotive applications
- Designed to be more compatible and to reduce cross contamination with other coatings*

SPECIFICATIONS

Cure Cycle [Substrate temperature]	20 minutes @ 375°F (191°C) 15 minutes @ 400°F (204°C) 10 minutes @ 425°F (218°C) 5 minutes @ 450°F (232°C)
Specific Gravity	1.73 +/- 0.05
Theoretical coverage at 1 mil	112 ft. ² / lb.
Film builds between	0.80 and 2.50 mils
Recommended at	1.60 mils
Theoretical Coverage at recommended	70 ft. ² / lb.

Heavier film builds are not recommended.

TYPICAL PROPERTIES

Adhesion(ASTM D3359)	5B
Gloss at 60° (ASTM D523)	1.0-4.0
Impact Resistance (ASTM D2794-90)	120D/60R
Pencil Hardness (ASTM D3363)	>2H

PERFORMANCE TESTING

Continuous testing at 1000°F (538°C) shows this product retains gloss, color and physical integrity at this service temperature. Testing indicates good film integrity after limited exposure to temperature at 1400°F (760°C). This formula has tested to the specifications of automotive and other equipment manufacturers.

SURFACE PREPARATION

High temperature coatings require cleaner substrates to maintain a good bond between metal and coating. Abrasive media blast is an excellent method of surface preparation. Chemical pretreatments are effective, but must be rinsed to a clean surface with no dirt or cleaner residue. *Phosphate pretreatments have their own temperature limits that must be observed.* Contact your chemical pretreatment supplier. Also substrates have limits that must be observed.

APPLICATION

Room temperature 77°F (25°C) electrostatic application is recommended. Reduced voltages (45 – 60kV) can improve coating film thickness uniformity.

PRECAUTIONS

Read and understand the MSDS before using. This product is more temperature sensitive than normal powders and should be used at temperatures below 77°F (25°C). This product is more susceptible to moisture than other powder products. Because of the electrostatic properties of this powder a fluidizing feed hopper with higher air flow must be used.

**We recommend testing for compatibility with other products that you use before purchasing.*

STORAGE

This product should be stored at temperatures below 77°F (25°C) for up to 6 months. Under carefully controlled conditions, shelf life may be extended.

LIMITATIONS

The technical data and suggestions for use in this product data sheet are currently correct to the best of our knowledge, but are subject to change without notice. Because application and conditions vary, and are beyond our control, we are not responsible for results obtained in using this product, even when used as suggested. The user should conduct tests to determine the suitability of the product for the intended use under then existing conditions. Our liability for breach of warranty, strict liability in tort, negligence or otherwise is limited exclusively to replacement of the product or refund of its price. Under no circumstance are we liable for incidental and consequential damages.

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PRIOR TO HEAT RESISTANCE			
Test description	Test method	Specification	Results
salt spray undercut test	ASTM B117/D1654/JDQ115	<3mm after 240Hrs	1mm after 240+ hrs
Humidity blister resistance	ASTM D2247/JDQ120	<3mm after 240Hrs	NA after 240+ hrs
Crosshatch Tape Adhesion	ASTM D3359/JDQ 17	5B	5B
pencil hard	ASTM D3363/JDQ 11	2H	>3H
int. gloss 60 °	ASTM D523/JDQ 12B	< 4.0	< 4.0
int. color	ASTM D1729/JDQ 14	BLACK	BLACK
HEAT RESISTANCE			
HEAT RESISTANCE OVER STEEL RES178800			
test description	test method	specification	results
tape adhesion after 72h@1100 °F (c,d)	D3359/JDQ 17	>B	4B (b) pass
tape adhesion after 24hrs@1000 °F (c,d)	D3359/JDQ 17	>B	5B (a) pass
THERMAL SHOCK RESISTANCE RES178801			
test description	test method	specification	results
1hr@800 °F, Quench,3hr@800 °F,Quench, 4hr@800 °F,Quench(d)	D3359/JDQ 17	>B	5B (b) pass
Cyclic Temperature Test RES175062			
test description	test method	specification	results
1) 1hr@-40 °F, 2) warm to Room Temperature, 3) 1hr@675 °F, 4) cool to Room Temperature. 5) perform D3359/JDQ 17 = one cycle: Repeat steps 1 – 5 but change step 3 to the following; 1hr@750 °F = cycle two; 1hr@800 °F = cycle three; 1hr@935 °F = cycle fours (c,d)	D3359/JDQ 17	>B	5B after each cycle (b) pass
POST HEAT RESISTANCE			
Salt Spray Resistance RES178802			
test description	test method	specification	results
Salt Spray undercut test (c,d): after 24hrs@775 °F	b117/f1654/jd115	<3mm creep@48hrs	<1mm@ >96hrs(b)
Salt Spray Resistance INTERNAL			
test description	test method	specification	results
Salt Spray undercut test (c,d):after 24hrs@1000 °F	b117/f1654/jd115	<3mm creep@96	<1mm@ >168hrs
Color Stability RES178805			
test description	test method	specification	results
Color Stability after every of the above tested panels	color difference CIE LAB DE	DE <15	DE= TBD
(a)= JD Quality Class 3			
(b)=JD Quality Class 4			
(c)= Blasted cold Rolled Steel			
(d)= Cold Rolled Steel			