



PRODUCT DATA SHEET

STOVE BRIGHT[®] HIGH TEMP

1PC-653-2199 MUFFLER BLACK

High Performance Powder Coating

GENERAL INFORMATION

This powder coating type is designed for optimum performance in harsh environments, such as automotive exhaust and other high temperature applications. It has superior heat and corrosion resistance and has been tested to the specifications of automotive and other equipment manufacturers. This product has achieved a standard of performance never before available in a powder coating.

Benefits

- Heat resistance in excess of 1200 °F.
- Continuous testing for 48 hours at 800°F indicates these products hold gloss, color and physical integrity at this service temperature.
- Testing for 168 hours at 1000°F indicates good performance up to 24 hours with some gloss change at extended times and higher temperatures.
- Tested very well on salt spray resistance testing – no blistering or rusting from scribe after 120 hours.
- Passed a full battery of corrosion performance tests for automotive applications.

SPECIFICATIONS

Bake Time & Temperature.....20 minutes @ 450°F
(minimum substrate temperature)
 Specific Gravity.....2.09+/- .05
 Theoretical coverage for 1 mil.....94 ft²/lb.
 Film build between.....1.2 and 2.9 mils
Heavier film builds are not recommended.
 Recommended at2.0 mils
 Theoretical coverage at use mils..... 46 ft²/lb.

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

Electrostatic application to room temperature substrate is typical. Reduced voltages can improve coating film thickness uniformity.

PERFORMANCE TESTING

PREHEAT RESISTANCE		ASTM
salt spray	240+ hrs	B117/D1654
humidity	240+ hrs	D2247
adhesion	5B	D3359
pencil hard	>3H	D3363
int. gloss60	12-18	D523
HEAT RESISTANCE		
STEEL	PASS	RES178800
THRM. SHOCK	PASS	RES178801
Cyclic temperature	4 cycles	RES175062
POST HEAT RESISTANCE		
24hrs@1000F, salt spray	>100 hrs	INTERNAL

STORAGE

This product should be stored at temperatures below 75°F for up to 6 months. Under carefully controlled conditions, shelf life may be extended.

PRECAUTIONS

Read and understand the MSDS before using. This product is more susceptible to moisture contamination and heat exposure than other powder products. Because of the electrostatic properties of this powder a fluidized hopper is required and box feeders are not recommended.

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. 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	12-18	15
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 (a)	D3359/JDQ 17	>B	4B (b) pass
tape adhesion after 24hrs@1000 °F (a),(c)	D3359/JDQ 17	>B	5B (d) pass
THERMAL SHOCK RESISTANCE RES178801			
test description	test method	specification	results
1hr@800 °F, Quench, 3hr@800 °F, Quench, 4hr@800 °F, Quench	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 four (a)	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 (a),(c): after 24hrs@775 °F	b117/f1654/jd115	<3mm creep@48hrs	<1mm@>500hrs
Salt Spray Resistance INTERNAL			
test description	test method	specification	results
Salt Spray undercut test (a),(c):after 24hrs@1000 °F	b117/f1654/jd115	<3mm creep@96	<1mm@>1000hrs
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=
(a)= Bead Blast Hot Rolled Steel			
(b)=JD Quality Class 4			
(c)= Bead Blast Cold Rolled Steel			
(d)=JD Quality Class 3			