

# DENSURF HR 800

SILICONE RESIN



## DESCRIPTION

Densurf HR 800 is a heat-curable phenyl-methyl polysiloxane resin.

Used in solvent-borne, heat and corrosion resistant paints.

Provides thermal stability up to 600-650 °C when formulated with suitable pigments

## HIGHLIGHTS

*for performance  
& application*

- ✓ Heat resistance up to 650°C
- ✓ Heat-curable
- ✓ Completes touch-free drying at ambient conditions
- ✓ Solvent-based coatings



+90 (282) 674 54 00



[www.densurf.com](http://www.densurf.com)

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## Performance Test in Solvent-Based Metallic Heat Resistant Paint

Coatings formulated with silanol-functional silicone resins, like Densurf HR 800, typically need to thermal curing to achieve the optimum performance.

In this study, performance of Densurf HR 800 and a benchmark resin were tested using the formulation given as right side. Paints were applied on the metal sheet by using 200 $\mu$  applicator. After waiting for 60 minutes, when the paint films reached touch free drying time, the paint films were completed. After cured at 200°C for 30 minutes, painted sheets were kept at 600°C for 120 minutes to test heat resistance and adhesion. Adhesion of the paint films were tested after heat exposure.

For the next step, painted sheets were kept at 600°C for 60 minutes then quenched in a water bath at room temperature immediately. Additionally, salt spray test was performed to control corrosion resistance of the resins.

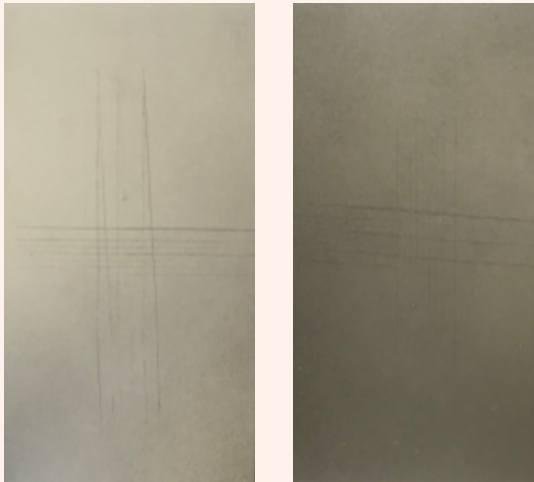
Results were given as below.

	Amount (%)
<b>Densurf HR 800</b>	55.0
<b>Densurf AF 200</b>	0.5
<b>Barite</b>	13.5
<b>Xylene</b>	7.0
<b>Isobutanol</b>	0.5
<b>Rheology modifier</b>	0.5
<b>Metallic Pigment</b>	15.0
<b>Xylene</b>	8.0
<b>TOTAL</b>	100.0

### 600°C

Densurf HR 800

Benchmark



### 1st Cycle

Densurf HR 800 Benchmark



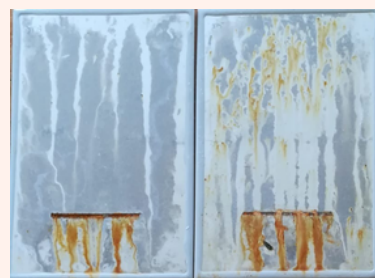
### 2nd Cycle

Densurf HR 800 Benchmark



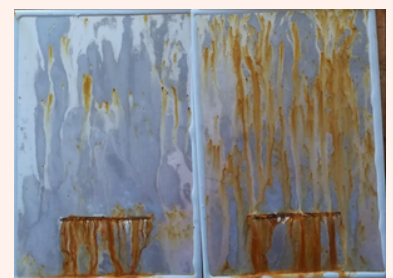
### 24 hours

Densurf HR 800 Benchmark



### 48 hours

Densurf HR 800 Benchmark



### REMARKS

- ✓ Provides heat resistance up to 600°C with metallic pigment
- ✓ Higher adhesion performance after quenching test and higher corrosion resistance compared to the benchmark product

