DENSURF HR 900

SILICONE RESIN

DESCRIPTION

Densurf HR 900 is a heat-curable phenyl polysiloxane resin.
Used in solvent-borne, heat and corrosion resistant paints.
Provides thermal stability up to 600-650 °C when formulated with suitable pigments
Has broad compatibility with organic resins

HIGHLIGHTS

for performance & application

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

Performance Test in Solvent-Based Metallic Heat Resistant Paint

HR

The usage of silicon-based technologies in the coatings market has evolved over the decades because of the outstanding properties and wide applications of silicones. In comparison to organic resins, silicone resins exhibit greater resistance to thermal and radiation degradation.
Coatings formulated with silanol-functional silicone resins, like Densurf HR 900, typically needs thermal curing to achieve the optimum performance.

In this study, performance of Densurf HR 900 and a benchmark resin were tested using the formulation given on the right-hand side. Paints were applied to the metal sheet using 200 µ 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.

For the next step, similar procedure was applied but this time painted sheets were kept at 800°C for 120 minutes.

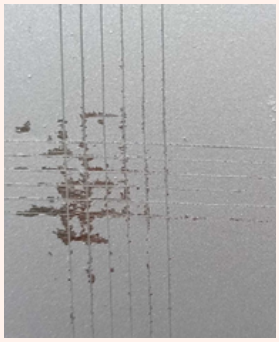
Adhesion of the paint films were tested after heat exposure and results were given below.

	Amount (%)
Densurf HR 900	55.0
Densurf AF 200	0.5
Barite	13.5
Xylene	7.0
Isobutanol	0.5
Rheology modifier	0.5
Metallic Pigment	15.0
Xylene	8.0
TOTAL	100.0

600°C

Densurf HR 900

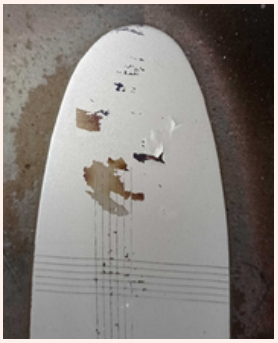
Benchmark



800°C

Densurf HR 900

Benchmark



REMARKS

- Pigment and extender choice directly affects the heat resistance performance of the paint
- Provides heat resistance up to 800°C with metallic pigment
- Higher adhesion performance after heat exposure