



Product Data Sheet

Product

MicroCoat 341014HTGT

A Single Component, Toughened, Microelectronic Grade Glob Top with a Service Temperature of <-65°C to Over >340°C and Meets NASA Low Outgassing Specifications

MicroCoat 341014HTGT features a unique blend of performance properties including both high shear and peel strengths along with convenient handling and high/low temp properties. This is a one component system formulated to cure at elevated temperatures.

341014HTGT has a number of outstanding processing advantages;

- No mixing is necessary prior to use
- This material is ***not*** "Pre-mixed and Frozen"
- The viscosity remains constant with time (i.e. it will not thicken over time)
- Working life is unlimited at room temperature, and the material is room temperature storable
- No cleanup required in-between shifts

MicroCoat 341014HTGT forms glob tops for high strength bonds for service over the remarkably wide temperature range of <-65°C to over 300°C and is used for Microelectronic Die/wire coating sealing for die on PCB, Ceramic, Liquid Crystal Polymers, Ceramic/Thick Film Gold, Pd/Au, Pt/Pd/Au, etc and as a high temperature coating for components. As a toughened system, 341014HTGT offers superior resistance to impact, thermal shock, vibration and stress fatigue cracking. It is 100% reactive and does not contain any diluents or solvents and is used in several "down-the-hole" environments at >2K meters.

341014HTGT is remarkably resistant to severe thermal cycling and many chemicals including water, oil, fuels and most organic solvents even upon prolonged exposures. Adhesion to metals, glass, and ceramics is excellent. The cured epoxy is a superior electrical insulator and is colored is tan (*this material will darken when exposed to high temperature with NO adverse effects on the adhesive*). MicroCoat Polymer System 341014HTGT high performance coupled with its convenient handling make it widely used in a variety of applications in the aerospace, electronic, microelectronics, electrical, automotive and chemical industries. MicroCoat 341014HTGT will meet NASA low outgassing specifications.

Product Advantages

- A single component system; no mixing required prior to use, no viscosity changes over time.
- Room temperature or refrigerator storable; not premixed and frozen! DO NOT FREEZE
- Versatile cure schedules.
- High shear and peel strength to similar and dissimilar substrates over the remarkably wide temperature range of -65°C – 340°C. (Note: Color changes to slightly amber >300°C)
- Good electrical insulating properties and chemical resistance.
- Superior thermal shock, impact and stress cracking fatigue resistance,
- Will meet NASA low outgassing per ASTM E-595, NASA MSFC 1443, Mil-Std-883 5011.4 (3.8.6)
- RoHS Compliant

MicroCoat Technologies

MicroCoat 341014HTGT

Product Properties

Solids content, %	100
Viscosity @ 25°C, cps.....	>25,000
Color.....	Yellowish Tan
Tensile shear, aluminum to aluminum, 25°C, psi.....	>3,200
Tensile strength, 25°C, psi	>8,500
Flexural strength, 25°C, psi.....	>9,700
Compressive strength, 25°C, psi.....	>30,000
Elongation	3.8%
Shore hardness (Shore D)	80
Tensile modulus, 25°C, psi	350,000
Maximum total mass loss (TML)	<1.0% of the original sample mass
Maximum collected volatile condensable material (CVCM) deposition.....	<0.1%
Tg:	+230°C
CTE	50-55 ppm per °C
CTE below the Tg	35-40 ppm
CTE above Tg	125 ppm
Youngs Modulus;	450-500K
Thermal Conductivity	3.13 W/mK
Service temperature range	-100C to 340°C
Short Term High Temp	480°C
Post Cure Ionics 883/5011.3.8.7	Cl=<6ppm, Na+<3.3ppm, K+<1.1ppm
Teflon Flask 5 gm sample using 20-40 mesh, 50 gm DI H ₂ O, 100°C for 24 hours	

Typical Customer Evaluations;

The following tests were completed successfully on 341014HTGT as a Sealing Adhesive:

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|---|--------------------------------|
| (1) Temp Cycling (TC); | 500 Cycles, -65°C to +150°C |
| (2) Temperature Humidity Bias (THB); | 85% RH, 85 degrees C, 1000 hrs |
| (3) Gross Leak | Pass 100% |
| (4) Solder reflow temperature exposure; | 260°C for 90 seconds |

Cure Schedule Mechanical Convection Oven; 30 minutes @ 125°C followed by 60 minutes @ 150°C
Shelf life at 25°C in UNOPENED containers; 4-6 months. Usually depends on ambient conditions.

· Available in 3cc, 5cc, and 10cc syringes only.

EXTENDED SHELF LIFE UP TO SIX MONTHS IF KEPT REFRIGERATED NOT FROZEN!!

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