

High Temp. Thixotropic Epoxy

Rev I
1/00

TYPICAL PROPERTIES

(To be used as a guideline only)

NUMBER OF COMPONENTS Two

MIXING RATIO PARTS BY WEIGHT
Part "A" 10
Part "B" (hardener) 1
Keep containers closed when not in use.
Mixed volume should not exceed 25 grams.

CURE SCHEDULE (minimum)
150°C 1 minute
120°C 2-5 minutes
100°C 5-10 minutes
80°C 15-30 minutes

PHYSICAL PROPERTIES

Color
Before cure Tan
After cure Dark Amber
Consistency Smooth, thixotropic paste
Viscosity (mixed)
@ 20 rpm/23°C 9,000 - 15,000 cPs
Specific Gravity
Part "A" 1.12
Part "B" 1.02
Glass Transition Temp. (Tg)
cured @ 150°C/1 hour 120°C
Coefficient of Thermal Expansion (CTE)
Below Tg 43×10^{-6} in/in/°C
Above Tg 230×10^{-6} in/in/°C
Operating Temp. Range -50 to +200°C
Degradation Temp. (TGA) 405°C
Shore D Hardness 70
Lap Shear Strength 1,950 psi
Outgassing to 300°C/N₂ 3.5%
Cation/Anion Analysis
Cl⁻ 680 ppm Na⁺ 427 ppm
NH₄⁺ 179 ppm K⁺ 444 ppm
Total Ion Content 9 ms/m
pH 6.6

ELECTRICAL/THERMAL PROPERTIES

Thermal Conductivity 0.2 W/m°K
Thermal Cycling Passed
100 cycles -55 to +125°C
Thermal Shock Resistance Passed
10 cycles -25 to +125°C

POT LIFE 4 hours

SHELF LIFE

One year when stored at room temperature

REFRIGERATION NOT REQUIRED

EPO-TEK 353ND-T is a two component, soft, highly thixotropic epoxy with non-flowing properties and high temperature resistance. The material contains no solvents or thinners, it is a 100% solids system.

Recommended for bonding metals, glass, ceramics and many types of plastic, it is ideal for fiber optic connector terminations. This adhesive exhibits excellent resistance to solvents and chemicals, can be subjected to 200°C continuous or 300 - 400°C for several hours making it suitable for bonding all types of devices that must be subjected to elevated temperatures.

EPO-TEK 353ND-T is a very reactive system and should only be used for thin or thick film bond line applications. If extra thick sections are needed, it is recommended to gel the epoxy at room temperature or slightly above, then follow by a short post cure at elevated temperature. This epoxy will change color (from tan to dark amber) upon cure. The user can determine the cure by color change as well as by time. EPO-TEK 353ND-T can be applied by spatula, hand held or automatic dispensing equipment.

Moisture resistance (MIL-1-16923-D), after 7 days @ 96% RH the epoxy exhibited a 0.03% weight increase. With respect to flammability (FED-STD 406, Method 2021), the epoxy is self extinguishing.

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