

# EPO-TEK® EV2002

Epoxy; Epoxide

Epoxy Technology Inc.

## Message:

Silver-filled, electrically conductive, flexible epoxy

Formerly EE162-5

| General Information                       |                         |      |
|-------------------------------------------|-------------------------|------|
| Filler / Reinforcement                    | Silver                  |      |
| Features                                  | Electrically Conductive |      |
|                                           | Good Flexibility        |      |
|                                           | Thixotropic             |      |
| Agency Ratings                            | EC 1907/2006 (REACH)    |      |
|                                           | EU 2003/11/EC           |      |
|                                           | EU 2006/122/EC          |      |
| RoHS Compliance                           | RoHS Compliant          |      |
| Forms                                     | Paste                   |      |
| Physical                                  | Nominal Value           | Unit |
| Ion Type                                  |                         |      |
| Cl-                                       | 295                     | ppm  |
| K+                                        | 2                       | ppm  |
| Na+                                       | 18                      | ppm  |
| NH4+                                      | 29                      | ppm  |
| Particle Size                             | < 45.0                  | µm   |
| Degradation Temperature                   | 402                     | °C   |
| Die Shear Strength - >5 kg (23°C)         | 11.7                    | MPa  |
| Operating Temperature                     |                         |      |
| Continuous                                | -55 to 225              | °C   |
| Intermittent                              | -55 to 325              | °C   |
| Storage Modulus (23°C)                    | 3.40                    | GPa  |
| Thixotropic Index                         | 5.30                    |      |
| Weight Loss on Heating                    |                         |      |
| 200°C                                     | 0.060                   | %    |
| 250°C                                     | 0.10                    | %    |
| 300°C                                     | 0.22                    | %    |
| Thermal                                   | Nominal Value           | Unit |
| Glass Transition Temperature <sup>1</sup> | > 50.0                  | °C   |
| CLTE - Flow                               |                         |      |

|                               |                                                             |                   |
|-------------------------------|-------------------------------------------------------------|-------------------|
| -- <sup>2</sup>               | 3.7E-5                                                      | cm/cm/°C          |
| -- <sup>3</sup>               | 2.2E-4                                                      | cm/cm/°C          |
| Thermal Conductivity          | 1.8                                                         | W/m/K             |
| Thermoset                     | Nominal Value                                               | Unit              |
| Thermoset Components          |                                                             |                   |
| Part A                        | Mix Ratio by Weight: 4.0                                    |                   |
| Part B                        | Mix Ratio by Weight: 1.0                                    |                   |
| Shelf Life (23°C)             | 52                                                          | wk                |
| Uncured Properties            | Nominal Value                                               | Unit              |
| Color                         |                                                             |                   |
| -- <sup>4</sup>               | Silver                                                      |                   |
| -- <sup>5</sup>               | Silver                                                      |                   |
| Density                       |                                                             |                   |
| Part A                        | 3.70                                                        | g/cm <sup>3</sup> |
| Part B                        | 4.08                                                        | g/cm <sup>3</sup> |
| Viscosity <sup>6</sup> (23°C) | 24 to 46                                                    | Pa·s              |
| Curing Time (150°C)           | 1.0                                                         | hr                |
| Pot Life                      | 240                                                         | min               |
| Cured Properties              | Nominal Value                                               | Unit              |
| Shore Hardness (Shore D)      | 72                                                          |                   |
| Lap Shear Strength (23°C)     | 9.05                                                        | MPa               |
| Volume Resistivity (23°C)     | < 5.0E-4                                                    | ohms·cm           |
| NOTE                          |                                                             |                   |
| 1.                            | Dynamic Cure 20-200°C/ISO 25 Min; Ramp -10-200°C @ 20°C/Min |                   |
| 2.                            | Below Tg                                                    |                   |
| 3.                            | Above Tg                                                    |                   |
| 4.                            | Part B                                                      |                   |
| 5.                            | Part A                                                      |                   |
| 6.                            | 5 rpm                                                       |                   |

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### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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