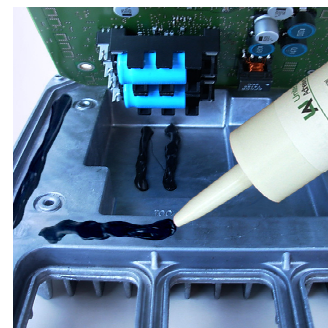


Heat Cure Adhesives & Sealants

Flowable and non-sag heat curable adhesives and sealants have following major features:

- Strong bonding to aluminum and most common plastics.
- Thermal stress compliant with silicone adhesives.
- Non-corrosion sealants and adhesives
- Excellent moisture, oil and chemical resistance.

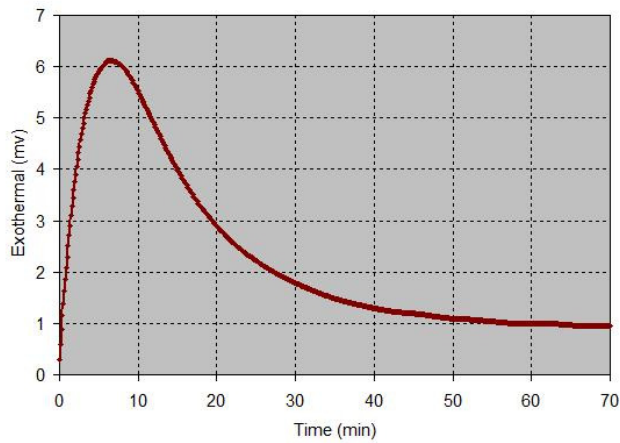
They are used to bond and seal electronic devices, components, electrical equipment, power and control connections, cover plates, housings, etc. The silicone series, Bondseal, provides stress release and resistance to high temperature and humidity, while epoxy series provides strong structural bonding for vibration applications and resistance to oil and chemicals.



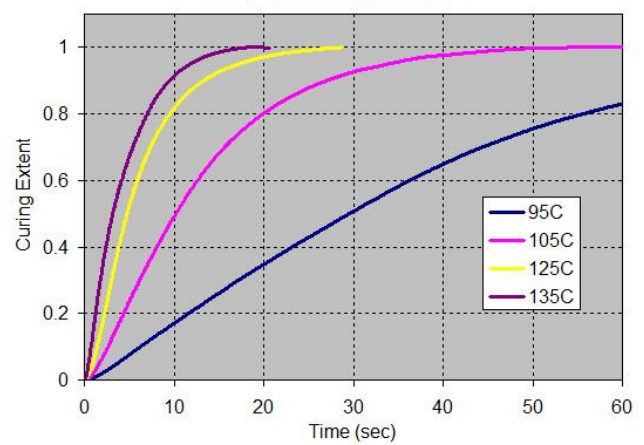
| Name | BondSeal BS8460 | BondSeal BS8350 | BondSeal BS8311 | BondSeal BS8440 | EP1611 | EP1641 |
|------------------------------------|---|---|--|--|---|---|
| Chemical Base | Silicone | Silicone | Silicone | Silicone | Flexible Epoxy | Epoxy |
| Features / Advantages | Heat cure to form silicone rubber. Non-corrosion Non-slump. Strong bonding to Al and most plastics. | One part. Non-slump. Heat cure to form silicone rubber. Strong bonding to Al and most plastics. | One Part flowable. Heat cure to form silicone rubber. Non-corrosion sealant / adhesive. Strong bonding to Al and most plastics. | Two part. Heat cure to form silicone rubber. Non-corrosion sealant / adhesive. | Flexible epoxy formulation. Two part for fast cure. Room temperature curable. | Thixotropic (non-sag) epoxy. Low CTE. Very strong bonding to many plastics and surfaces. Strong oil and chemical resistance. |
| Typical Application | Bonding & sealing electronic devices, components, equipment, power control connections, cover plates, etc. Stress release & resist. to high temp & humidity | Bond & seal electronic devices. Good oil resistance. Seal lead, housing. Attach baseplate; Gasketing; Connector seal. | Bonding & sealing electronic devices, components, electrical equipment, power control connections, cover plates, etc. Stress release & resist. to high temp & humidity | Bond & seal electronic devices. Good oil resistance. Seal lead, housing. Attaching baseplate; Gasketing; Connector seal. | For low stress bonding & flexible seal. Bond to PBT, PPS, Nylon, PC, Phenolics and other difficult materials. | For severe thermal shock, vibration bonding applications. Structural bonding applications. Oil and media resistance applications. |
| Rheology | Thixotropic (non-sag) | Thixotropic (non-sag) | Flowable | Flowable | Flowable, Dispensable | Thixotropic (non-sag) |
| Appearance / Color | White / Grey | White / Grey | White / Grey | White / Grey | Off-white | Milky White Brown Or Grey |
| Part / Component | A : B = 1 : 1 | One Part | One Part | A : B = 1 : 1 | Two | One Part |
| Viscosity @25C (cps, after mixing) | 122,000 | 110,000 | 45,000 | 40,000 | 60,000 | 120,000 |
| Pot life (hr) | 2 hrs | N/A | N/A | 2 hrs | 30 min | 8 hrs |
| Cure Rate | 125C 60 min | 125C 60 min | 125C 60 min | rmT 12 hrs 125C 15 min | rmT 12 hrs 125C 30 min | 125C 45 min |
| Weight Loss @250C 1hr | < 0.2% | < 0.2% | < 0.2% | < 0.2% | < 0.5% | < 0.2% |
| Storage | < 25C | < 4C | < 4C | < 25C | < 25C | < - 40C |
| Shelf Life (days) | 12 month @ 24C | >3 months @ 4C | 6 months @ 4C | 12 month @ 24C | 12 month @ 24C | >3 months @ -40C |
| Thermal Stability | -40C to 180 | -40C to 180 | -40C to 180 | -40C to 180 | 150C | -40C to 180 |
| Tg | -120C | -120C | -120C | -120C | 35C | 120 |
| CTE (ppm/C) | < 250 | < 250 | N/a | N/a | 350 | 62 (above Tg) 19 (below Tg) |
| Hardness | Shore A = 60 | Shore A = 62 | Shore A = 47 | Shore A = 51 | Shore A = 60 | Shore D = 55 |
| Tensile Strength | 6 Mpa | 5.8 Mpa | 5.2 Mpa | 5.8 Mpa | 8 Mpa | N/a |
| Elongation | 180% | 250% | 280% | 240% | 150% | N/a |
| Adhesion (Al/Al Lap Shear, psi) | > 500 psi | 550 psi | > 600 psi | > 550 psi | > 400 psi | > 1800 psi |

► Properties of Heat Cure Adhesives and Sealants

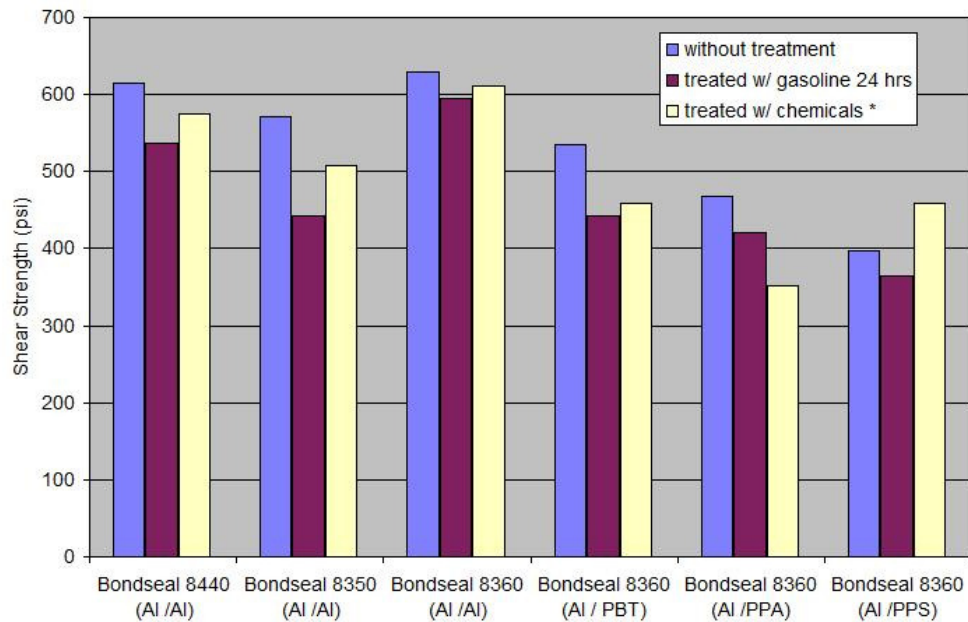
DSC for Curing of Bondseal 8350 at 125C



Curing Profile of Bondseal 8360

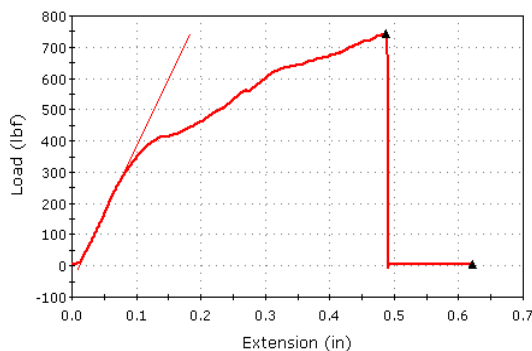


Lap Shear Adhesion



* Chemicals: Windshield washer 25C, 1hr; Brake fluid 25C 1hr; Antifreezer & Coolant 50C 1hr; Moto oil 50C 1hr; Transmission fluid 25C 1hr; Ethyl alcohol 25C 1hr.

Bondseal BS 8440 125C 30 min



Bondseal 8360 125C 30 min Cured

