



Epoxy Code Selection Guide Application Note

| Name | Epoxy Code | Color | Characteristics | Good for Applications | Bad for Applications | B-Stage Profile/Cure Profile |
|------|------------|---------|--|---|---|------------------------------|
| RJ9F | 3397 | Neutral | A high molecular weight, highly filled formulation that is good for applying in thick crosssections in few passes. Contains some TP and tends to exhibit solvent bubble voids after B-stage. Generally a better clip & bake material than most. Average Shelf Life characteristics. | Good for most clip & bake applications adhering similar or dissimilar materials together | Bad for Applications where the package lead pitch is very small...tends not to flow well into tiny crevices | Standard/155-165°C, 1 hour |
| RJ9F | 3396 | Black | Same | Same | Same | Same |
| RJ9F | 3395 | White | Same | Same | Same | Same |
| RJ4B | 1006 | White | An older, lower viscosity formulation (but not as low as codes 1027, 1028) that is used for many ITS customers due to its high flow and medium reactivity characteristics. Can be applied in thick crosssections using several passes. Not a great clip & bake material. Average Shelf Life characteristics. | Good for ITS applications where the epoxy is required to flow into tight lead spacing or notches. May also be used for existing customers who have a part history with this epoxy code. | Bad for general clip & bake applications - especially for small cavity packages | Standard/155-165°C, 1 hour |
| RJ4B | 1007 | Black | Same | Same | Same | Same |



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|--------|------------|---------|--|---|---|--------------------------------------|
| RJ9LHS | 1018 | Silver | A silver conductive epoxy formulation with ~67% silver loading. Requires lower temperature B-staging cycle (i.e. 1 hr @ 85°C) due to high filler content. Tends to form peaks and valleys on the coating surface. Lower flow material than most also due to high filler content. Shortened shelf life (4 mos. @ 3-8°C) | Where electrical conductivity is required for a ground plane | Where the application requires a high shear strength material with a standard shelf life | 85°C 30-60 minutes/155-165°C, 1 hour |
| RJ9F | 1030 | Neutral | A medium flow formula with some TP for improved sealing processability. Can be used for clip & bake applications where material is required to flow into tight lead pitch areas. | Where package requires medium flow material that is somewhat blowout resistant | ?? | Standard/155-165°C, 1 hr. |
| RJ9F | 4311 | White | Same | Same | Same | Same |
| RJ9F | 1790 | White | A high flow, old production formulation used on many ceramic covers. Very low in viscosity and not blow out resistant. | Applications where the customer is using an ITS or where blow out resistance is not a concern | Where blow out resistance is a concern and where the material must be applied in a thick cross section to a thin wall | Standard/155-165°C, 1 hr. |



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|--------|------------|-------|--|---|---|---|
| RJ3805 | 3805 | Clear | A short shelf life, blowout resistant formulation designed initially for CCD window applications, B-stage material must be refrigerated between 3-8°C, and is good for 4-6 months. | Where low temperature curing (i.e. 110-125°C) is required as well as good blowout resistance. | where the customer cannot store the material under refrigerated conditions. | 85°C, 1 hr./110°C, 2hrs. Or 125°C, 1 hr or 155°C for 30 mins. |
| RJ3805 | 4195 | Black | Same | Same | Same | Same |
| RJ3805 | 4196 | White | Same | Same | Same | Same |
| RJ9F | 3954 | Black | A highly filled material with 10% microspheres originally formulated for use on the S08 backers. Probably has shorter shelf life due to high filler content. | TBD | TBD | 85°C, 60-90 minutes/155-165°C, for 1 hr. |



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|----------|------------|-------|--|--|--|--|
| RJ9F-CCD | 4130 | Clear | A formulation originally designed for CCD window Automated Sealing applications. Very blowout resistant, but requires special temperature B-staging (i.e. 85°C for 30 minutes - 1 hour). Average shelf life characteristics. | Where medium flow is required as well as blowout resistance. Also good for automated sealing systems (as determined by RJR). | Where low temperature (85°C) B-staging is not possible. May also be good for very tight pitch lead applications. | 85°C, 30-60 minutes/2hrs. @ 125°C or 155-165°C, 1hr. |
| RJ9F-CCD | 4312 | White | Same | Same | Same | Same |
| RJ9F-CCD | 4312 | Black | Same | Same | Same | Same |
| RJQB911 | 4221 | White | A material designed for use in AITS, ITS, and some clip & bake applications. A very reactive material with low flow characteristics - requires B-stage at 85°C for 30-60 minutes. Refrigerated Storage required, 3-8°C | Where blowout resistance and/or a short sealing cycle is required. Good for flat substrate applications. | Where high flow is needed for tight lead pitch applications, and where refrigerated storage is not possible. | 85°C 30-60 minutes/175-185°C, 30 minutes |