



# Tacusil®

## Product Selector Guide

 [tacusil.com](https://tacusil.com)

# About Us

Tacasil<sup>®</sup>, under the umbrella of the UK's Robnor, is a leading resin manufacturer specializing in custom formulations and toll blending services to meet customers' specific application needs. We are able to provide both standard and custom products for virtually every industry including electronic packaging, general industry, OEM and assembly. Our experienced chemists and engineers stand ready to provide our customers with our best possible services and technical support.



## High-Quality Products

Tacasil<sup>®</sup> offers a wide variety of encapsulants and adhesives for almost every industry and application. As one of the leading resin formulators, we specialize in developing high-quality products designed to be efficient, worker-safe and cost-effective. Tacasil<sup>®</sup> creates high-strength bonds with methacrylate, cyanoacrylate, epoxy, anaerobic, electrically conductive and thermally conductive adhesives, and insulates and protects your applications with epoxy, urethane and thermally conductive encapsulants, including UL recognized formulations.



## Customized Solutions

With a team of experienced product development chemists, we can modify, test and characterize your custom formulations to ensure you're getting a high-quality product. We also offer custom one and two component packaging with a range of package materials, styles and sizes.



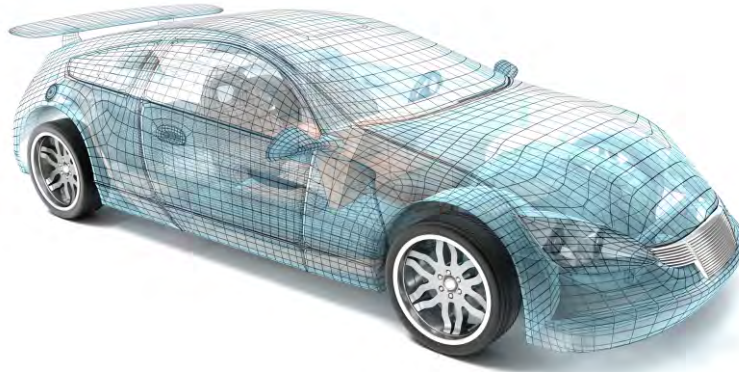
## Dedicated Support

Our goal is to provide excellent customer service and outstanding technical support. We focus on your company's needs and application requirements to find a solution that exceeds expectations. With decades of experience, our team is equipped to serve you.

# Thermally-Conductive and High Temperature-Resistant Epoxies (for electronics)

## One-Part Epoxies

Tacusil<sup>®</sup> one-part epoxies provide comprehensive bonding solutions for applications in industries of consumer electronics, semiconductors, automotive electronics, etc., where good thermal conductivity, low temperature curing, high temperature resistance and thermal shock resistance are required.



**EPA0168** is a one-part epoxy that cures at low temperatures of 80°C for 15 minutes or 100°C for 5 minutes.

**Main applications:** PPS plastic housing bonding; Fast securing of components; High temperature resistance; Applicable for Edge Bonding; Gap filling for optical devices and metal parts.

**EPA0306HF** is an HF compliant, high purity epoxy resistant to thermal shock and temperature cycling.

**Main applications:** PCB component fixing; Inductor fixing; Can also be used for shallow potting of COB and connectors; With adhesion to silver-plated and gold-plated PINs.

**EPA0135** series: High temperature resistant, high strength, white/black/gray.

**Main applications:** Bonding of motor magnets, metals and ceramics; Bonding and fixing of reversing radar sensors.

Product Name	Curing Schedule	Work Time ( 50g )	Viscosity (cps@25 °C)	Hardness (Shore)	Color	Operating Temperature (range /°C)	Typical Characteristics
EPA0135G	60 mins@135 °C	24 hrs@room temperature	160000	85D	White, black, gray	-40~204	General-purpose adhesive
EPA0135M	40 mins@135 °C	24 hrs@room temperature	25000	85D	Gray	-40~180	Low viscosity; General-purpose
EPA0168	15 mins@80 °C 5 mins@100 °C	>8 hrs	Paste	80D	White, black	-40~180	Fast curing
EPA0172	15 mins@70 °C 3 mins@85 °C	>8 hrs	60000	65D	Black	-40~130	Fast curing at low temperature; Low hardness; Drop impact resistance
EPA0181	40 mins@135 °C	>24 hrs	350000	90D	Gray	-40~204	Thermal conductivity: 4.5W/M·K
EPA0212	15 mins@110 °C	>24 hrs	45000	85D	Red, black	-50~204	Fast curing; High temperature resistance; High Tg; Strong adhesion
EPA0306HF	40 mins@135 °C	>48 hrs	60000	88D	Black	-50~204	Meets low-halogen requirements; High peel strength; General-purpose bonding; Withstands reflow soldering
EPA3065	60 mins@135 °C	48 hrs	Non-sag	88D	Black	-50~204	Bonding PBT+glass fiber

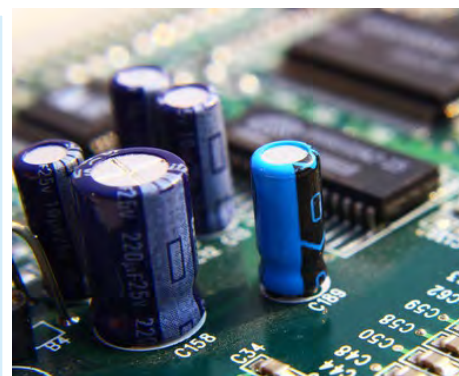
# Thermally-Conductive and High Temperature-Resistant Epoxies (for electronics)

## Two-Part Epoxies

Product Name	Mixing Ratio (by volume)	Curing Schedule	Work Time ( 50g )	Viscosity (cps@25 °C)	Hardness (Shore)	Color	Operating Temperature (range /°C)	Typical Characteristics
EPA0133	1:1	30 mins@80°C+1 hr @140°C	24 hrs@room temperature	25000	88D	Black	-50~230	Two-component heat curing; Low shrinkage; Large-area potting
EPA0145	5:1	24 hrs@room temperature	30 mins	11000	80D	Black	-40~150	Long work time version available; Coil potting
EPA0180	2:1	24 hrs@room temperature	30 mins	1200	70A	Clear	-50~100	Highly flexible; Adjustable light transmittance; Potting of touch switches and between glass interlayers
EPA0406	1:1	24 hrs@room temperature	3-5 mins	20000	70D	Clear	-50~100	5-minute epoxy with good adhesion to plastics
EPA0900P	4:1	72 hrs@room temperature or 180mins@80°C	6 hrs	650	88D	Black, Clear	-50~200	Low viscosity; High temperature resistant; No filler
EPA1200R2	1:1	24 hrs@room temperature	60 mins	100000	85D	Black	-40~150	HF; High viscosity and strength; For thermally-conductive bonding; UL 94-V0 certified; Long-term high temperature resistance
EPA3082	1:1	48 hrs@room temperature or 60mins@70°C	60 mins	3000	50D	Black, Amber	-50~150	Flexible; Large-area potting; Potting of reversing radar and gearbox magnet sensors
EPA1291	1:1	RT 24 hrs or 2 hrs@70°C	90 mins	25000	70D	Black, Clear	-60~140	Plastic bonding; High peel strength; Chemical resistance
EPA2701	10:1	30 mins@85°C or 15 mins@100°C or 1 min @150°C	>4 hrs	3000	92D	Clear	-50~230 (Up to 290°C for a short time)	Fiber optic FA connector fixing; Good dimensional stability; Fast curing; Good weather resistance
EPA2711FG	10:1	24 hrs@room temperature or 60 mins@80°C	150 mins	9000	85D	Black, Red	-50~200	Thermally-conductive potting; Meets UL 94-V0 requirements

The majority of Tacusil<sup>®</sup> two-part epoxies are custom formulations for customers to cater for their needs in product upgrading, design and manufacturing.

- EPA1291 series: Super corrosion resistance; Strong adhesion to plastics (PC, PEEK); High peel strength; Suitable for electronic module bonding, such as fingerprint module and photosensitive module in plastic and glass bonding.
- EPA0406: A clear flame-retardant epoxy; Fast curing, flexible bonding and small-area potting.
- EPA2711 series (FG, RC, XS): Low curing shrinkage and coefficient of thermal expansion; High glass transition temperature; Good weather resistance; Corrosion resistance; Suitable for potting of submarine cables, large transformers and automotive electronic control coils and components, such as wiper pump coils and rearview mirror drive modules.



## Silicones

Product Name	Work Time	Curing Schedule	Viscosity (cps@25 °C)	Hardness (Shore)	Operating Temperature (range /°C)	Typical Characteristics
SIA0030	15 mins	24 hrs@room temperature	200000	60 shore 00	-55~180	Thermal conductivity: 3.0 W/M-K; Used as a bottom gap filler in EV batteries
SIA0210	30 mins	24 hrs@room temperature	2000	15A	-55~200	Highly transparent silicone potting; Reworkable; Non-toxic
SIA0210-11	60 mins	24 hrs@room temperature	20000	60 shore 00	-55~200	Silicone gel
SIA0310	60 mins	24 hrs@room temperature	650	25A	-55~200	Highly transparent; Low viscosity; Reworkable; Non-toxic; Potting of fiber optic splice tray



# UV/Visible Light Fast Curing Adhesives

## UV Curing Adhesives

Tacusil® UV curing adhesives consist of acrylates and high-strength modified epoxy resin systems that enable precision dispensing, fast curing and excellent overall performance.

**UVA0202 series:** General-purpose adhesive with high strength and flexibility, mainly used for housing bonding and component fixing. UVA0202HP waterproof series: Passed watertightness test and solvent resistance test. UVA0202W: White, light-blocking version.

**UVA0217 series:** Flexible printed circuit board reinforcement; PI film bonding; Passed 500 hours high temperature and high humidity test; Particularly suitable for bonding of anodized aluminium substrates.

**UVA0240 series, epoxy system UV curing adhesive:** High hardness; Low shrinkage; Low CTE; Realizes UV curing+heat curing; Good strength consistency under different curing methods; Suitable for bonding and fixing of optical fibre components and fixing of camera modules.

**UVA0243 series:** Bonding of electroplated layer and stainless steel; Good adhesion to PVC and PET.



Product Name	Curing Schedule	Viscosity (cps@25 °C)	Hardness (Shore)	Tensile Strength (Mpa)	Operating Temperature (range /°C)	Typical Characteristics
UVA0202*	800mj@365nm	18000	60D	18	-40~125	General-purpose; High-strength bonding and reinforcement
UVA0207	1500mj@365nm	8000	45D	8	-40~120	Bonding of plastic and substrates with low surface energy
UVA0216	2500mj@LED365nm or 30 mins@110°C	21000	75D	16	-40~150	UVLED curing+heat curing
UVA0217	1000mj@365~405nm	20000	45D	15	-40~125	Flexible printed circuit board reinforcement; Resistant to high temperature and humidity
UVA0218 series	2000mj@LED365~385nm	Higher than 7500	65A	6	-40~130	Dry to touch with LED curing; Used as a formed-in-place gasket with UV curing; With adhesion to substrates; Suitable for sandblasting and electroplating for protection purposes
UVA0219	1500mj@365nm	87500	75A	4	-40~130	UV curing maskant; High tensile strength and elongation
UVA0240	3000mj@365nm	100000~paste	90D	140	-40~230	Modified epoxy system; Secondly heat-curable; Filled; Low shrinkage; High Tg; For fiber optic applications
UVA0237	2000mj@365~405nm	60000	85D	70	-40~200	High Tg; For temperature sensor; Resistant to oil immersion at 150°C for 500 hours
UVA0243	1000mj@365nm	25000	80A	20	-40~125	General-purpose bonding; Highly flexible; Particularly suitable for bonding metals and plastics
UVA0258	1000mj@365nm	1900	55A	8	-40~125	Optically transparent; Lens bonding; Small-area potting in clear

\*All the products in this table have multiple viscosity options



## High-Performance Polyurethane Adhesives

Product Name	Work Time	Viscosity (cps@25 °C)	Hardness (Shore)	Typical Characteristics
UA1003	3 mins	2500(110°C)	40D	PUR; Plastic bonding; Panel bonding; Black PUR
UA1008	8 mins	6200(110°C)	40D	Long work time; High strength; High transparency; Tough
PUA501	15 mins	2500(1:1 by volume)	75A	Potting of light bars and light strips
PUA505	10 mins	80000(1:1 by volume)	75D	High peel strength; H for high hardness version, TC for thermally-conductive version
PUA508	6 mins	2500(4:1 by volume)	75A	General-purpose PU potting



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### Disclaimer

As the experience and method(s) of using the product will inevitably affect the use and performance of the product, it is of great importance that users have their own assessment and tests to determine the suitability of this product for their own purposes. To determine the suitability of the product and the application method is the user's sole responsibility. Tacusil collects information to respond to users' questions about the use of product, however, as Tacusil is not able to know all the factors and conditions concerning the product's specific application, users must make their own assessment on the suggestions, recommendations, statements etc. regarding the suitability, use and application of the product. Users must also carry out their own tests to ensure the suitability, safety and performance of the product. Under no circumstance will Tacusil be liable for any loss, damage, expense or incidental or consequential damage of any kind arising from using these suggestions, recommendations, statements etc. For more information, please contact us at 86 - 755 - 2294 5849. Suggestions for uses of our products shall not be understood as recommending the use of our products in violation of any patent or as permission or license to use any patents. <sup>TM</sup> or <sup>®</sup> denotes a trademark of Tacusil and its affiliates.