

EVERWIDE GLUE THE WORLD



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Research • Innovation • Dedication • Value

Semiconductor encapsulation, Optoelectronics, Electronic components
Circuit board assembly, Automotive & motorcycle components
Micro motors, Heavy duty motors, High-level traditional industry
Medical and sports equipment, Green energy
Communication networks, Computers, Household Appliances



Everwide Chemical Company began operations in 2000. The initial products had mainly focused on photo-curing adhesives and epoxy resin (one-component & two-component). To join the adhesive applications market and meet the new applications from existing customer's requirements, Everwide launch a Modified Silicone and Silicone as a new product line in 2012.

Along with its continuous growth and new product development, the annual growth rate is more than 10%. "Research, innovation, dedication, and value" are the highest quality policy of Everwide.

We believe in creating an excellent management system to continually improve our performance, such as document management and production equipment. Everwide has obtained several management certificates:

- ISO 9001:2000 certification in 2005 and upgraded to ISO 9001:2008 version in 2008 and ISO 9001:2015 version in 2017.
- ISO 14001 certification in 2011 and upgraded to ISO 14001:2015 in 2018.
- OHSAS 18001 certification in 2012 and upgraded to ISO 45001:2018 in 2018.
- ISO/TS 16949:2009 certification in 2014 and upgraded to IATF 16949:2016 in 2017.



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Potting Adhesive for Electronic Components of Automobile and Motorcycle

Human safety is the top priority

The automobile and motorcycle industry's electronic components industry has always been stable, so the requirement of bonding materials standards are incredibly rigorous. The application of human transportation, and related to human safety, should be more careful. Everwide focuses on component applications, such as:

- Potting of generator diode
- Insulating potting of the electric vehicle motor
- Waterproof potting of the car cable port
- Waterproof potting of car LED light module
- Encapsulation of parking sensor
- Encapsulation and potting of image sensor displaying module
- Potting and encapsulation of wireless Tire-Pressure Monitoring System (TPMS)
- Encapsulation of smart anti-glare rearview mirror module
- Encapsulation of autopilot optical radar and other applications.

Most of these applications require high-temperature resistance, good weather resistance, acid resistance, alkali resistance, and high durability; as the solution, this industry can apply Everwide's series of epoxy resin products. Furthermore, we also developed modified silicone adhesive for special applications in this industry. In the future, Everwide will focus on developing better temperature resistance and more stable product to meet the needs of this industry.

- Potting of LED car lamp application
- Parking sensor and image display module application
- Potting of wireless Tire-Pressure Monitoring System (TPMS) application
- Encapsulation of smart anti-glare rear view mirror application
- Application of autopilot optical radar module
- Potting of waterproof cables and waterproof joints application
- Full application of electric vehicle motor application
- Sealing for waterproof of automotive relay application

Potting Adhesive for Electronic Components of Automobile and Motorcycle



Potting Adhesive for Electronic Components of Automobile and Motorcycle

Encapsulation Adhesive for Optoelectronic Industry

Encapsulation Adhesive for Electronic Components

Structural Adhesive for Medical and Sports Equipment

Thermally Conductive Potting for Micro-Electromechanical

Sealing Adhesive for Composites, Communications and Consumer Electronics Industry

Filling Adhesive for Circuit Board Assembly

Waterproof Sealing Adhesive for the Green Energy Industry

Structural Adhesive for High-Level Traditional Industry

Potting of LED car lamp application

LED light module of buses, trucks, and professional vehicles in the automotive and motorcycle industry, because they use in the outdoor, it needs to have waterproof encapsulation. Everwide successfully uses epoxy resin to replace the long-used silicone adhesive for sealing, it has better adhesion and weather resistance, and it will not damage the plastic lamp housing.

Everwide epoxy potting products have the following characteristics:

- There is no corrosion and embrittlement for all kinds of plastic lamp housing materials.
- Support all types of electric cable materials solder on electrode after potting without any leakage.
- No water leakage, crack, or corrosion after the environmental test.
- It will not impact the LED control board, and it has high insulating property and stability; there is no electrical leakage problem.
- Everwide's epoxy products are anti-yellowing, anti-cracking, anti-corrosion, and high insulating property.
- Usable with various types of adhesive for flexible application.



Potting of wireless Tire-Pressure Monitoring System (TPMS) application

In recent years, traffic accidents caused by flat tires increase. Therefore, international regulations of various countries request the Tire-Pressure Monitoring System (TPMS) as standard equipment, and the requirements for encapsulation materials are stricter. Everwide attaches great importance to the development of this market and has obtained the certification of IATF16949. Besides, product development, manufacturing, quality control, packaging, and shipment are strictly controlled. After two years of relentless efforts, we have successfully supplied two of the three largest manufacturers in Taiwan for five years, and the cooperative development of new products also continues.

The characteristics of Everwide products are:

- The mixing ratio is simple— 1:1 or 2:1. It is suitable for automatic mixing machine and it has good compatibility with other adhesives.
- The product has excellent defoaming property after mixing, so the complicated encapsulation will not have the problem of hiding bubbles.
- The structure has high toughness after encapsulation, and it can resist the thermal shock test at -40 ~ 125°C.



Parking sensor and image display module application

The international automotive market has generally applied parking sensor and image display module to all models. In recent years, the automatic parking industry has gradually upgraded its parking system. This system relies on the image sensor to capture and transmit the images to the chip for interpretation and then provide the servo motor of steering gear to achieve the automatic parking function.

Everwide developed two series of products for this module:

- Epoxy series: This series has a low shrinkage rate, high TG to resist temperature, toughening formulas can resist external factors of cracks and water leakage caused by the outdoor thermal shocks.
- Modified silicone adhesive series: This series has low shrinkage stress, higher toughness than epoxy resin, better anti-cracking property, but it has less heat-resistant.



Encapsulation of smart anti-glare rear view mirror application

The electronization using of automobile and motorcycle is changing rapidly. The anti-glare rearview mirror and the car's rearview mirror have been intelligent, which can be wirelessly transmitted by Wi-Fi to connect with dashcam and navigation. The main function of the rearview mirror is to see rearward, which can avoid accidents. The traditional rearview mirror has the problem that the driver can be temporarily blinded by another driver's headlights from oncoming vehicles. Therefore, it can effectively improve this problem by using the function module. Everwide also attaches great importance to this application of multi-functional structure. We have an excellent example of this application, such as the display panel's encapsulation with dual functions of anti-glare with an operating condition display.

The application of Everwide products are:

- The photo-curing resin is mixed with special powder to achieve liquid crystal resistance and water penetration resistance. After the aging test in a pressure cooker for more than 8 hours, the function remains in regular operation.
- It is an excellent UV-curing bonding adhesive for glasses, which exhibits good surface dry and high-temperature resistance. It won't get brittle after aging and is an excellent waterproof epoxy acrylate product.



Potting Adhesive for Electronic Components of Automobile and Motorcycle



Potting Adhesive for Electronic Components of Automobile and Motorcycle

Encapsulation Adhesive for Optoelectronic Industry

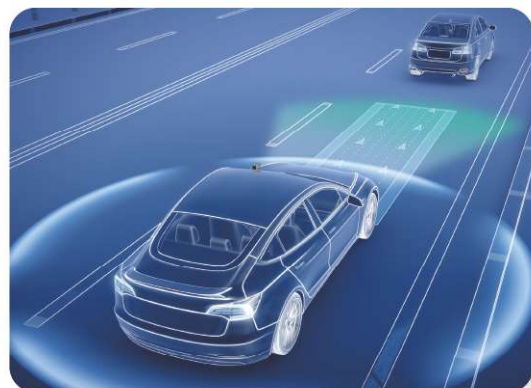
Encapsulation Adhesive for Electronic Components

Structural Adhesive for Medical and Sports Equipment

Application of autopilot optical radar module



Self-driving for the private and public transportation system has been running on a small scale for a long time in many areas. In the future, the demand for LIDAR self-driving cars will gradually increase. After the cost structure had been changed, the cost of it will also decrease year by year. The demand for the self-driving car will increase soon. Everwide has laid out and deepens deployment applications of LIDAR module para-position structure bonding. There is some well-known factory using our products, and the number of mass-production is also excellent.



Potting of waterproof cables and waterproof joints application

The waterproof application of potting and sealing of automotive-grade cables and waterproof connectors has a high waterproof standard. These devices are used in temperature cycling and high humidity environment for a long time, and the current and voltage are relatively high. Everwide has a deep understanding of waterproofing in the automotive field. We develop many types of wires with a lot of combinations of plastic and metal connector solutions.

The characteristics of Everwide products are:

- The main composition of the weather resistance formula is using the toughness of epoxy polyurethane.
- Focus on research for various wires and plastics to achieve a perfect solution of formula and adhering materials.
- Application and solution experience of automotive parts for 20 years, stay ahead of the latest materials application curve, meet the eco-friendly requirements, and pass the stringent environmental testing, it is a win-win solution.



Full application of electric vehicle motor application

The hybrid vehicle is the most acceptable solution for consumers before full-electric vehicles cannot provide one-time charging to reach consumers' request mileage. Five years ago, Everwide cooperated with a well-known automatic electric manufacturer in Taiwan to develop magnets bonding for hybrid electric vehicle motors, potting of the stator coil, and other high-performance resin applications. Finally, it was used in a brand car manufacturer with the highest market share in Europe and successfully passed 200,000 kilometers of real vehicle test. Furthermore, there is no problem about 500,000 kilometers so far. Everwide proud of this, and we also recommend this excellent product to you.



Sealing for waterproof of automotive relay application

An automotive relay is a control switch. It is to switch a high current circuit using a low current to protect the in-line switch in the electrical system (such as headlight switches, ignition switches, etc.), make the small current pass the circuit, or the large current breaks the circuit. Therefore, these parts need to have to seal for waterproof. Everwide has a formula of does not contain organosilicon; it can be completely unaffected by the silicone content after the encapsulation. It passes the requirements of the automotive-grade environmental aging simulation test.



Thermal Conductive Potting for Micro-Electromechanical

Sealing Adhesive for Compliant, Communications and Consumer Electronics Industry

Potting Adhesive for Circuit Board Assembly

Waterproof Sealing Adhesive for the Green Energy Industry

Structural Adhesive for High-Level Traditional Industry



Encapsulation Adhesive for Optoelectronic Industry

Explanation of optoelectronic industry

The definition of optoelectronic is to study the effects between "light/photo" and "electrons" and applied fields of these effects. Besides, optoelectronics study is cross-disciplinary of physics, optics, electronics, chemistry, and materials.

The encapsulation materials of this industry require unique physical properties:

1. The transparency needs suitable for optical application.
2. Low shrinkage rate during curing. Low thermal expansion after curing.
3. The optical component's size is tiny; it is suitable for special-product with specific dispensing requirements.
4. The packaging of the material requires high cleanliness without any small bubbles.
5. Colloid has good yellowing resistance after curing.
6. Low volatility and high-stability after encapsulation.
7. Good environmental aging resistance. Most of the products are handheld devices, so they also require passing the drop resistance test and tumbling test.
8. It needs good adhesion properties for some high stability special materials, such as LCP, PA, PC (GF), nickel plating, chrome plating, metal anode, etc.

Everwide actively develops high-performance adhesives to meet the application of various products.

The application of this optical lens module is becoming more widely used, from simple cameras> mobile phones> video devices> reversing displays> dash cam> security surveillance systems> endoscopy > wearable communication imaging devices> infinite possibilities in the future. This highly developed applications industry is full of creativity and imagination. This industry actively develops high-efficiency bonding materials for various device applications, which has become a big mission for Everwide.

Adhesives for mass production

The optical sensor has a linear structure. Arrange each photosensitive element closely for a straight line on the circuit board. These elements use adhesives to fixed and bonding, and most of them are fast curing materials to meet the requirement of mass production.

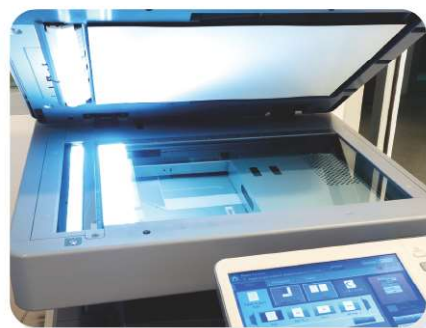
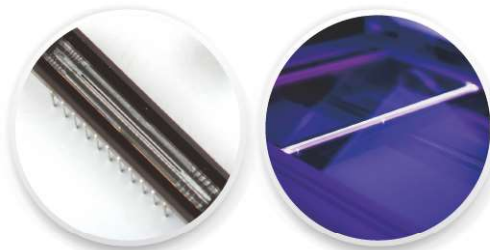
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- Water-soluble temporary bonding UV adhesive for the processing of optical glass

Encapsulation Adhesive for Optoelectronic Industry



Adhesive for sealing photoreceptor drum application

The core component that affects the scanning device is the photoreceptor drum. The application of the photosensitive module is from 1. Die bond 2. Gold wire bonding 3. Waterproof coating 4. LED light bar fixed 5. Light guide lens bonding with main body 6. Finally, it finishes after the dust-proof glass has bonded. For this industry's application, Everwide has delivered stably for more than eight years, and the customers are very satisfied.



Fixed adhesive for optical sensor module application

Optical lens: Glass lens bond with the lens holder body
Photosensitive module: COB process, AA process

- The photosensitive chip bonding to the circuit board of FR4, BT, FPC, and other materials.
- Use stickers on the photosensitive chip's periphery to absorb the dust during assembly in the later stage.
- IR filter or blue light filter is bonding with lens mounts of PC, LCP, PA, and other materials. Everwide has photo-curing acrylic resin, low curing temperature thermoset epoxy resin, photo-curing resin, and low curing temperature thermoset resin.
- The lens mounts of PC, LCP, PA are bonding with FR4, BT, FPC circuit boards.
- It can dispense more adhesives before the lens lock into the lens mounts. Curing by UV light after focusing. If it requires a low shrinkage rate of photo-curing adhesive can reworkable.
- The module process of AA, AF, and OIS put the lens to no thread lens mounts and VCM voice coil motor. After dispensing, focus again and start the light irradiation to cure. It mainly wants to thermoset the adhesive after photo-curing.



Bonding application of voice coil motor

Any optical device requiring a dynamic focus needs a voice coil motor to adjust the focal length to achieve clear images. Vibrant photography even overlaps 3D images and high definition images with depth of field. Everwide has been devoted more years to the assembly adhesive of this device structure. At present, the products from UV adhesive to UV heat curing mixed epoxy, cationic epoxy, and other product series.

The characteristics of Everwide products are:

- The voice coil motor bonding with various heterogeneous materials can meet the bonding strength requirements.
- To meet these device requirements needs to pass the drop test and tumbling test.
- High stability adhesive formula for non-corrosive coils and metal gaskets.
- Meet the special requirement of thin layer can be fully cured.

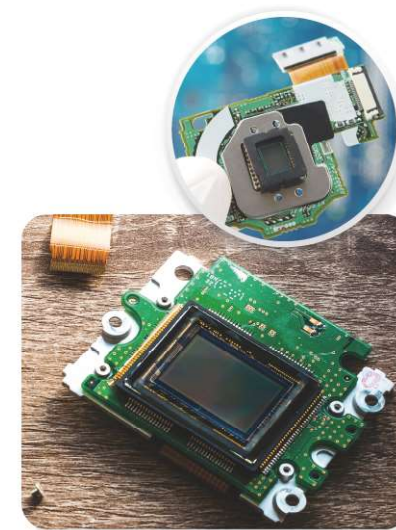


Low-temperature processing adhesive for fingerprint identification module application

Many technology products have always used biometric modules as devices for security mechanism control. The device market has fingerprint recognition (button type, display type, ultrasonic induction type), face recognition, iris recognition, etc.

Everwide has been several applied in many solutions for this device:

- Low-temperature epoxy for bonding metal ring to glass.
- Low-stress epoxy resin reacts at 60°C for the sensor chip and glass bonding.



Encapsulation Adhesive for Optoelectronic Industry



Full application of monitoring and camera optical module

The main application in this industry is waterproof structural sealing, especially waterproof cameras. Due to most of the monitors are outdoor, the waterproof requirements need high standards. Such as the temperature resistance under temperature durability under high outdoor temperature and against wet weather. These are all strict scrutiny test the bonding ability of the adhesives.



Application of monitoring system

The filter fix to the main lens body requires a photo-curing resin with low shrinkage, low thermal expansion, and high-temperature resistance. Besides, modified silicone rubber can be used on the main body joints to achieve the application of waterproof sealant with fast curing.



Full application of camera optical module

Because mobile phones also have photographing functions, traditional single-lens reflex cameras are upgraded to have waterproof functions, and some can also shoot underwater. Therefore, the choice of sealing material is relatively important. The introduction of fast-curing modified silicone rubber for seams of the case can be one of the solutions. The other one is the filter fixed on the main body, in which the photo-curing resin is required with low shrinkage, low thermal expansion, and high-temperature resistance.

Application of LCD encapsulation and shading

This industry occupies a large market in the optoelectronics industry because it has always been the most important visual mode for human communication. Everwide focuses on the application in this industry. The thinning process adhesive for panel encapsulation uses ACF to adhere to flat flexible cable to COG, which is coated with rework photo-curing acrylic adhesive. Photo-curing resin for the flat flexible cable's back after the TAB process and the glass L-shaped linear reinforcement. We can supply transparent, blue, or any color and even introduce the latest photo-curing resin that can change color. Finally, dispense on the end face of the LCD panel to block light.



- UV adhesive for protecting the thinning process.
- UV adhesive for coating of ITO circuit on COG.
- UV adhesive or modified silicone resin for FPC reinforcement after TAB.
- UV adhesive for end face of panel shading and frame reinforcement.

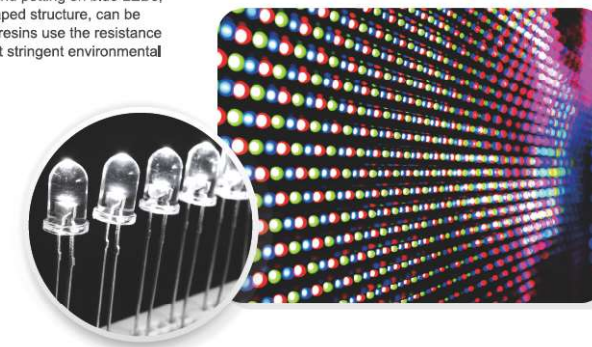
Application of LED chips encapsulation

This industry is one of the important projects in the green industry. After sapphire crystal growth are cut into crystal grain, we start with die bond and the mainly target is hybrid epoxy silicone products with different curing process parameters. We launch a series of products to meet the market demand.



Epoxy resin mixing with phosphor and potting on blue LEDs, if the LED product shows a cup-shaped structure, can be turned into white LEDs. The epoxy resins use the resistance yellowing high-grade resins to resist stringent environmental tests and aging tests.

- LED die bond series
- Bright white light adhesive series



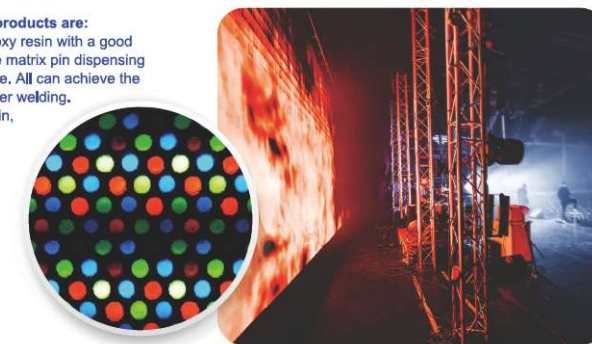
Application of Mini & Micro LED module encapsulation

Mini LED small pitch is dot pitch of 2.5 mm or less which the effect rivals the liquid crystal display, brightness is 2-3 times of LCD, the contrast is stronger, and the color gamut 709 is 100% covered.

Micro LED ultra-small pitch is a dot pitch of 1.1 mm, or less, displayed on the substrate through micro-LED arrays of red, green, and blue.

The characteristics of Everwide products are:

- Everwide has one-component epoxy resin with a good value, which can be applied to the matrix pin dispensing method or dispensed by a jet valve. All can achieve the effect of reinforcing the bottom after welding.
- For the one component epoxy resin, which is gap-filled, low-stress shrinkage, low-reflection, there is a unique formula to achieve low-warpage products with a large area.



Encapsulation Adhesive for Optoelectronic Industry



Application of LED lighting module

This industry is downstream of LED and is widely applied. Our target is supplying the corresponding bonding materials to several major end products.

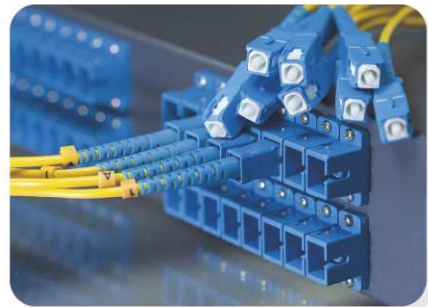
- Waterproof type projecting lamp module of building or park is partly UL94V-0 epoxy resin potting, modified silicone, and other sealing materials.
- LED household and outdoor light bulbs- The dome lampshade uses high-temperature resistant modified silicone (low-temperature resistance below -40°C) to bonding the main body two-component epoxy resin (high-temperature resistance above 100 ° C) conforms to UL94V-0.
- The LED tubes application The ABS on both sides of the lamp tube and the lamp tube's PC tube main body are bonding with photo-curing UV adhesive and modified silicone. This two-component epoxy resin (high-temperature resistance above 100 ° C) conforms to UL94V-0.



Application of optical fiber connector industry

The optical communication industry products are very diverse. The types of applications are very widely, such as photoelectric signal converters, optical receivers, patch cords, repeaters, bidirectional connectors, dense wavelength division multiplexing systems, etc. We mainly supply adhesive, which are bonding and reinforcing applications for this industry. The main characteristics of our products are:

- Low shrinkage does not affect light transmission. The photo-curing resin has anti-sagging features, good optical properties, and a refractive index that meets industry requirements.
- Good workability of adhesives, and meet the general process requirements in the industry.
- Our products are high temperature resistant, weather-resistant, and aging resistance, which is better than market products. Everwide main product is 10:1 low-sensitivity and environmental-friendly epoxy resin.
- Physical specifications of our photo-curing resin, one-component, and two-component high temperature-resistant epoxy resin products are comparable with American and Japanese products. Even the packaging process is excellent, so the quality is stable.



Water-soluble temporary bonding UV adhesive for the processing of optical glass

The optical glass processing industry has a wide range of applications. The lamination process of cover plates, dust-proof glass for mobile phone lens, quartz processing, crystal processing, etc. All require temporarily fixed adhesives. After the procedure complete, the designed mechanism can be used to soluble entirely without residue.

Dust-proof glass application:

After cutting large pieces of glass to the required size. Glue is needed to temporarily fix the glass on the jig and then put it on the processing machine stage. Then, after grinding, chamfering, polishing, using the preset dissociation conditions for the degumming process, and then the process of inking around.

The glass of cover plate processing and thinning applications:

It is suitable for the dispensing process (LOCA dispensing method) and a silk-screen printing process. It has good defoaming properties and good moldability, and it can be used in the mass production of different sized products. The glass thinning process is used in 0.5mm optical glass and thinned with mixed acids such as hydrofluoric acid or potassium cyanide nitric acid. The double-sided thinning of single-layer glass is prone to breakage, the yield is not high, the material loss and the cost increase. Therefore, the double-sided thinning processes after the double-sheet glass is used as the photo-curing hydrolytic adhesive. At this time, the adhesive can reinforce and buffer the water flow's impact in the thinning and cleaning tank to increase the thinning yield rate. Finally, you can use the preset dissociation conditions to carry out the degumming process and without any residue on the glass.





Encapsulation Adhesive for Electronic Components

At the electronic components industry chain, many manufacturers can't only focus on improving production capacity and, more important are the company's innovation's long-term profit. This market positioning also is Everwide wanted.

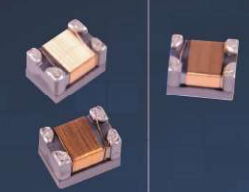
Nowadays, the electronic components industry is actively developing in emerging markets, and there are many affordable products. Although the production capacity and performance are excellent, it reduces the interest rate, let the entire industry have fierce price competition. Therefore, the electronic components industry only maintains the unit's digit growth rates in the future, and lower costs will become an essential issue for each company.

The motivation of innovation in the electronic components industry will lead the industrial design from the consumer value orientation into higher performance products. The performance and price ratio of products can be fulfilling consumer demand. It will have more opportunities to win the market for manufacturers.

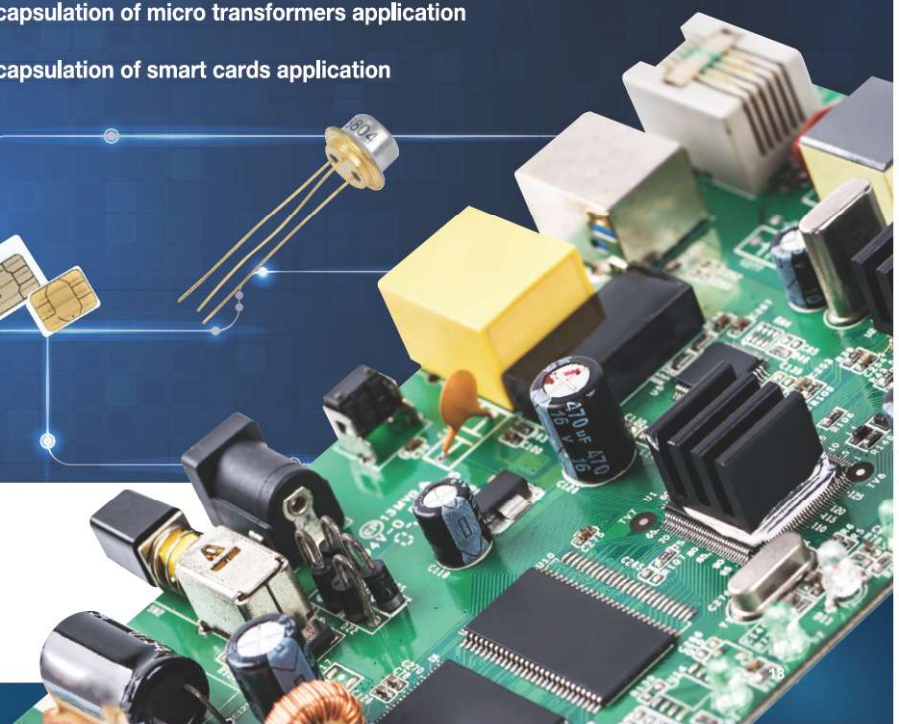
The commoditization and homogeneity of smartphone end products make the manufacturers have "high specification for a low price", leading to China's supply chain rising instantly. Its open supply chain strategy makes the competition more intense.

In the global electronics industry's supply chain, Asian manufacturers still have advantages in electronic components, especially in the traditional automotive, medical, and energy sectors.

Under the trend of ICT, they have become intelligent. Combining with computing, processing, sensing, controlling, networking, even software and services has become the next important source of innovation in the electronics industry. At this time, Asian manufacturers should provide better solutions and lower prices to enhance the added value of their products and spread the risks of excessive concentration in the 3C product market. Therefore, Asian manufacturers should abandon quantity myths as soon as possible and actively embrace a new era of value creation.



- Application of Mini & Micro inductor industry
- Application of waterproof joint sealing for connector
- Relay and micro switch industry application
- Application of cable reinforcement for signal connection
- Application of micro-speaker and earphone industry
- Application of various-usage sensors encapsulation
- Application of piezoelectric ceramic
- Encapsulation of micro transformers application
- Encapsulation of smart cards application



Encapsulation Adhesive for Electronic Components



Application of Mini & Micro inductor industry

The developing trend of products in this industry is smaller and thinner, so adhesives required standard is getting higher and higher. The bonding material market is almost exclusively occupied by European, American, and Japanese manufacturers. Thus, in Asia, we need a company that can supply adhesives to this industry chain and offers the best quality and high efficiency. Therefore, Everwide stands at the forefront of industrial demand and actively invests human resources to develop products that meet customer needs.

The characteristics of Everwide products:

- Meet environmental restricted substance control standards, and this product complies with the RoHS, REACH regulations.
- This product is suitable for dispensing, and it is required for the print coatings process.
- Meet the needs of curing at 100°C ~ 120°C low temperature.
- Low shrinkage rate during curing, low thermal expansion after curing, and excellent insulation properties.

Product application range:

- DR small inductors
- Adjustable inductors
- Choke inductors



Application of waterproof joint sealing for connector

This industry is very mature, mainly applied to smart handheld devices. For example, barcode scanners in the logistics industry, barcode scanners in industrial workshops, signal connecting lines for washing device of home appliances, outdoor power supplies, etc.

The requirements for products are fast curing, excellent waterproofing, and reworkable under certain conditions. Besides, as early as 2004, Everwide has focused on leading customers in this industry and developed a series of products to meet customer needs.

The characteristics of Everwide products:

- Good workability, defoam easily, and proper potting operation time.
- Transparent, black, and good sag resistance.
- Partially products meet the requirements of UL94V-0.
- Good weather resistance after curing, no cracking after the thermal cycling test.
- After drop test and thermal cycling aging test, it can also pass the water pressure test above 10kg high pressure without leaking water.

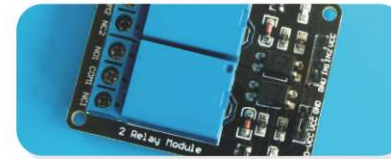


Relay and micro switch industry application

Almost all products in this industry are manufactured in mainland Asia factories. However, high-end application material demand still relies on potting materials in Europe, America, and Japan. Therefore, we target high-level requirements and focus on the automotive and medical industries that accept the potting material as high quality and reasonably priced.

The characteristics of Everwide products:

- The product's viscosity is stable, making the customer's output at a constant production rate.
- It can be cured at 80°C low temperature, and the weather resistance is still good.
- Low shrinkage stress can be obtained when curing at low temperatures.
- This adhesive has excellent physical properties after curing. It exhibits low thermal expansion, low water absorption, and good insulation.



Application of cable reinforcement for signal connection

This industry has a wide range of usage. Almost every industry will have cables to connect the signal transmission between parts or transmit electricity. The product's structure is mostly using conductive wires to extend the length in the middle of two terminals. Because the two terminals are all welded processes, the solder joints cannot withstand the insert-withdraw type's reciprocating pulling force. Therefore, it is necessary to use adhesive for reinforcement after welding. The adhesive is reinforced and cured at the end of the wire terminals to resist the repeated pulling force during usage and maintain the cable's good performance.

The characteristics of Everwide products:

- Excellent dispensing performance and good sag resistance.
- Good bonding effect for difficult to bond wire materials such as PE, Teflon, PVC, PP, etc.
- Good bending resistance and aging resistance, and it can pass the strict environmental aging test.



Encapsulation Adhesive for Electronic Components



Application of micro-speaker and earphone industry

In terms of the applied characteristics in this industry, it can say that speakers are representative work that uses adhesive to bond all parts. Because this product's structure requires one piece, it could not bond mechanically. Otherwise, sound quality performance cannot be optimized, so Everwide certainly does not miss this industry's opportunity.

Everwide products are:

Medium and large speakers:

- One component epoxy resin with heat resistance for composite in speaker diaphragm and Kapton voice coil.
- One component epoxy resin with heat resistance for titanium alloy in speaker diaphragm and Kapton voice coil.
- Bonding materials for solder joint protection, outer annular ring, and so on.

Micro speakers:

- Adhesive for high temperature resistant, waterproof PET, PEN, PI, PEEK, TPEE diaphragm, and enameled wire voice coil. Everwide has a photo-curing resin series that cured resin exhibits flexible and red fluorescent detection function.
- Edge adhesive for PET, PEN, PI, PEEK, TPEE diaphragm, and plastic frame. Everwide has a green and blue photo-curing resin series that cured resin with flexible and toughness fluorescent detection function.
- Transparent or blue photo-curing resin for solder joint protection, which is flexible and tough with fluorescent detection.
- The photo-curing resin and modified silicone series are used in combining the upper and lower carrier, which have the function of fluorescent detection.
- One component epoxy resin's characteristics with heat resistance for magnet and magnetic cylinder are high strength, high-temperature resistance for 200°C, and impact resistance.



Application of various-usage sensors encapsulation

The adhesives are widely used in this industry, such as temperature sensors for household air conditioners and industrial air conditioners, wireless tire pressure sensors for automotive tires, contact and non-contact RFID sensor cards, various gas and liquid detectors, etc. Therefore, there are many types of bonding and encapsulation materials in this industry, and the requirements have different levels of from low, medium to high. In particular, the transmitting results of some products' sensor accuracy are related to human life. Especially applications of sensors are critical, such as toxic gas detectors and liquid leakage sensors.

The sensor devices are mainly used for sealing and potting applications, as described below:

- This product must have excellent adhesion to the temperature sensor shell. Thermal conductivity of about 0.5 ~ 1.5W-m°C and weather resistance are required.
- Products for potting applications should be easy to configure and stir. Good fluidity when working and easy to defoam.
- Products for potting applications exhibit low shrinkage stress during curing not to affect the accuracy of sensing chips. Furthermore, after curing, the thermal expansion coefficient should be as low as possible so as not to damage the chips.



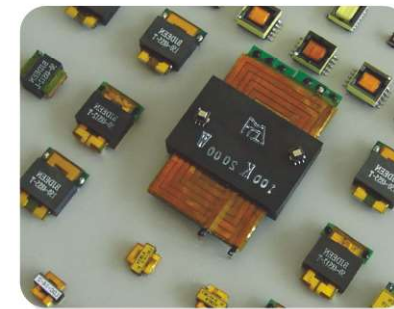
Application of piezoelectric ceramic

Piezoelectric ceramic components are widely used, especially the swing mechanism of shuttles of textile machinery. A layer of epoxy curing is coated on the insulation sheet and the ceramic sheet to achieve bonding with fixed thickness. It is a special application in Everwide. Because it needs to add inorganic powder and beads of small particle sizes into the adhesive, it should provide characteristics of conducting electricity and heat at the same time after curing. Besides, the curing temperature is 120 ~ 150 °C, and the shrinkage rate must be less than 3% to meet the requirements. After two years of continuous research and development, we have launched mature epoxy resins and supplied them to this industry.



Encapsulation of micro transformers application

The requirements of products in computer industries are relatively low, and most adhesive suppliers can supply low and stable prices. Everwide mainly focuses on transformer applications with high-level quality requirements in the automotive and motorcycle industry, transportation industry, aerospace industry, medical industry, and so on. Therefore, we use raw materials from Europe, America, and Japan to be our major suppliers to make this formula. The advanced R&D Technology of Everwide has developed structural one component and two-component epoxy resin with high glass transition temperature, low thermal expansion, low shrinkage, good thermal conductivity, and high-temperature resistance, etc. Especially for customers who require high toughness and thermal cycling test.



Encapsulation of smart cards application

The structure of chips smart cards has evolved rapidly, such as from contact shopping cards, mobile phone SIM cards, chips credit cards to non-contact transportation cards, shopping Easy Cards, etc. Obviously, the encapsulation structures of chips are quite different and evolving. Everwide has photocurable epoxy resin for Dam & Fil of contact chip, and cooperates with design companies to make different 3D Dome Coating encapsulation. The products range from soft to hard, from room temperature curing to photo-curing, double mechanisms of photo-curing and heating, and have evolved from metal substrates to applications of PC and PET sheets that are suitable for thin plates.





Structural Adhesive for Medical and Sports Equipment

The industry of medical equipment and sports equipment are green industries that make human bodies become healthier.

The history of the biotechnology industry development in Taiwan has been more than 20 years. The releasing quantity of related products have multiplied many times after 2005, especially the medical equipment, such as medical masks for breathing and anesthesia, medical injection needles, collectors for human waste during various medical procedures, etc., which all require adhesives to assemble, and the adhesives needed medical certification in this industry.

Nowadays, the biotechnology industry has been developing in Taiwan for more than 20 years. In 2005, the number of related product publications increased, especially in medical equipment such as medical breathing tubes, anesthesia masks, medical injection needles, and various medical procedures. All it needs is excellent adhesion for assembly and the medical certification for the adhesive in the medical industry.

The history of the sports equipment industry development is earlier. From treadmills, bicycles, rackets, aquaplanes, hockey, etc. Taiwan used to be the world's first product design and manufacturing center. After the industrial division was upgraded, Taiwan became the operation center of designing, branding, marketing, and service, the adhesive requirements are second only to transportation equipment, so it takes at least one to two years to complete an adhesive case.

Everwide has invested considerable effort in purchasing various test substrates and specializes in test methods and verification machines. We took two years to obtain the recognition of world-class bicycle manufacturer. Dr. Li, who has completed this difficult task, will proudly say that the bicycle industry is the pride of Taiwan, he has contributed part of efforts.



- Application of medical devices bonding adhesive
- Application of injection needles bonding
- Application of bicycle industry

Structural Adhesive for Medical and Sports Equipment



Application of medical devices bonding adhesive

The breathing and anesthesia masks of international medical are disposable. Taiwan is one of the few designs and manufacturing centers in Asia that meets European and American quality standards. The conservative manufacturers all use expensive European and American adhesive, and the production cost is very high, so they only have low OEM profit. Before 2000, there was no excellent photo-curing resin in Taiwan to supply this industry; therefore, Everwide invested three years in developing the mask industry. Furthermore, Everwide products have been using for more than 15 years, and the quality is stable, and the amount of usage is increasing.

The advantages of Everwide products are:

- Customers can use innovative materials to design and develop new products, then the new adhesive development by Everwide. It is a perfect industrial division and creates a win-win situation.
- Everwide is willing to continue investing large amounts of money in upgrade the medical certification.
- Everwide uses more environmental-friendly raw materials from large factories and continues developing more environmental-friendly adhesives.



Application of injection needles bonding

The product design changes greatly due to functional changes, and the types of materials are becoming more and more. Therefore, there is more demand for adhesives, and the industry has higher inspection standards. In addition, this industry has very high requirements for the stability of mass production. The stability of quality and quality inspection is quite strict because the daily amount of production in this industry is tens of millions, hundreds of millions, and billions. Everwide worked hard for two years to supply two products in this industry successfully.

One is epoxy resin, and the other is photo-curing resin. The characteristics of these products are:

- Epoxy resins of various colors with medical grades are available in one-component and two-component, which are different materials and various curing temperature parameters.
- The photo-curing resin target is the difficult bonding materials, such as PP and PC, PVC, and the metal part is mainly stainless-steel needles. It can cure quickly and have stable viscosity, which is suitable for continuous production.



Application of bicycle industry

This industry has been dominated by countries such as Europe, the United States, Japan, and Germany for a long time. The design and field application have covered the leisure and consumption. At early stage, Taiwan had always been a role of subcontracting production, so manufacturers only make meager profits. Until a large factory in Taichung successfully created its brand that Taiwan manufacturers successfully built their brands. The diligent Taiwanese worked hard to specialize in the research and development of high-quality products and then extended to the research of sophisticated production processes. After ten years of continuous efforts, several well-known brands have finally been launched in the international market and have gained international fame. The demand of the product for high strength adhesives has progressed from the anti-loosening anaerobic screws and anaerobic bearing for iron or aluminum bicycle screws bonding to carbon fiber with aluminum alloy composite bicycle frame, forks, seat post, seat, saddle, rim, and various metal parts adhesive bonding. After two years of cooperation with major manufacturers, Everwide finally successfully entered the adhesive supply chain about bicycle frame and bottom bracket with a well-known international factory in Taichung, and expanded the applications of front fork, seat post, seat, saddle, and other components. Until now, Everwide market shares as high as 60% in this market, and continues working with the bicycle industry to develop high-end electric bicycles for more forward-looking applications.

Everwide's advantages are:

- The special standard test specimen for tensile test and surface treatment ability of the substrate materials in the bicycle industry. It totally meets the entire set of testing standards in the industry.
- We have a universal testing machine which can test at a low temperature of -40 ° C and a high temperature of 180 ° C. It can test various strength data of the shear and tension strength of the material under different temperatures and disclose the complete test process for our customers.
- Everwide has three thermal impact machines, three thermal cycling test machines, three high temperature, high humidity test machines, and one QUV aging test machine, which can perform the most severe aging simulation tests and give our customers the highest quality assurance.
- R & D technical services and manufacturing production in Taiwan, Quality control upgrades to IATF16949 automotive quality management. Technical services and after-sales service are provided upon request from the customer.
- Technology and supply services have been extending to Southeast Asia at the beginning of 2020.
- The recommendations of international manufacturers and the guarantee of high-quality services make Everwide confident to arrange a stronger R & D team actively and believe that we can develop new materials with more forward-looking advantages.





Thermally Conductive Potting for Micro-Electromechanical, Heavy-Electromechanical, and Structural Adhesive

In terms of the electronics industry's application field, this is a mechanism industry that converts electrical and mechanical energy. Its applications include the vibration motor in the mobile phone, juicer machine, washing machines, large-sized machinery, and super-large-sized civil machinery, which all have the shadow of electronic products.

Requirements in this industry for potting and adhesives:

- Good insulating property, high-voltage resistance, and no potential phenomenon of ion drift.
- Long-term high-temperature resistance at 80 ~ 150 ° C, and it can reach a short-term 300 ~ 350 ° C.
- It has passed various simulated aging tests in the outdoor environment, including thermal test and cycling test, high temperature and high humidity test for a long time, and even more stringent tests under dynamic power-on state of above aging conditions.

Everwide is currently focusing on potting and structural adhesive applications in the electronic field. We also pay attention to the potting product line that can conform to attain the UL 94V-0 standard and meets environmental protection requirements in the electronics industry, such as REACH, RoHS, GP, etc. Besides, the factory's production environment meets the ISO EHS environmental control regulations, and the product quality meets the ISO quality management system and automotive quality management system standard.



- Application of micro motor bonding
- Application of radiator fan reinforcement
- Application of ultrasonic oscillator bonding
- Application of electromagnetic brake potting
- Application of submersible motor potting
- Application of drone motor bonding

Thermally Conductive Potting for Micro-Electromechanical, Heavy-Electromechanical, and Structural Adhesive

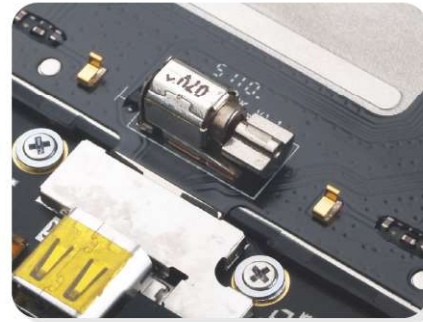
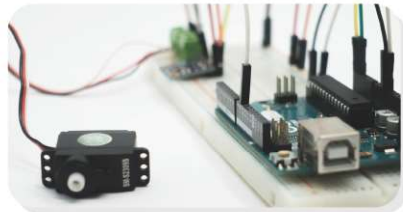


Application of micro motor bonding



Everwide focuses on the adhesion of magnets and main body motors and the product-oriented design of structural formulas for permanent adhesion. These are mainly epoxy types which are one-component or two-component products used in combination. The reinforcement of the leads or power cords can be matched by high-performance photo-curing resin, and this photo-curing resin conforms to the UL94 V-0 certification.

- Epoxy resin: Application of high-permeability materials and motor main body bonding.
- Photo-curing resin: To fix thread end of insulation conductors after winding.
- Fast curing epoxy resin: Spot welding protection of armature and brush.



Application of radiator fan reinforcement

The key technology of the cooling fan is that the noise value is the lower while it is working at high speed. It also relates to the overall performance of weather resistance and durability resistance. What's more, this industry has developed for a long time.

Everwide successful applications in this industry:

- Dispensing on the pillar of fan main body and then pressing the stator in to achieve the effect of bonding and reducing the vibration noise during high-speed rotation.
- To fix positive and negative wires can use UL94V-0 photo-curing resin or two-component epoxy resin for quick positioning in five minutes.



Application of ultrasonic oscillator bonding



This product type has been using in daily life and industrial application for a long time. The high-frequency vibration head is the core of the whole machine, and the joint of the vibration head is the application of adhesive. This adhesive must be resistant to vibration, high-temperature, easy to operation, non-toxic, etc. It can be cured at room temperature because there have not a big heating chamber which can place it to cure by heating. Therefore, it is a special application.

Special needs are as follows:

- Mixing proportion is 1:1 or 2:1, and it is easy to defoam after mixing.
- Dispensing on the vibration head will have more than 30 minutes bonding time.
- Full curing time is less than three days and can pass various tests.
- Everwide has the above advantages, and can withstand high temperature 160°C X 24hrs under the environment of abnormal temperature sensitivity without coming unglued.
- The product uses various packages to match the automatic adhesive mixing machine to save manpower.



Application of electromagnetic brake potting

The development of this industry is relatively stable, but it is a very conservative industry. The requirement of adhesive is very high. To become the leader in this industry, Everwide took a year to introduce products in all applications and meet the requirements of UL94V-0 regulations.

The advantages of Everwide products are:

- The two-component adhesive has good workability, defoaming, and self-leveling property.
- Heat resistance of adhesive can be above 120°C and the higher stability.
- There is no precipitation during adhesive storage and the storability is good.



Thermally Conductive Potting for Micro-Electromechanical, Heavy-Electromechanical, and Structural Adhesive



Application of submersible motor potting

The structure of this industry is more difficult in the potting field, because the depth of potting is relatively deep, it is not easy to defoaming after potting, and the exothermic reaction cannot be too large when the adhesive is cured. The cured adhesive physical properties must have a certain thermal conductivity, can resist the high temperature after long time operation, high insulation coefficient, good crack resistance, no brittleness at low temperature, etc.

Everwide has broken through many above-mentioned contradictory physical property requirements, and design products that can meet the requirements of manual mixing and automatic mixing processes. Furthermore, the product specification is conformed the UL94V-0. We have several high cost-performance ratios of potting heat conduction adhesives.



Application of drone motor bonding

There are many applications in this popular emerging industry. At present, various types of adhesives with higher performance are needed to meet multiple applications. Therefore, adhesive suppliers must provide products with high cost-performance to obtain customers' approval in this high-standard competition. Everwide mainly focuses on the magnet bonding with the stainless steel case main body, the waterproof conformal coating for the circuit board, and the carbon fiber molding resin for the drone's main structure. There are more applications in electronics and optoelectronics, such as lead fixing epoxy adhesive or UV adhesive, high rebound ratio of sealing CIPG, and heated organic silicone adhesive with highly waterproof requirements.

The characteristics of Everwide products are:

- It has toughness after curing and can pass the drop test.
- The product has low volatility characteristics when cured, avoiding the control device short circuit caused by pollution.





Sealing Adhesive for Computers, Communications and Consumer Electronics Industry

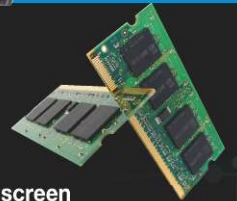
The computers, communications and consumer electronics industry are referred to as 3C industry. The products surround our lives and can be seen everywhere. These industries all develop from mass production to rapid transformation, especially mobile phones, tablets, and computers.

The assembly of communication products and portable computer products are mainly structural applications, such as structural bonding, waterproofing, reinforcement of components and main body case.

The main applications of appliance products are waterproofing and sealing. For example, the washing machine's mainboard must use conformal coating, the gaps of microwave oven must use adhesive caulk, the water tank of the wet and dry vacuum cleaner must be bonding top and bottom and must be water-resistant, seal the seams of the juicer, etc.

Everwide products focus on supply various adhesive to different requirements of the assembly application process.

- Application of handheld scanner device
- Application of wet and dry carpet cleaner sealing
- Reinforce application with waterproof around the outdoor screen
- Reinforce application for memory card device
- Waterproof sealing application for satellite navigation
- Bonding and sealing applications for wireless Bluetooth headphone
- Bonding application with color wheel of high lumen projector



Sealing Adhesive for Computers, Communications and Consumer Electronics Industry



Application of handheld scanner device

Due to internet development, the applications of two-dimensional and three-dimensional codes are becoming more and more widespread. Therefore, handheld scanners and wireless sensing devices have developed to be waterproof, sealed, and reinforced.

The items of Everwide products are as follows:

- Modified silicone adhesive is used to reinforce the flat cable inside the device, preventing the wire rod from falling off during impact.
- Because the upper and lower covers of devices need to be assembled, only use liquid gaskets to automate production. Everwide already has gasket products.
- Everwide high cost-performance ratio one component epoxy resin can pot CPU chip bottom, and has passed the drop test.
- After the device's display panel bonding with the main body, the inner periphery is coated with modified silicone adhesive to achieve a waterproof effect.



Reinforce application with waterproof around the outdoor screen

The price of the display is hitting a record low, so various public institutions widely use it. The outdoor screen needs additional functions such as waterproof. In terms of this application, Everwide provides the best packaged of modified silicone adhesive to the display manufacturers.

The characteristics of Everwide products are:

- After curing, it has 5mm thickness.
- Have good workability and easy to wipe and remove when overflow.
- The product has excellent weather resistance and can pass the cycling test of the low temperature of -40°C to high-temperature of 80°C for 240 hours.
- Products can be used in automated dispensing machines, fine packaging.



Application of wet and dry carpet cleaner sealing

The adhesive in this industry is a stable application. Wet and dry products have a water tank design, and the water tank will be filled with water and different detergents. The requirements for adhesives are high. It needs to pass the detergent resistance test, high altitude drop test, requirements of the length of impact joint cracks and curing methods, so the photo-curing resin or two-component epoxy adhesive will be designed for application. Everwide has focused on many applications and has successfully been introduced into one of the world's top three manufacturers for nearly a decade. We have thoroughly studied the details of adhesive application, and can provide the best solution to customers.

The characteristics of Everwide products are:

- The special anti-drop PC water tank has the function of filtering ultraviolet, so it is necessary to provide an adhesive that can cure under weak visible light and meet the high strength requirements.
- In the detergent corrosion test of the photo-curing resin resistance, the strength attenuation is less than 20% in the test of 50°C X 90 days.
- After the product has been tested in a free fall of 1.5 meters six times, although the box was broken, the glue joint will not crack.



Reinforce application for memory card device

The high-end memory cards used in industrial computers require an extremely sturdy structure to reinforce the assembly design. Therefore, the important chips and connection positions need to be reinforced, and even seal the mechanism against water. Everwide cooperated with a Japanese company to develop epoxy resin for chip underfill, reinforce the soldering point, and mechanism waterproof epoxy resin.



Sealing Adhesive for Computers, Communications and Consumer Electronics Industry



Waterproof sealing application for satellite navigation

With the advancement of modern technology, satellite navigation has been applied to household purposes for decades. Since Taiwanese manufacturers have been designing and producing satellite navigation for a long time, therefore, there is a demand for localized supply of adhesive for device waterproofing mechanism and chip reinforcement. Everwide cooperated with a large American manufacturer a few years ago, focusing on the introduction of design materials for waterproofing mechanism, and modified silicone adhesive is a good choice. The environmental protection requires adhesive that does not contain Dibutyltin and Dioctyltin catalysts. Now, the most widely used are vehicle navigation and running navigation device, etc.



Bonding and sealing applications for wireless Bluetooth headphone

Wireless Bluetooth headphones allow humans to advance from the walkman era's wired headphones to now they can listen to music with mobile phones, especially the noise-canceling headphones are sold out of stock. Everwide has application of this product. Therefore, we use high cost-performance ratio and low-viscosity modified silicone adhesive as the motherboard's waterproof sealant. Use UV adhesive to bonding with the structure of micro-speakers and micro-microphones, and use modified silicone adhesive to assembly waterproof of whole machines.



Bonding application with color wheel of high lumen projector

Meeting planners use projectors to share slides and visuals with audiences when lectures and large-scale meetings. The projector changes rapidly, and it is advancing towards high lumen and high contrast performance. The color wheel needs to run at high speed, and it needs continuously irritated by a high-illuminance light, so request the structural adhesives need to resist the centrifugal force at high temperatures and high revolutions. Everwide has cooperated with manufacturers to develop and break into the projector industry in South Korea, Taiwan, Europe, and America for decades.





Fixing Adhesive for Circuit Board Assembly

In 2000, the assembly industry of the whole machine based on the circuit board was a glorious period. No doubt the rapid development of this industry was caused by computers.

There is a communication system from desktop computers to notebook computers and the network system has gradually matured. The entertainment game console, various virtual reality devices, and telemedicine devices all need a circuit control system. Therefore, various electronic components on the circuit board need to cooperate with the circuit design, functional chip design, and assembly. Due to its use in different environments, it derives the following major types of adhesive applications:

- The thickness of the encapsulated chip components is too thick to meet the thin product design, so the unpackaged chip evolved into the chip on board process, and there are applications of Glob-Top dome encapsulation and Dam & Fill square encapsulation.
- Laptops should meet the requirements of drop resistance, failures, solder cracks, and short circuits. It is necessary to make structural reinforcements to resist the impact of instantaneous vibration force when dropping after the chip is welded to the circuit board, and it has evolved the following applications:

Reinforcement of chip corner
Chip all-around reinforcement
Reinforcement of chip bottom

- The automatic insertion's electronic component needs to be soldered through wave soldering after being installed on the circuit board. However, the electronic components of the SMT type use solder paste and a temperature-controlled reflow furnace to solder. If both components use an integrated process, SMT red glue should be used between the two pads of the electronic components on the circuit board. It is for achieving the SMT type components no dropout when soldered with the automatic insertion of electronic components through the high-temperature wave soldering after the SMT process.
- Some products are outdoor use or use in high-temperature and high-humidity environments. The electronic components solder points are easy to rust and corrosion after soldered at high temperatures. Thus, the adhesives need waterproof and dust-proof for partial coating, and some products will have full-fledged protection for the entire coating.
- Some products have concerns about imitation and misappropriation because of the exposed design circuit, so potting adhesives are required.
- Some high-power components are easy to create heat during operation. Therefore, a good thermal module is required and the thermal modules have evolved power chips and heat-sinks. There are types of products such as thermal pads, thermal greases, and thermal adhesives on the market.

- Application of COB encapsulation
- Application of SMT for temporarily fixing components
- Application of chip repair in corner reinforcement
- Application of chip bottom reinforcement
- Application of chip protection anti-disassembly encapsulation
- Bonding application of thermally conductive on chips

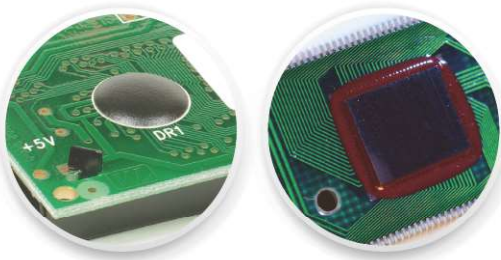
Fixing Adhesive for Circuit Board Assembly



Application of COB encapsulation

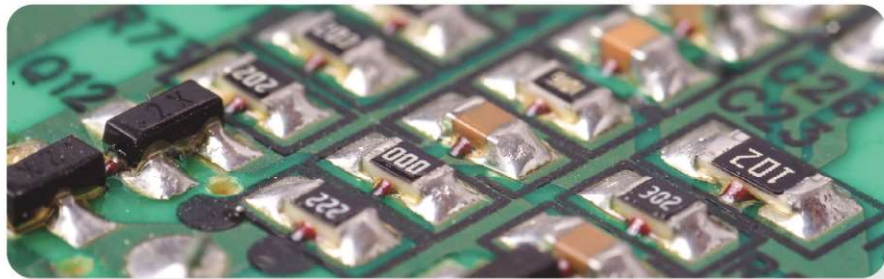
This application is quite mature in the industry. Everwide has successfully entered the COB encapsulation of the printer's leading brand control board for more than ten years, it is very stable product.

In the application of Dam & Fill, Everwide break through the problems of warpage during large-area resin liquid encapsulation. Now, it can fully cover and heat with 0.3mm PCB sheet of 60mm X 60mm and the warpage less than 0.1mm.



Application of SMT for temporarily fixing components

This adhesive is not only for the temporary fixation of SMT components in a two-panel process, but also can use with the automatic insertion electronic components mixed insertion the SMT electronic components of wave soldering. This product exhibits fast cure, it can be used for reinforcement of chip corner. Everwide has improved this product for quick dispense and fast curing.



Application of chip repair in corner reinforcement

In the application of portable products, the drop test requirements are getting higher and higher. The chips with multiple access points or small-pitch chips need to be reinforced around the chips to let the overall structure can resist an altitude of 1.5 ~ 1.8M drop test. Currently, it can pass a drop test hundreds of times.

The main characteristics of Everwide products are:

- The curing temperature is at 80°C low temperature, which can be cured in 5-10 minutes, and it can avoid the PCB board warping due to the high-temperature process.
- Fast curing at 150°C X 60 ~ 90sec in high-temperature process.
- Resin toughened, it has good resist drop and impact.

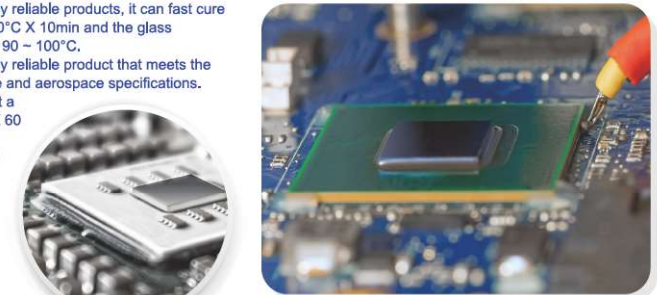


Application of chip bottom reinforcement

After the system chip is soldered to the circuit board, use one component epoxy resin for precise dispensing and the adhesive will flow to the chip bottom. After curing, there was reinforcing of the chip. This process's advantages are good strength and high stability, but it requires more expensive dispensing equipment and longer processing time.

Everwide currently has several primary underfill materials:

- JC823 series: Reworkable products and cured at a low-temperature of 80°C X 30min.
- JC738, JD831 series: Highly reliable products, it can fast cure at medium temperature 120°C X 10min and the glass transition temperature is at 90 ~ 100°C.
- JD100, JD370 series: Highly reliable product that meets the requirements of automotive and aerospace specifications. These products can cure at a high-temperature of 150° X 60 ~ 120min and the glass transition temperature is at 100 ~ 150°C.

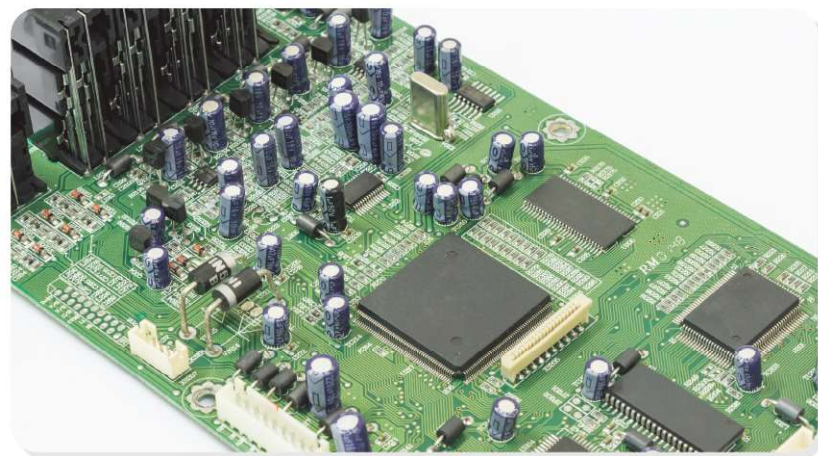
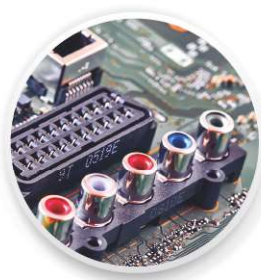




Application of chip protection anti-disassembly encapsulation

Everwide has successful products in this application. For example, the functional system chip of the home television set-top box motherboard, which needs encrypt to prevent customers tampering the program.

After fully cured, Everwide products can withstand a high-temperature of 250 ~ 270°C until the board has warped, and there is no whole piece of adhesive material falling. However, use the sharp instrument can disassemble it into small pieces. It can completely achieve confidentiality before the chip is destroyed and loses its function.

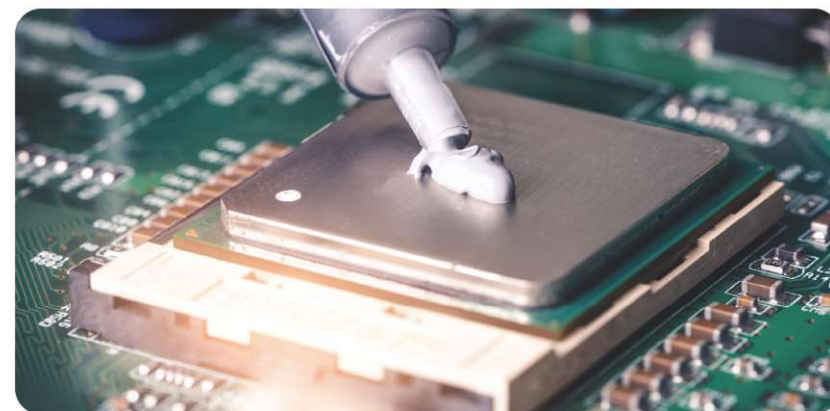


Bonding application of thermally conductive on chips

The more powerful of the system chip, the heat generation will higher, especially for 5G related product lines. At this time, the excellent heat conductor material can bring the heat energy of the chip to the heat sinks and then combine the fan's heat dissipation function.

Therefore, Everwide developed three product lines:

- It does not dry up thermal grease products that can resist a high-temperature of 200°C with thermal conductivity of 1.5W and 3.2W. High cost-performance ratio and 300ml tube products for automatic dispensing, it can meet the mass production needs.
- Thermal greases that do not contain silicone oil and have a thermal conductivity of 1.5W are suitable for devices with sensitive contacts.
- The thermal conductivity of 2.2W and 3.2W of thermal conductivity adhesive that can be cured with the reflow and has the function of adhesion. It can use a dispensing process or steel brush coating process.

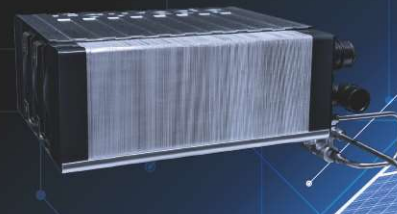




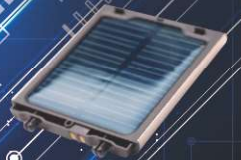
Waterproof Sealing Adhesive for the Green Energy Industry

The development of the green energy industry has become more mature. The most representative industry is the solar chips module electricity generation devices, the rapid development of fuel cells, and the wind drive generators that cover the entire western coastline of Taiwan. The active development of offshore wind power systems in the world, which can make humans live longer on the planet. Moreover, this industry cannot be able to break away from the economy. Every financial crisis makes everyone forget that the green industries cannot be stopped because global warming will not stop because of the financial crisis, and natural disasters will not be reduced either. However, governments of various countries are often affected by the economic recession, and the first budget to be deleted is the development subsidy for green industries. We only have one earth. The answer is yes. Do you have another solution?

Therefore, Everwide actively invests in researching and developing adhesives products to meet the needs of the middle and lower stream industry's upper. From the development of fixing adhesives for die sawing to the development of encapsulation resin for power generation modules. Everwide looks forward to the continuous development of this industry and always provide technical solutions.



- Waterproof sealing application for solar cell modules
- Application of fuel cell sealing
- Encapsulation application for general household battery modules



Waterproof Sealing Adhesive for the Green Energy Industry

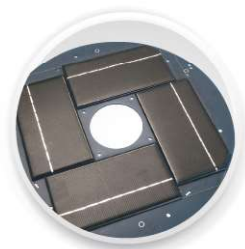
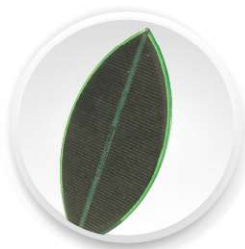


Waterproof sealing application for solar cell modules

The most important indicators in this industry are the lowest cost thin-film solar cells, single crystalline silicon cells, Multi-crystalline silicon cells, and CIGS engine solar-tracking system to the power generating efficiency of graphene cells. The sunshine time and investment of each country are also related to the future development of the industry. Everwide looks forward to developing the green energy industry, which can be faster and more cost-effective.

- The original adhesives for the die sawing pre-process were mostly imported, which had high unit-price and long delivery time.
- Everwide invested half a year to develop two-component epoxy resin which can surface dry in 5 minutes, and cure in 6 hours to achieve the bonding strength required for the dicing process, and use weak base liquid to dissolve. This epoxy resin was formally introduced into a major Taiwan factory so far.

As the module factory's assembly and waterproof application for the solar application, large modules are all EPA laminated encapsulation processes, Everwide products target is modules with length and width of 300 X 300mm or less, which are assembled on circuit boards after string welding, and then potting the resin on the surface to protect the chip and prevent water and dust. This product can also be used for the protection of chip coating after SMT placement.



Application of fuel cell sealing

This application market often has higher security requirements, so it increases in total cost. Moreover, the development speed and time to profit are not as expected due to a few fuel stations and inconveniences. Everwide specializes in the research and development of hermetic encapsulation products. There are multiple categories, and it can also be applied to the encapsulation of generating module, such as hydrogen cells, methanol cells, etc.

There are three categories of Everwide products:

1. HD1232UL series, FB001 series, FK1000 series: Sealing resin in strip form after photo-curing, which is certificated by UL94V-0 specification.
2. FS168 series: Modified silicone sealing resin in strip form which is certificated by UL94V-0 specification.
3. JD716AB series: Two-component soft epoxy resin which is certificated by UL94V-0 specification.
4. Heat-curing organic silicone rubber: good elastic strength and withstand a high temperature of 150°C for a long time without cracking.



Encapsulation application for general household battery modules

Industrial applications also require flameproof certificate formulas, as home safety places excellent emphasis on flameproof functions. Therefore, Everwide has designed an adhesive that is transparent and high toughness. It has good bonding occurred when potting on the lithium batteries with stainless steel main body. Furthermore, there are two-component epoxy resin products that are easily deformed, good fluidity, and excellent impact and vibration resistance to meet the special needs of this industry.





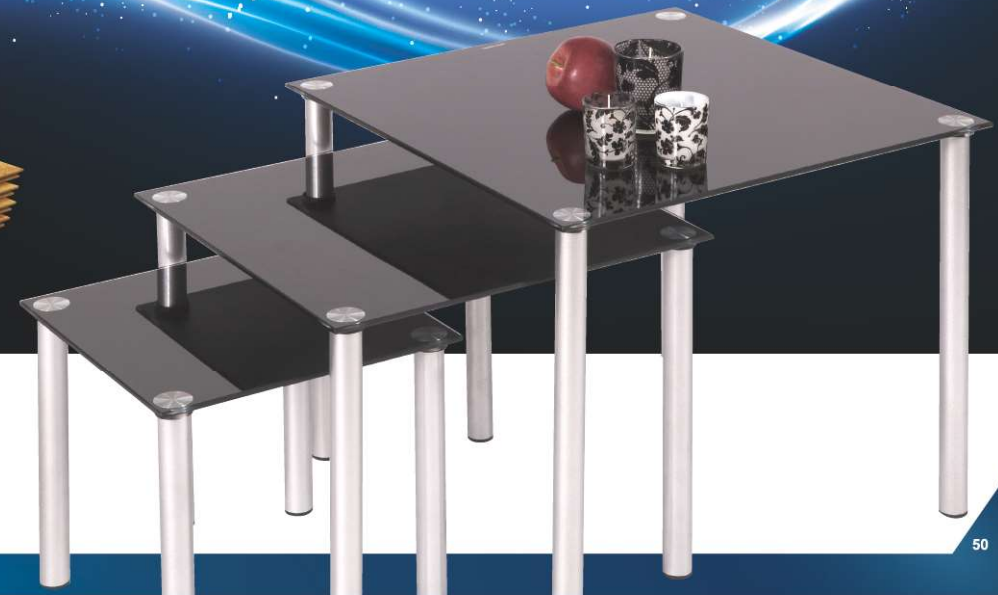
Structural Adhesive for High-Level Traditional Industry

R & D, innovation, high efficiency, high value, safety first, and traditional industries with sustainable green ecology are in creating the image. These words profoundly explain that at this time after 50 years of development, it is extremely necessary to create new ideas, so that the traditional industries can continue developing in the future. This strong transformation and innovation come from the full cooperation between the government and citizens. Moreover, the government has loosened rules, and industrial actively invest in R & D and innovation, so that the technology of basic industry can establish a foundation of values.

Since our establishment in 2000, Everwide has created new manufacturing adhesives for a traditional industry whose manufacturers could purchase locally. The plastic Christmas art, glass crystal art, metal furniture, and glass furniture were especially popular at that time. However, these industries originally used imported adhesives, so the costs were very high, the delivery periods were long, and a lot of stocks were needed. Therefore, Everwide has been developing actively to serve the local industrial manufacturing chain, so that the industry benefits from a win-win mechanism and grow strong together.



- Bonding application for glass crafts
- Bonding application for glass furniture
- Bonding application for plastic crafts
- Application for printing texture of the anti-counterfeiting label
- Application of wall hook UV structural adhesive and UV pressure-sensitive adhesive
- Application of composite wood floor filling
- Application of carbon fiber composites
- Bonding application of drainpipe repair and renovate



Structural Adhesive for High-Level Traditional Industry



Bonding application for glass crafts

The representative of this industry is crystal jewelry and souvenirs from the world's largest amusement park, as well as exquisite glass, wine glasses, champagne glasses, etc. They are from Europe, America, and OEM of world brands. From OEM original factory designates adhesives to the original design manufacturer, Everwide strives to be an excellent supplier of ODM. Along with the industry moves west, the supply chain also extends to China, and continues to use high quality adhesives to make the high-end glass art design and create a win-win situation with manufacturers in China.

The characteristics of Everwide products:

- Excellent water resistance: It can be used in an outdoor environment for ten years without degumming, and it has good yellowing resistance. The yellowing value variation after using QUV machine 50mw / cm², UV light X 50°C, ambient temperature X 240hrs only increases two yellowing value indexes.
- Excellent adhesion: The initial bonding strength can reach the fracture surface of glass materials. It only decays by 20% after the environment simulated aging test for 1000 hours.



Bonding application for glass furniture

The country represented by the design innovation and technology leadership in this industry in Milan, Italy. However, many countries in Asia are the world factories in this industry. Therefore the adhesives are up to the standard, It can be purchase local. The key is reliability because the two materials must have excellent bonding strength, there are technical difficulties to overcome. Considering the state of structural stress during innovative design, the requirements for adhesives are very higher. Everwide products have been used in this industry for decades. Therefore, we have confidence in entering the high-end western market.

The characteristics of Everwide products are:

- Suitable use for metal materials are aluminum, stainless steel, copper, anodized aluminum, electroplated iron, etc.,
- For various strengths of glass materials, the shear strength can be broken whole piece of the material.
- Excellent durability and weather resistance. After placed outdoors for more than five years, there are also no bubbles or cracks at the edges.



Bonding application for plastic crafts

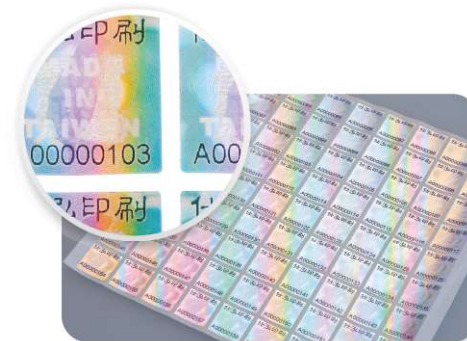
The adhesive application in this industry is wide. Now the chemical industry in the world, especially the plastics industry is booming. The innovation of plastic products has been greatly improved, and the products with multi-layer painting structures have been continuously introduced. In order to meet the requirement of customers, Everwide actively develops new products for various innovative applications. Our adhesives have anti-UV yellowing, anti-blue light, bonding with multiple color materials, and use in different functional sports wearable products.

- Some plastics are red or dark brown, which will filter out the energy of ultraviolet light. However, Everwide products can overcome this problem, the adhesive can fully cure to achieve bonding strength.
- The bonding strength of the plastic products after adhering is moderate. Therefore, there will be no corrosion of the plastic under the broken material standard, and it will not cause the plastic to gradually crack.



Application for printing texture of anti-counterfeiting label

This product is used in high-end, innovative and technologically advanced products. In order to avoid the problem of being counterfeited, high-level anti-counterfeiting labels can be used. Everwide seizes the business opportunities to developed special anti-counterfeiting adhesives to meet specific customer needs. At present, Everwide products have been used in this industry for many years.



Structural Adhesive for High-Level Traditional Industry



Application of wall hook UV structural adhesive and UV pressure-sensitive adhesive

The application of this product is originated from the development of double-sided adhesive by a world-leading manufacturer. Coating the double-sided adhesive on the back of PET film, and the front is a hook made of PC or acrylic, which must be bonding to the painted surface. At this time, photo-curing resins are the best choice for the fast-curing design of mass production. Everwide has developed a series of products that can be used on different painting base film sheets and can used with structural bonding application of hooks with different materials. This product has been quite mature and has mass production for many years.



Application of composite wood floor filling

This product is an environmental-friendly design because composite wood floor can effectively use limited wood resources, the design can meet the strength requirements of the original wood. After the defective board is laminated, use resin to fill the holes of the defect, and then matched with precise colors, it can meet the requirements of aesthetic architecture. Everwide cooperate with big export manufacturers to research and development the adhesives, including color design, improving suitability, and then mass production to innovate new projects in the future.



Application of carbon fiber composites

The application in this industry is quite mature. The development and application in the future are very widely, and technological innovation is quickly breaking through the bottleneck and develops the application in sea, land, air and even space. the widespread use of bicycles, the application of 3C products and automobile components, even is the mixed application of body and interior parts of transportation equipment and wind power blades. In the past few years, major European aircraft manufacturers have officially introduced aircraft fuselage applications. Everwide has a foothold in Greater China and supplies the adhesive throughout the industrial chain. We simulate the customer's process to research suitable products and develop the resin products with simpler processes, higher reliability and structural strength to create more promising carbon fiber composite material. It can produce more environmental-friendly, energy-saving and carbon-reducing materials for industrial applications.

- The advantages of Everwide products are:**
- Research and manufacturing of resins have special specification, we can develop resin materials that meet the needs of innovative applications.
 - Small-scale process simulation equipment has been set up, and the manufacturing simulation can be performed after product development, greatly reduce many times of improvement after customer testing.



Bonding application of drainpipe repair and renovate

The development in this industry is the renewal plan of every city. In the process of urban development, there is the problem of all pipelines under the ground will leak out due to ageing. However, the city has heavy traffic. It doesn't have much time and space to excavate drainpipe by the large machinery to update and backfill them, so the single-point excavation of the inner anti-corrosion bushing has become a new method urban pipeline maintenance. Regarding the Japanese construction method, Everwide has improved it to a more efficient operating method, and launching a product for inner bushing bonding. It has been successfully applied to the drainpipe renovate project in major cities in Taiwan. We can provide technical guidance for the whole process, and guide customers to use Everwide's products most suitable for your engineering operations. A full range of services is a new trend in this industry.

The future of Everwide products is developing in the aerospace and military products. We hope that the detailed introduction of these major industries can let you know more about the applications and advantages of Everwide products. Let Everwide becomes your best design partner.

