



2K POLYMER SYSTEMS LIMITED
TWO COMPONENT BONDED ANCHORS FOR PRIVATE LABEL



FOR OVER 25 YEARS 2K POLYMER SYSTEMS HAS BEEN A MARKET LEADER IN THE SUPPLY OF BONDED ANCHOR CARTRIDGE SYSTEMS TO PRIVATE LABEL PARTNERS. IT MAINTAINS THIS PROMINENT POSITION BY PROVIDING CONSISTENTLY HIGH QUALITY, SAFE AND EASY-TO-USE PRODUCTS, COUPLED WITH OUTSTANDING CUSTOMER SERVICE AND SUPPORT.





2K Polymer Systems Limited

With manufacturing origins stretching back nearly 50 years, 2K Polymer Systems has accumulated considerable experience and expertise together with an enviable reputation for understanding its markets, its products and the needs of its customers. 2K has become a major global supplier of own-label bonded anchor cartridge systems to more than 60 countries from its 6,000m² manufacturing centre of excellence in the UK and its subsidiaries in the USA and Singapore.

Comprehensive Customer Support

All customers demand a quality service from suppliers and 2K Polymer Systems offers more than that. Use of advanced manufacturing and packaging technologies enables 2K to provide a comprehensive range of high performance, consistent-quality and easy-to-use products, leaving our partners to concentrate on marketing and selling the goods that carry their name.

2K's manufacturing processes are thoroughly checked and monitored by the company's QC technicians and outside bodies to ensure that all products are supplied to consistent standards that support and enhance our customer's brand image. Quality control is paramount to give customers complete peace of mind. Manufacturing, however, is not the only focus point. 2K can produce, or provide advice on how to complete labelling and packaging solutions that suit customer's requirements and are compliant with the regulations of the product's intended market. In addition, 2K can arrange all aspects of shipping and take care of all related documentation, wherever the destination, to make sure that delivery is on time and in good condition. From full containers to individual pallets, 2K's expert logistics team organises shipments to over 60 countries worldwide, always conforming to local rules and regulations. To be able to achieve this in a continuous and reliable manner, 2K constantly monitors the regulations that affect all aspects of its manufacturing, packaging, labelling and shipping. By forming close partnerships with its customers, 2K can ensure it meets their requirements and creates successful own label products in which they can have complete trust. Quality, innovation and partnership ► three important reasons why top brands worldwide choose 2K.

2K meets its customers needs in different ways:

- We produce bonded anchors to our own formulation and packaging specification.
- We manufacture products to our customers own formulations and packaging requirements.
- Customers supply their own formulations which we package using our modern production technology and supporting services.



RESPECTED FOR ITS KNOWLEDGE AND CAPABILITIES, 2K IS A CONTRIBUTOR TO TECHNICAL COMMITTEES IN EUROPE AND THE USA THAT MAINTAIN AND IMPROVE BROAD BASED INDUSTRY STANDARDS AND QUALITY WORLDWIDE.

Innovation

Over the last quarter of a century 2K Polymer Systems has maintained an ongoing programme of research and development, formulating specialist bonded anchors for the construction, mining and civil engineering markets. Never standing still, 2K is always looking to the future, developing products that meet the changing needs of evolving world markets. 2K is also renowned for devising innovative packaging and cartridge systems and this expertise enables us to take full responsibility for all products, improve the methods of application and minimize waste. The CiC (Capsule in a Cartridge) packaging system, invented by 2K and launched in 1999, has revolutionised the bonded anchor market and is now an essential in most companies product ranges. As with many other aspects of the bonded anchors market, this was another case of '2K leads, others follow'. Respected for its knowledge and capabilities, our company is a contributor to technical committees in Europe and the USA that maintain and improve broad based industry standards and quality worldwide.

Advanced Manufacturing

At 2K, we invest our resources in modifying existing products to stay abreast and ahead of market regulations as well as developing new formulations to meet customers' needs. Continual investment in the latest manufacturing techniques and machinery improves product quality and ensures consistency. Through innovative design 2K's systems lead the world and provide customers with the latest in packaging technology. Careful control of raw materials, manufacturing processes, testing and approvals ensure that dispatched finished products are fit for purpose and with the longest possible shelf life. 2K's technology and innovation, combined with the expertise and dedication of its stable work force who have acquired considerable experience through many years of loyal service, enable us to provide first class products promptly and competitively.



2K POLYMER SYSTEMS PAY STRICT ATTENTION TO QUALITY AND OUR STRINGENT CONTROL SYSTEMS ARE AUDITED REGULARLY BY OUR CUSTOMERS.

Quality Control

2K Polymer Systems pays strict attention to quality and our stringent control systems are audited regularly by our customers. In 2010 our quality management system celebrated 25 years of conformance to ISO 9001 standards and its predecessor BS5750. From the delivery of raw materials to the dispatch of finished product, the company's quality control systems check every stage. At the end of each production run samples are stored for at least 18 months from the date of manufacture, ensuring every production batch is fully traceable from start to dispatch.

Environment

Top quality high performance products are no longer enough with environmental impacts becoming a global purchasing consideration. 2K actively monitors its raw material supply chain for potential SVHCs, SIN-listed chemicals and changes to national chemical inventories. Our formulations are devised and developed to provide the best product performance without significant hazard to the environment or health.

BONDED ANCHOR CARTRIDGE SYSTEMS ARE EASY TO USE AND, WHEN APPLIED CORRECTLY, ENSURE CONSISTENT SITE PERFORMANCE.

Bonded anchor cartridge systems

offer a variety of unique benefits compared to mechanical anchoring techniques. By avoiding mechanical expansion they introduce no stresses into the substrate and can be installed close to each other and to substrate edges. They also resist high static loads, with some products formally approved for seismic applications. Most resin anchors may be used in a wide variety of substrates and site conditions. If the substrate is hollow, bonded anchors may still be used in conjunction with perforated sleeves. Bonded anchor cartridge systems are easy to use and, when applied correctly, ensure consistent site performance.

2K's comprehensive range of products includes polyester, vinylester, polyester styrene-free, vinylester styrene-free, epoxy acrylate styrene-free and pure epoxy resin systems. Our products have been independently tested and granted European approvals, including ETA's, ESR's, Socotec, WRAS, NSF 61, and have been fire tested. In the USA we work with IAPMO and ICC-ES on an ongoing programme of product approvals.

Safety data sheets

Safety Data Sheets and Material Safety Data Sheets are available for all our products in 27 languages and to your national requirements.

Product data sheets

Every bonded anchor cartridge system comes with its own Product Data Sheet (PDS). The PDS tells you everything you need to know about the product, including technical and marketing information, to assist you in designing your own product literature and branding, if required.

CE mark

A CE mark is awarded to a product once it has been tested to a European harmonised standard and its manufacturing processes and quality control procedures are shown to be consistent to ensure conformity. Many 2K products already hold a CE mark and the product range with CE marks is constantly expanding. Regular audits by outside bodies ensure our high standards are maintained. A CE mark on a 2K product gives further confidence in our total commitment to product quality and you, our customer, can proudly include a CE mark on your product labels. CE marking is essential under Construction Product Regulations (CPR) effective in Europe since 1 July 2013.





CIC Cartridge

2K OFFERS A COMPREHENSIVE RANGE OF CARTRIDGE TYPES AND DELIVERY SYSTEMS TO MEET THE DEMANDS OF ITS CUSTOMERS AND THE NEEDS OF THE ALL IMPORTANT END USERS. THERE IS SOMETHING IN OUR RANGE TO MEET EVERY NEED AND OUR FACTORY HANDLES CARTRIDGES FROM 150ML TO 1500ML INCLUDING CO-AXIAL, CIC AND SIDE-BY-SIDE FORMATS.

See next page for our full range of cartridges

RANGE OF CARTRIDGES AND VOLUMES

For available chemistry and packaging system combinations please refer to the table on page 16.



CO-AXIAL CARTRIDGES ARE AVAILABLE IN 150ML, 330ML, 380ML AND 410ML VOLUMES.

APPLICATOR:
150ML - STANDARD MASTIC GUN.
330, 380 & 410ML - SPECIAL CO-AXIAL GUN.



CIC FOIL PACK SYSTEM CARTRIDGES ARE AVAILABLE IN 150ML, 170ML, AND 300ML VOLUMES.

APPLICATOR:
MAY BE USED WITH STANDARD MASTIC GUNS.



UNIVERSAL CARTRIDGE IS AVAILABLE IN 250ML VOLUME.

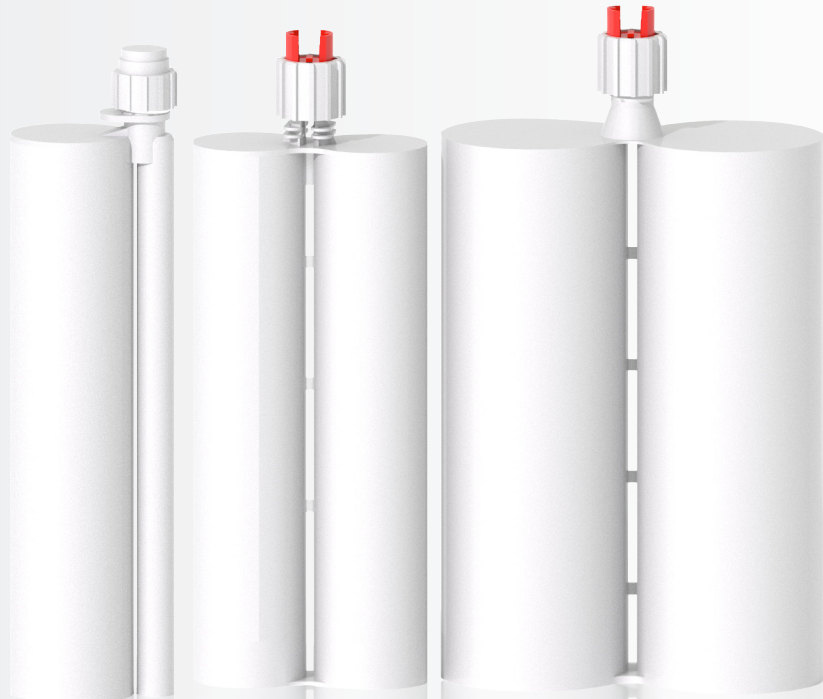
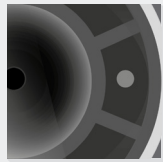
APPLICATOR:
A GOOD QUALITY, SINGLE-PISTON MASTIC GUN.





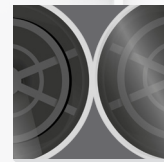
PEELER CARTRIDGE IS AVAILABLE IN 280ML, VOLUME AND 10:1 MIXING RATIO

APPLICATOR:
HIGH QUALITY SINGLE-PISTON APPLICATOR GUN.



SIDE BY SIDE CARTRIDGES ARE AVAILABLE IN 345ML, 385ML, 400ML, 450ML, 585ML, 600ML, 825ML, 900ML, 1125ML AND 1500ML VOLUMES.

APPLICATOR:
ALL SIDE BY SIDE CARTRIDGES REQUIRE SPECIFIC APPLICATOR GUNS.



PRODUCTS



P

P is a general purpose two-component chemical anchoring system that has been formulated to cure fast. It exhibits excellent bonding strength and is suitable for use in a variety of substrates, including dry or wet concrete and solid or hollow masonry.

Mixing ratio: **10:1**

P has an European Technical Approval and is available in various colours (grey, white and stone) and with different gel times (standard and winter grades).

P is available in different versions:

- ▶ P - standard gel time.
- ▶ PC - cold for winter conditions.



PSF-V Styrene-Free formulation

PSF-V resin is a universal bonded anchor for use in hollow and solid masonry substrates and dry or wet concrete, including flooded holes. Formulated free of styrene, PSF-V has a very low odour and is ideal for use in confined spaces and indoors.

Mixing ratio: **10:1**

PSF-V resin system carries ETA approvals to ETAG029 for anchoring threaded bars and internally threaded sockets into many masonry types and to ETAG 001 option 7 for use in concrete.

Special Feature:

- ▶ No styrene = Low smell.

PSF-V is available in different versions:

- V - standard gel time.
- VE - extended gel time for tropical climates.
- VS - speed for fast cure times.
- VC - cold for winter conditions.



For detailed product information please refer to the relevant **Product Data Sheet**



VE

VE resin offers improved performance for anchoring into concrete. It is suitable for use in hollow and solid masonry substrates and dry or wet concrete, including flooded holes.

Mixing ratio: **10:1**

VE resin has the following approval:

► ETA to ETAG 001-5 Option 7.



VESF Styrene-Free

VESF resin is the ideal bonded anchor offering improved performance for anchoring into a range of substrates. It is free of styrene and is suitable for use in hollow and solid masonry substrates and dry or wet concrete, including flooded holes.

VESF-E offers an extended gel time for tropical climates. The slow gel/fast cure property guarantees both application safety and high productivity on site.

Mixing ratio: **10:1**

Special Feature:

► No styrene = Low smell.

VESF Resin has the following approval:

► ETA to ETAG 001-5 Option 7.

VESF is available in different versions:

VESF - standard gel time.

VESF-E - extended gel time for tropical climates.



For detailed product information please refer to the relevant **Product Data Sheet**



EASF Styrene-Free low hazard

EASF resin offers excellent performance in dry and wet concrete and masonry substrates.

Mixing ratio: **10:1**

Special Features:

- ▶ No styrene.
- ▶ Low VOCs.
- ▶ Low smell.
- ▶ No label hazard symbols.

High Flash point ▶ 100 °C, Excellent for indoor use and in confined spaces. EASF has been extensively tested and carries the following approvals:

- ▶ ETA to ETAG 001-5 Option 7 for anchoring threaded bars in concrete.
- ▶ ETA to TR023 for post installed re-bar connections.
- ▶ ETA to ETAG 029 approval for use in masonry.
- ▶ Fire Tested F120 for threaded bars & F240 post installed for re-bar connections.
- ▶ NSF / ANSI 61 approved for potable water.
- ▶ ESR to AC308 for anchoring threaded bars and re-bars in cracked and un-cracked concrete and in seismic areas.



EASF-V Styrene-Free

EASF-V resin offers high performance in dry or wet concrete, including flooded holes, and masonry substrates.

Mixing ratio: **10:1**

Special Features:

- ▶ 100% epoxy acrylate polymer with very low VOC content.
- ▶ EASF-V has an ETA approval to ETAG 001-5 Option 7 for anchoring threaded bars in concrete.
- ▶ ETA to TR023 for post installed re-bar connections.
- ▶ ETA to ETAG 001-1 & 5 Option 1

EASF-V is available in different versions:

- V - Standard gel time.
- VC - Reduced gel time for cold climates.
- VE - Extended gel time for tropical climates.



For detailed product information please refer to the relevant **Product Data Sheet**



EASF-VC Styrene-Free winter grade

EASF-VC resin is a special formulation designed for low temperature applications and for winter seasons. The system offers high performance in concrete and masonry and has been independently tested for use in temperatures down to -26°C. EASF-VC is a 100% epoxy acrylate polymer with a very low VOC content.

Mixing ratio: **10:1**

Special Features:

- ▶ 100% epoxy acrylate polymer with very low VOC content.
- ▶ EASF-V has an ETA approval to ETAG 001-5 Option 7 for anchoring threaded bars in concrete.
- ▶ ETA to ETAG 001-1 & 5 Option 1



EASF-VE Styrene-Free tropical grade

EASF-VE is a special formulation designed for applications in high ambient temperatures.

The slow gel/fast cure property guarantees both application safety and high productivity on site. EASF-VE system offers high performance in dry or wet concrete, including flooded holes, and masonry substrates.

Mixing ratio: **10:1**

Special Features:

- ▶ 100% epoxy acrylate polymer with very low VOC content.
- ▶ EASF-V has an ETA approval to ETAG 001-5 Option 7 for anchoring threaded bars in concrete.
- ▶ ETA to TR023 for post installed re-bar connections.
- ▶ ETA to ETAG 001-1 & 5 Option 1



For detailed product information please refer to the relevant **Product Data Sheet**



EX1

EX1 is a high performance pure epoxy resin for use in cracked and un-cracked concrete, including seismic applications.

Mixing ratio: **1:1**

EX1 has been extensively tested at leading test facilities and now has or is awaiting the following approvals:

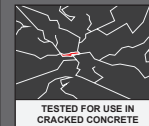
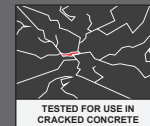
- ▶ ETA to ETAG 001-1 & 5 Option 1
- ▶ ETA to TR023 for post-installed re-bar connections (Pending)
- ▶ ESR to AC308 for anchoring threaded bars and re-bars in cracked and un-cracked concrete and in seismic areas.
- ▶ Fire Tested F240 for post installed re-bar connections.
- ▶ NSF / ANSI 61 approval for potable water.

Special Features:

- ▶ 100% epoxy with no MXDA, Phenol N-Methyl Pyrrolidone, Bisphenol A and Phthalates, VOCs.
- ▶ Minimal shrinkage.
- ▶ Good for oversized holes.
- ▶ Extended gel time making it perfect for deep holes and high ambient temperatures.



Certified to
NSF/ANSI 61
by
IAPMO R&T
(file N-7858)



For detailed product information please refer to the relevant [Product Data Sheet](#)



EX2

EX2 is a pure epoxy resin offering high performance, particularly in wet holes where it will outperform standard epoxies and is suitable for use in both cracked and uncracked concrete. EX2 is free of MXDA, NMethyl Pyrrolidone, Bisphenol A, Phthalates, Styrene and VOCs. It is good for overhead applications and is suitable for use in large diameter and deep holes and may be used in high ambient temperatures.

Mixing ratio: **2:1**

EX-2 has the following approvals pending:

- ▶ ETA Option 1.
- ▶ ETA to TR023 for post installed re-bar connections.



EX3

EX3 is a pure epoxy resin offering high performance, particularly in wet or flooded holes where it will outperform standard epoxies and is suitable for use in uncracked concrete. EX3 is free of MXDA, N-Methyl Pyrrolidone, Bisphenol A, Phthalates, Styrene and VOCs.

It is good for overhead applications and is suitable for use in large diameter and deep holes and may be used in high ambient temperatures.

Mixing ratio: **3:1**

EX-3 has the following approvals:

- ▶ ETA to TR023 for post installed re-bar connections
- ▶ Fire Tested F240 for post installed re-bar connections.
- ▶ WRAS potable water.



For detailed product information please refer to the relevant **Product Data Sheet**

CHEMISTRY AND PACKAGING COMBINATIONS.

CARTRIDGE	CIC					C-CN			S-SN										UVL	PLR	
PRODUCT VOL. ML.	150	170	300	550	850	150	380	410	345	385	400	450	585	600	825	900	1125	1500	250	280	
P 10:1	✓	✓	✓	✓	✓	✓	✓	✓	✓												
PSF - V; VE; VS; VC STYRENE-FREE 10:1	✓	✓	✓	✓	✓	✓	✓	✓	✓												✓
VE 10:1	✓	✓	✓	✓	✓	✓	✓	✓	✓												
VESF STYRENE-FREE 10:1	✓	✓	✓	✓	✓	✓	✓	✓	✓												✓
MEA 10:1	✓	✓	✓	✓	✓	✓	✓	✓	✓												
EASF STYRENE-FREE LOW HAZARD 10:1	✓	✓	✓	✓	✓	✓	✓	✓	✓						✓						✓
EASF - V STYRENE-FREE 10:1	✓	✓	✓	✓	✓	✓	✓	✓	✓						✓						✓
EASF - VE STYRENE-FREE TROPICAL 10:1	✓	✓	✓	✓	✓	✓	✓	✓	✓						✓						✓
EASF - VC STYRENE-FREE WINTER 10:1	✓	✓	✓	✓	✓	✓	✓	✓	✓						✓						✓
EX1 1:1											✓			✓				✓	✓		
EX2 2:1												✓				✓	✓				
EX3 3:1										✓			✓								

2K OFFERS A COMPLETE RANGE OF ACCESSORIES WHICH ARE INTEGRAL TO OUR ANCHORING SYSTEMS.

CRK Crack Injection Kit

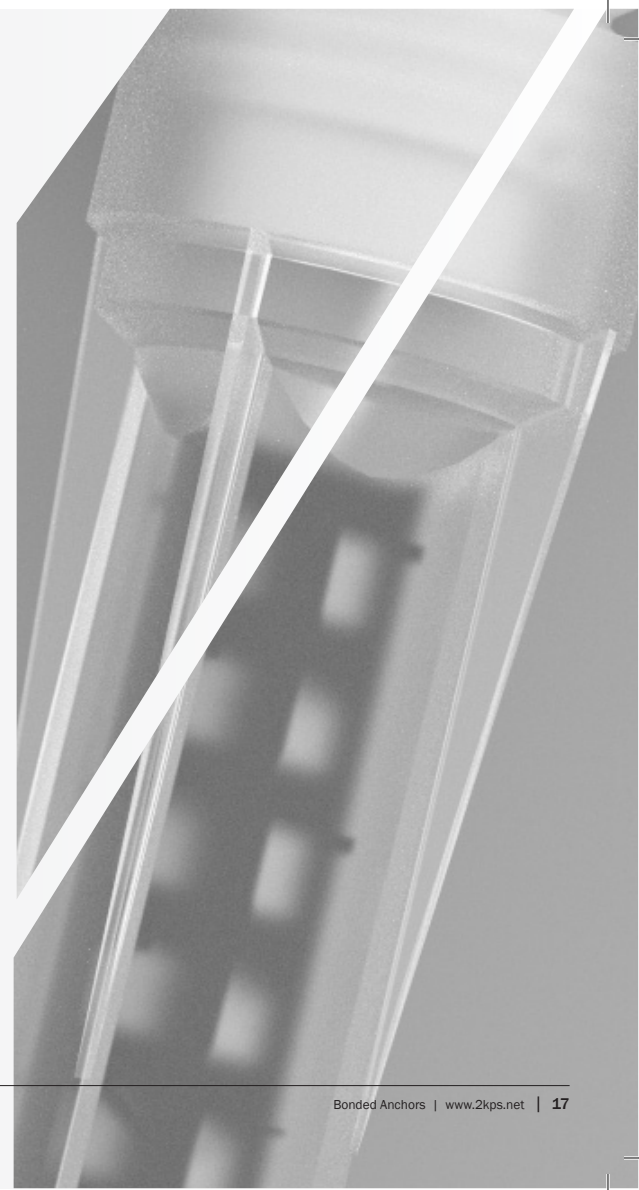
All-in-one kit to repair cracks in concrete and solid masonry.

2 x 300ml cartridges Capseal to seal the exposed surface of the cracks and fix the injection ports, 2 x 250ml cartridges of low viscosity CrackFix epoxy resin to inject into the cracks. CrackFix injection resin conforms to ASTM C-881. 16 x injection ports, 2 x mixing nozzles, extension tubes, restrictors, fan nozzles, gloves, spatulas and full instructions are supplied. A mastic gun is NOT included.

Accessories

We offer applicator guns, blow pumps for cleaning holes, metal or hybrid hole cleaning brushes, mixing nozzles (standard, very short or extra-long), extension tubes, resin stoppers and perforated sleeves.

Our original accessories should always be used as often they form a part of the Approved System.





TO MAKE YOUR LIFE EASIER 2K POLYMER SYSTEMS PROVIDES THEIR APPROVED HIGH PERFORMANCE BONDED ANCHORS WITH STATE-OF-THE-ART DESIGN SOFTWARE FOR THREADED BARS AND POST-INSTALLED REINFORCING BARS.

Design Software

The use of ETA-approved bonded anchoring products, now common place, can involve long and complicated calculations during the anchor-design phase. These calculations may take a lot of time and can seriously delay the start of a project.

These calculations are detailed and complex because the option level chosen for that particular ETA. Among 12 options there are three design methods ▶ A, B, and C. The calculations determine each possible anchor failure mode: steel failure, combined pull-out failure, concrete cone failure, concrete splitting failure and concrete edge failure.

Available in six languages, the software is available for Private Label Customers with the logo, font, colours and product name all customized to suit the corporate image.

Contact us to learn more about 2K's Design Software.

2K UNDERSTANDS THAT OUR TOP QUALITY PRODUCTS NEED TO BE BACKED UP WITH UNIVERSALLY-RECOGNISED TECHNICAL APPROVALS FROM INDEPENDENT OUTSIDE BODIES.

Technical Approvals

We devote time and resources to ensuring our products have a wide range of approvals including:

Europe

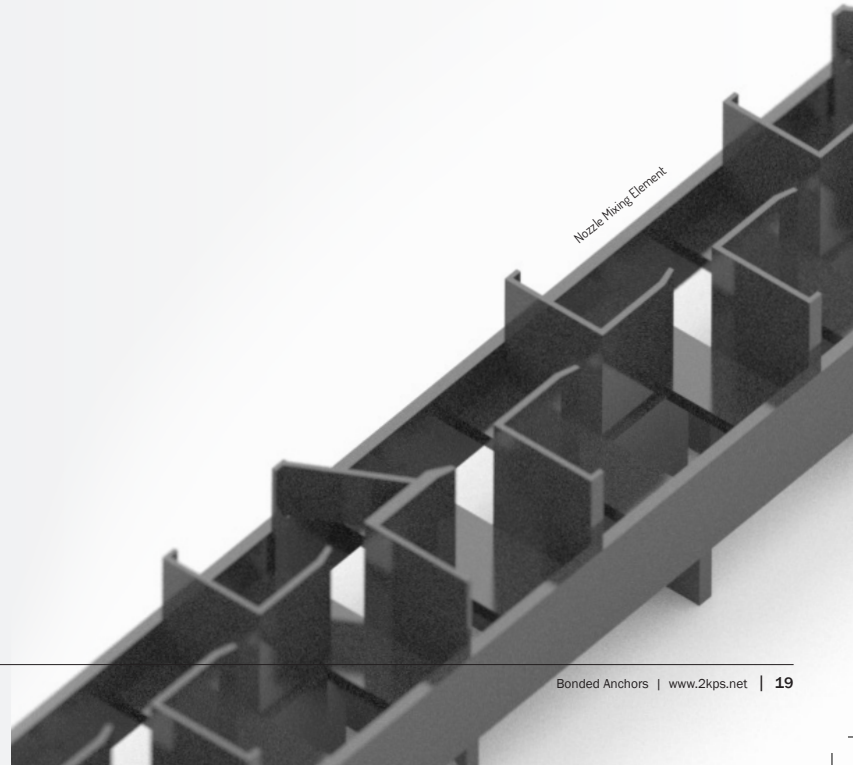
- ▶ ETAs according to ETAG 001 for threaded bars, to TR023 for post-installed rebar connections and to ETAG 029 for masonry applications.
- ▶ Socotec.
- ▶ C1 Seismic performance.
- ▶ F240, Fire Tested for post-installed rebar connections.
- ▶ WRAS Potable Water Approval.

USA

- ▶ We have ES reports from ICC-ES and IAPMO.

We also have NSF/ANSI 61 approvals for potable water. Last but not least we carry out extensive test programmes in our own laboratory and test rooms.

These approvals may all be transferred to our private label partners who benefit from our years of investment and attention to technical detail.



EPOXY PUTTY STICKS ARE A RANGE OF SIMPLE, READY TO USE, EPOXY REPAIR PUTTIES THAT RAPIDLY AND EFFECTIVELY REPAIR, REBUILD OR REINFORCE MOST MATERIALS.

Epoxy Putty Sticks

There is an Epoxy Putty Stick for most applications: Steel, Aluminium, Copper, Titanium, Plastic, Wood, Masonry and Underwater. They have been tried and tested to produce excellent results. Quick and easy to use, Epoxy Putty Sticks harden in minutes to a high strength and can then be machined, sawed, tapped, drilled, sanded and painted to provide a reliable and permanent repair. Each colour-coded Epoxy Putty Stick is a two part, co-extruded, polymer compound that requires no tools and is simply kneaded by hand to a uniform consistency before applying to the required area.

Clean and roughen the area to be repaired and then follow these three simple steps:

- ¹ Cut off required amount
- ² Knead to a uniform colour
- ³ Apply to the surface to be repaired

Making effective repairs with Epoxy Putty Sticks could not be quicker or easier

Visit the website for product and application details.

Epoxy Putty Sticks

- ▶ the fast, simple and effective way to permanent repairs

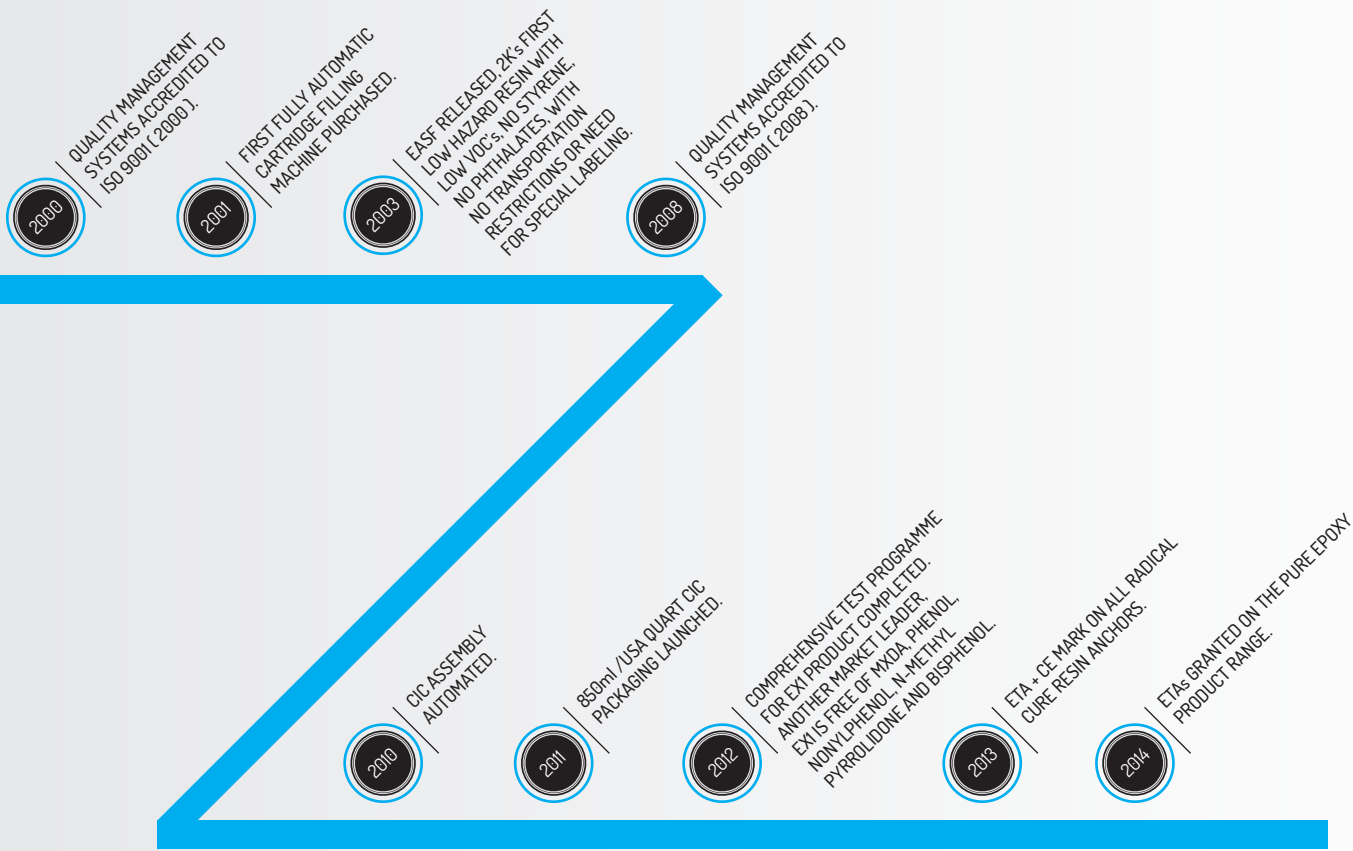
The advantages of Epoxy Putty Sticks:

- ▶ Quick and easy to use.
 - ▶ No measuring: just cut off what you require no tools: simply mixed between the fingers.
 - ▶ No mess: putty-like consistency means no running or dripping.
 - ▶ No waste: only use as much as you need.
 - ▶ Good shelf life.
 - ▶ Cure in minutes to a high strength.
 - ▶ Rapidly obtains industrial strength.
 - ▶ Easily moulded or shaped for each application.
 - ▶ Can be machined, sawed, drilled, sanded and painted.
 - ▶ Ideal for a wide range of repairs.
 - ▶ Epoxy Putty Sticks have been formulated to produce outstanding results.
 - ▶ High bond strength formed with the repaired material.
 - ▶ Filling cracks, sealing leaks, forming parts, restoring damaged areas.
 - ▶ No shrinkage or rusting; extended shelf life.
 - ▶ Particularly suitable for all maintenance departments.
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Co-Axial Cartridge

EVER-TIGHTENING REGULATIONS REQUIRE EVER-**GREENER** PRODUCTS. INCREASINGLY DEMANDING USERS WANT MORE COMPLEX PRODUCTS TO BE DELIVERED EVER-MORE EFFICIENTLY. THROUGHOUT ITS HISTORY 2K'S BONDED ANCHOR FORMULATIONS HAVE DEVELOPED TO MEET REGULATIONS AND PERFORMANCE DEMANDS, ALONG WITH STEADY IMPROVEMENTS TO OUR PACKAGING AND DELIVERY SYSTEMS.





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