

# Knowledge + Knowhow



Tunnels and Underground





Transport Infrastructure

Utilities Infrastructure



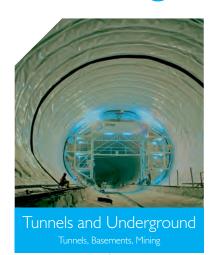


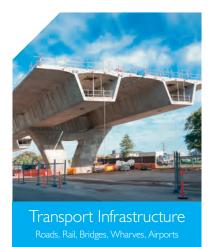
Through its distributor Quicseal, Bluey is now able to offer its range of Civil Engineering products throughout the Asia Pacific region. Bluey is widely regarded for its ability to provide more than industry specific products, its engineering edge and experience will help you specify, plan and manage projects seamlessly from beginning to end.

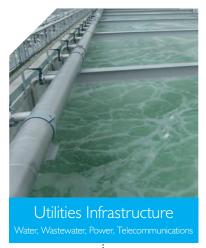
The local knowledge and manufacturing capabilities of Quicseal will further ensure that you will receive the usual great service you have come to expect from our team. The Quicseal partnership with Bluey will result in a collaborative approach to problem solving with local asset owners, contractors, designers and specifiers. This means you will have a partner by your side with tenacity and agility to think outside the square and ensure the job gets done. All in all, this not only makes your life easier - it means a better whole of life cost for your project.



# Knowledge + Knowhow









### Blu**Cem**

#### **PRIMER**

Blu**Cem** API0

#### ACRYLIC CONCRETE PRIMER

This product improves bond between layers of cementitious products by sealing the surface and preventing water from being lost at the contact interface. This allows full hydration of subsequent layers at the point of bonding and ensures full strength development.

#### **MORTARS**

Blu**Cem** HB40

#### HIGH PERFORMANCE REPAIR MORTAR

A state-of-the-art repair mortar designed for the most challenging repair applications. BluCem HB40 has ultra low shrinkage, negligible permeability and is chloride and aluminium free, to create a durable and chemically advanced repair mortar system. The cured mortar is designed to provide compatible strength and elastic modulus for a range of structural repair applications.

Blu**Cem** HB50

#### RAPID SETTING MARINE HIGH BUILD MORTAR

The reliable choice of repair mortar for challenging environments due to its blend of special sulphate and chloride resistant cements. BluCem HB50 provides fast setting times and high chemical resistance which ensures repairs can be undertaken within tidal zones and other applications that require fast return to service.

Blu**Cem** HB55

#### SPRAYABLE SHOTCRETE

Selected aggregates are custom graded to create maximum interlocking during dry spraying. This builds depths of several hundred millimetres in one pass, creating a strong and highly resistant structural repair mortar. BluCem HB55 is an economical high-performance product with low electrical resistivity and is suitable for repairs involving cathodic protection.

Blu**Cem** HB60

#### SPRAYABLE RAPID SETTING CEMENTITIOUS SHOTCRETE

Developed using a blend of carefully selected aggregates combined with sulphate and chloride resistant cements to form the basis of this very dense, high build repair mortar. BluCem HB60 is a high performance repair mortar which performs very well in marine environments. The special cements allow placement during low tide and is ready for submersion several hours later.

Blu**Cem** ZeoGlass

#### RECYCLED INORGANIC POLYMER FOR STRUCTURAL SEWER LININGS

BluCem ZeoGlass had been developed using a blend of carefully selected recycled glass aggregates combined with our cementitious material to form the basis of this very dense, high build inorganic polymer structural sewer mortar. The selected aggregates are custom graded by Bluey Technologies to create maximum interlocking during dry spraying. This builds depths of several hundred millimetres in one pass, creating a strong and highly resistant structural repair mortar. BluCem ZeoGlass is an economical high-performance product with high acid resistance and is suitable for structural repairs in sewers and waste water environments.







#### **GROUTS**

Blu**Cem** 510

#### **CONSTRUCTION GROUT**

A flowable, volumetrically stable, Class C grout which has both early and long term shrinkage compensating additives. This allows grout to be placed in critical applications and ensures elimination of shrinkage cracking or settlement.

Blu**Cem** HE80

#### **EARLY STRENGTH GROUT**

A fluid grout which has exceptionally high early strength development through its technically advanced cement system. This allows the grout to remain fluid during placement and ensures a high strength and very durable long-term grouting solution.

Blu**Cem** HS200

#### PT CABLE GROUT

This product uses the most advanced superplasticisers and suspension agents available to create an exceptionally high performance fluid grout. The additives allow the grout to be applied in critical applications such as post-tension cable grouting and ensures full encapsulation of the duct without bleed, segregation or presence of voids. BluCem HS200 is one of the most advanced aggregate-free fluid grouts available and is the preferred grout for many major road authorities and government utilities. (Also available in additive format BluCem HS200A.)

Blu**Cem** HS400

#### THIXOTROPIC GROUT

A thixotropic grout which will flow under pumping pressure but remains stable under gravity forces through its special blend of cement and fillers. This allows the grout to be applied in top-down application such as overhead rock bolting and ensures full encapsulation of bolts and filling of cavities without voids. The silica fume provides added density and durability for 100-year design life.

Blu**Cem** 511

#### HIGH STRENGTH NON SHRINK GROUT

A high strength, fluid and shrinkage compensated grout. BluCem 511 has both early and long term shrinkage compensating additives. This allows grout to be placed in critical applications and ensures elimination of shrinkage cracking or settlement.







## Blu**Cem**

#### **MICRO-CONCRETE**

#### D

Blu**Cem** LH60

#### DEEP POUR ENGINEERED MICRO CONCRETE

Creates low exothermic heat during hydration through its use of slower reacting cements and specially selected thermally conductive aggregates. This allows BluCem LH60 to remain cool during placement of large pours and also allows the grout to effectively transmit heat during service life. The product is non-shrink and is designed to pump long distances and be self-compacting in form-and-pour remediation activities.

#### EARLY STRENGTH GROUT WITH AGGREGATE

Blu**Cem** HE80AG A blend of advanced cementitious powder and fine aggregate which has exceptionally high early strength development. This addition of aggregate allows BluCem HE80AG to be batch mixed in agitators for large volume applications including road and runway repairs. BluCem HE80AG has been used on some of Australia's largest and most important infrastructure projects where time is a critical factor.

#### **UNDERWATER GROUTS**

#### HIGH STRENGTH UNDERWATER GROUT

Blu**Cem** HS60 UW An underwater grout that is a highly fluid, volumetrically stable, Class C grout which has both early and long-term shrinkage compensating additives. This allows grout to be placed in critical applications and ensures elimination of shrinkage cracking or settlement where it is not possible to create a dry working environment.

#### DEEP POUR UNDERWATER MICRO CONCRETE

Blu**Cem** LH60 UW An underwater grout that creates low exothermic heat during hydration through its use of slower reacting cements and specially selected thermally conductive aggregates. This allows BluCem LH60 to remain cool during placement of large pours and also allows the grout to effectively transmit heat during service life. The product is non-shrink and is designed to pump long distances and be self-compacting in form-and-pour remediation activities where it is not possible to create a dry working environment.

#### **FLOORING**

#### RAPID FLOOR SELF-LEVELLING CEMENTITIOUS GROUT

Blu**Cem** SL50 An extremely hard wearing, early strength, self-levelling grout manufactured from specially selected cements, aggregates and additives. This allows BluCem SL50 to be used in hard wearing applications and ensures a durable and long lasting installation. BluCem SL50 is a leader in its class of floor topping materials with its exceptionally high scratch resistance, strength and bond







### Blu**Geo**

#### **GRP**

#### GRP CONTINUOUSLY THREADED SOLID BAR

Blu**Geo** GRP60 BluGeo GRP60 is a Vinyl Ester glass composite bar, based on leading edge Swiss and Japanese design and manufacturing technology. The unique manufacturing process results in an ultra-high shear capacity and thread strength. The product has been designed and extensively tested to International standards for GRP bar manufacture and to provide a 100-year design life. The system includes both GRP and steel nuts and plates to provide the appropriate load capacity for the anchors. The product is easily cut, non-conductive and light weight, reducing site safety risks.

#### **ROCK BOLTS AND ANCHORS**

#### Blu**Geo** LP Rock Bolt

#### DCP LOW PROFILE STEEL RIGID ANCHOR

BluGeo LP Rock Bolt has a low-profile head and is an extremely durable, high strength bolt, manufactured from Australian Standard steel, and polyethylene sleeve. The simple design facilitates ease of installation. BluGeo LP Rock Bolt is a leader in its class of tunnel bolts with its exceptionally low profile head allowing savings in shotcrete lining thicknesses while eliminating hazards associated with protruding bolt heads.

#### Blu**Geo** SR Rock Bolt

#### DCP STEEL RIGID ANCHOR

BluGeo SR Rock Bolt has a traditional head and is an extremely durable, high strength bolt manufactured from Australian Standard steel, and polyethylene sleeve. BluGeo SR Rock Bolt is a leader in its class of tunnel bolts with its traditional head assembly allowing for easy installation with standard bolting equipment.

#### Blu**Geo** CF Rock Bolt

#### DCP LOW PROFILE FLEXIBLE CABLE ANCHOR

BluGeo CF Rock Bolt has a low-profile head and is an extremely durable, high strength cable bolt manufactured from Australian Standard steel, and polyethylene sleeve. BluGeo CF Rock Bolt is a leader in its class of cable bolts with its low-profile head allowing savings in shotcrete lining thicknesses while eliminating hazards associated with protruding bolt heads.

#### Blu**Geo** S-Type Centraliser

#### ANCHOR CENTRALISER

BluGeo S-Type Centraliser is an injection moulded, high strength plastic product designed for quick installation on ground anchor bars to ensure central location in the drilled hole. The product has been designed to facilitate the location of the grout tube along the bar.







### BluRez

#### **POLYURETHANE INJECTION RESINS**

#### HYDROPHILIC POLYURETHANE INJECTION RESIN

Blu**Rez** CSI50 BluRez CSI50 is a single component polyurethane injection resin which can be easily injected in complex environments where a quick sealing solution is required. The specially formulated resin reacts with water to form a semi-solid hydrophilic product which will later expand in contact with water to create a pressure resisting seal. Requiring only simple application equipment for installation as a single component product, the BluRez CSI50 is ideal for difficult access environments including tunnels, sewers and basements. With some basic instruction, BluRez CSI50 can be installed by non-specialised operators allowing installation on site by the main contractor. BluRez CSI50 provides an easy and cost effective solution for all damp cracks requiring fast and easy sealing on site.

#### WATER STOPPING POLYURETHANE RESIN

Blu**Rez** CSW BluRez CSW is designed for sealing large water inflows under high pressure. Its fast reaction with water, rapid expansion and ability to form a pressure resisting structure within minutes will ensure that work can progress quickly. BluRez CSW is suitable for sealing and consolidating rock, soils, concrete, steel and timber structures. The closed cell foam structure provides long-term durability against sustained high pressure water heads. Injected as a single component, the product only requires simple equipment for installation making it a quick and easy solution for tunnels, basements and most underground structures. BluRez CSW is a reliable choice for sealing water flow or consolidating soils and rock in an underground environment.

#### **EPOXY RESINS**

#### HIGH PENETRATION EPOXY RESIN

Blu**Rez** Epoxy III BluRez III has been developed to offer an unmatched combination of ultralow mixed viscosity, good work time and high full-cure mechanical strengths. This low viscosity and low surface tension has been achieved without the incorporation of any solvents, creating one of the best penetrating 100% solid resin systems available. BluRez III has been developed to offer fast injection application and specially developed to bond to both dry and damp surfaces. Extremely high structural properties including compressive strength, tensile strength and bond make BluRez III a reliable choice for challenging, high performance project applications.

#### LOW VISCOSITY EPOXY INJECTION RESIN

Blu**Rez** 302LV A two component, low viscosity epoxy resin for injection sealing of cracks into dry and damp cracks, and provides good water resistance and protection against chemical attack. BluRez 302LV has been developed to offer fast injection application with high full-cure mechanical properties. Extremely high compressive strength, tensile strength and bond make BluRez 302LV a reliable choice for challenging, high performance project applications.

#### **EPOXY INJECTION RESIN**

Blu**Rez** 302 A two component epoxy resin for injection sealing into dry cracks and provides good water resistance and protection against chemical attack. It has been developed as an easy to use and cost effective injection resin with good working time and high full-cure mechanical strength. BluRez 302 is solvent-free ensuring no shrinkage and safe to use. BluRez comes in preweighed packaging suitable for large scale applications, making it ideal for a range of civil engineering applications.

#### **EPOXY MORTAR**

Blu**Rez** 301 A two component, high strength epoxy mortar that produces an impermeable and chemically resistant mortar. BluRez 301 is suitable for repairs of damaged concrete elements, bedding applications like bridge bearing pads and mounting of heavy plant and machinery, and reinstatement of structures exposed to heavy battering of the sea, such as seawalls and concrete jetties.







#### **EPOXY GROUT**

#### PRECISION EPOXY GROUT

Blu**Rez** 

BluRez 322 is a three-component, high strength non shrink epoxy based grouting system offering ease of use and superior mechanical properties. The use of a high-performance epoxy grout like BluRez 322 will maximise the effective bearing area under the widest variety of machinery and equipment support applications. The system demonstrates higher mechanical properties than cement based grouts including superior dynamic load response. BluRez 322 is suitable for a wide range of civil engineering applications.

#### **EPOXY SEALANTS AND ADHESIVES**

#### **EPOXY PUTTY**

Blu**Rez** 304

BluRez 304 is a specially formulated gap-filling paste adhesive. It is a two component epoxy putty which comes in a thixotropic paste. When mixed, it exhibits excellent bond and mechanical properties, making it ideal for many building and construction site application. It can be used for bonding precast concrete, anchoring bolts and dowel cars, sealing cracks, and overhead repair. Due to its robust nature, durability in harsh environments and wide range of applications, BluRez 304 is a reliable choice for civil engineering projects.

#### SEGMENTAL CONSTRUCTION ADHESIVE

Blu**Rez** Epoxy 575CG BluRez 575CG Structural Adhesive System is a specially formulated non-sag, gap-filling paste adhesive. This easy-to-use, two-part epoxy product hardens after mixing with excellent properties that are ideally suited to sealing vertical and overhead surfaces including precast match castings on buildings and bridges. BluRez 575CG contains Kevlar® reinforcement, providing high creep resistance and excellent long-term durability. BluRez 575CG will bond to damp surfaces and maintain its bond and structural integrity in a submerged environment. Due to its robust nature, durability in harsh environments and wide range of applications, BluRez 575CG is a reliable choice for civil engineering projects.







### Blu**Seal**

#### **MEMBRANES**

#### VLDPE FLEXIBLE SHEET MEMBRANE

Blu**Seal** VLDPE Tunnel Liner BluSeal VLDPE is supplied and installed as a fully sealed and welded robust membrane system. The installed system includes proprietary system provisions for service penetrations, through fixings and terminations. The liner is suitable for a range of underground structures, providing the most robust and reliable solution available for concrete protection and water infiltration management. Under the supervision of Bluey Engineers and trained installers, BluSeal VLDPE can be applied to tunnels, basements and other structures as either a tanked or drained lining system. VLDPE allows extrusion welding over hand welds in complex areas, providing additional surety around structures with complex geometry. BluSeal VLDPE is designed and installed in accordance with International standards. BluSeal VLDPE is the most reliable choice for all civil engineering underground structures.

#### PVC FLEXIBLE SHEET MEMBRANE

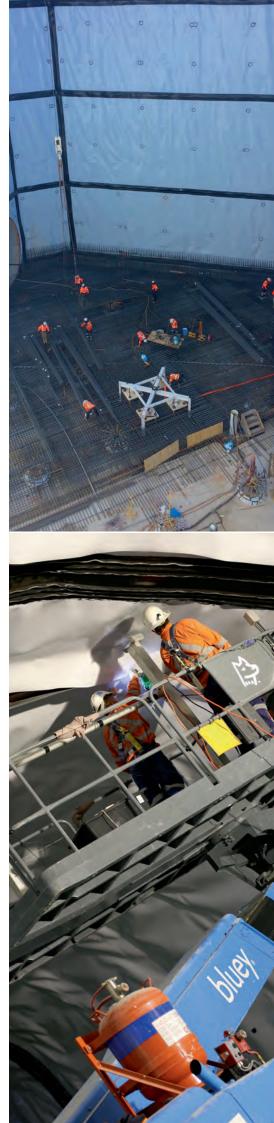
Blu**Seal** PVC Tunnel Liner BluSeal PVC is supplied and installed as a fully sealed and welded robust membrane system. The installed system includes proprietary system provisions for service penetrations, through fixings and terminations. The liner is suitable for a range of underground structures, providing the most robust and reliable solution available for concrete protection and water infiltration management. Under the supervision of Bluey Engineers and trained installers, BluSeal PVC can be applied to tunnels, basements and other structures as either a tanked or drained lining system. PVC allows easy hand welding in complex areas, providing cost savings on installation around structures with complex geometry. BluSeal PVC is designed and installed in accordance with International standards. BluSeal PVC is the most reliable choice for all civil engineering underground structures.

#### HDPE CONCRETE PROTECTION MEMBRANE

Blu**Seal** Anchor Knob Sheet BluSeal Anchor Knob Sheet (AKS) is a premier concrete protection lining solution. The sheet, manufactured from the highest quality HDPE, is locked into the surface of concrete during construction by an integrated anchoring system. Being installed during the concrete placement process eliminates the requirement for concrete curing and preparation prior to installation saving time and eliminating potential quality control issues. The integrated knobs provide very high mechanical anchoring ensuring that vapour pressures and dampness from the underground environment do not compromise bonding over the lifetime of the structure. Under the supervision of Bluey Engineers and trained installers, BluSeal AKS can be applied to sewers, chemical tanks and other structures as either a tanked or drained lining system. The AKS liner can be applied to complex geometrical surfaces as a continuous, fully welded system suitable for the challenge of civil engineering environments.

#### CEMENT POLYMER MEMBRANE

Blu**Seal** TF05 BluSeal TF05 is a robust and flexible membrane system with a proven track record in underground applications. The installed system has been specifically designed to provide a combination of benefits including water infiltration management, strata support and aesthetic final lining. The spray liner can be applied between shotcrete layers or otherwise on the internal surface. Its high tensile strength has the added advantage of being able to offer strata support, while accommodating the stresses associated with structural movement and providing a barrier to moisture degradation. Under the supervision of Bluey Engineers and trained installers, BluSeal TF05 can be applied to tunnels, basements and other structures as either a tanked or drained lining system. The spray application allows easy application in complex areas providing cost savings on installation around structures with complex geometry. BluSeal TF05 is designed and installed in accordance with International Standards.



#### WATERSTOPS AND SEALING SYSTEMS

#### PVC UNIVERSAL REAR GUARD WATERSTOP

Blu**Seal** URG Waterstop BluSeal URG Waterstops are extruded from specially formulated PVC to meet International Standards. The product has high flexibility and an ability to withstand cyclical loadings expected within movement joints. The range of widths and rib configurations provides specifiers with options which will suit a range of waterproofing solutions. BluSeal URG Waterstop has the structural integrity and the long-term durability to make it suitable for critical infrastructure works in a range of application environments.

### Blu**Seal** UCG Waterstop

#### PVC UNIVERSAL CENTRE GUARD WATERSTOP

BluSeal UCG Waterstops are extruded from specially formulated PVC to meet International Standards. The product has high flexibility and an ability to withstand cyclical loadings expected within movement joints. The range of widths and rib configurations provides specifiers with options which will suit a range of waterproofing solutions. BluSeal UCG Waterstop has the structural integrity and the long-term durability to make it suitable for critical infrastructure works in a range of application environments.

#### Blu**Seal** |S50

#### **EPDM JOINT SEALING MEMBRANE**

BluSeal JS50 is an EPDM bonded joint sealing system which can be applied to high movement concrete joints. BluSeal JS50 is designed to be used in conjunction with BluSeal AD50 to create an ultra high movement capacity joint seal for fixing between concrete elements where high movements are expected. Due to its very high elasticity, BluSeal JS50 is particularly suitable for joints where large thermal, geotechnical and loading deformations may occur between structural elements. Due to its robust nature and ability to be applied in damp environments, BluSeal JS50 is particularly suitable for the most challenging civil engineering applications.

### Blu**Seal**

#### SILANE-MODIFIED POLYMER ADHESIVE

BluSeal AD50 is a silane-modified polymer which cures when exposed to the atmosphere to form a flexible, high bond compound. BluSeal AD50 is designed to be used in conjunction with BluSeal JS50 to create an ultra-high movement capacity joint seal for fixing between concrete elements where high movements are expected. Due to its excellent bonding capabilities, even in damp environments, BluSeal AD50 is particularly suitable for challenging civil engineering applications.

#### Blu**Seal** Superstop 47B

#### HYDROPHILIC BUTYL WATERSTOP SEAL

BluSeal Superstop 47B is manufactured utilising a specialised mixing process which encapsulates hydrophilic materials into a Butyl base creating a controlled, moisture activated seal. This allows the product to be used in major civil engineering project applications and ensures a durable and long lasting installation. BluSeal Superstop 47B has the structural integrity and the long-term durability to make it suitable for critical infrastructure works. BluSeal Superstop 47B does not expand prematurely from the wet weather due to its unique expansion control system, helping minimise any pre-expansion when installed in fresh concrete.

#### HYDROPHILIC GUN GRADE PU WATERSTOP

Blu**Seal** Leakmaster BluSeal Leakmaster is manufactured utilising a specialised single component Polyurethane water swelling resins. This allows the product to be used in major civil engineering project applications and ensures a durable and long lasting installation. BluSeal Leakmaster has the structural integrity and the long-term durability to make it suitable for critical infrastructure works. BluSeal Leakmaster unique properties allows it to be applied where conventional solid sealants cannot be easily applied. After curing, BluSeal Leakmaster has excellent physical and water sealing properties.









# Bluey deliver...

- Products developed for civil engineering
- Product technical knowledge
- Site application knowhow
- A collaborative approach
- Economical solutions for large projects

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