



Water & Wastewater

SECTOR GUIDE



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WHO WE ARE

For more than three decades, Hychem Infrastructure has stood as a proudly Australian owned and operated leader in the protection and enhancement of the nation's critical assets.

We deliver specialised materials and proven engineering solutions across the Transport, Ports & Marine, Water & Wastewater, Mining & Geotechnical, Structural and Remediation sectors. Our reputation is built on technical excellence and innovation, applied to extend the life of Australia's most essential infrastructure.

Our approach goes beyond product supply. We partner with clients through our in-house team of qualified civil engineers and technical specialists, who work directly with asset owners and contractors to develop robust, fit-for-purpose solutions.

By combining the agility of local manufacturing with world-class technologies from strategic global partners, we provide access to a comprehensive portfolio of advanced systems adapted for demanding Australian conditions.

Guided by our core values of integrity, excellence, and partnership, we are positioned as Australia's trusted provider of solutions that strengthen infrastructure for future generations. We don't just repair your assets; we future-proof them—applying decades of engineering experience to protect Australia's infrastructure legacy.

OUR VALUES

Integrity

We stand by our word. Our relationships are built on honesty, trust, and reliability both internally and with those we serve.

Excellence

We pursue the highest standards in engineering, technical delivery, and product performance, offering solutions that last.

Innovation

We embrace progress by adopting smarter technologies and continuously improving how we solve infrastructure challenges.

Accountability

We take ownership of our work, our commitments, and the outcomes we deliver in the field.

Partnership

We believe in collaboration, working alongside clients, contractors, engineers, and global suppliers to achieve shared success.

People & Culture

We cultivate a supportive, inclusive environment where our people are encouraged to grow, contribute, and thrive.

Sustainability

We are committed to reducing environmental impact through durable, efficient, and future-focused infrastructure solutions.



WATER & WASTEWATER INFRASTRUCTURE SOLUTIONS

Hychem delivers specialised systems to protect and rehabilitate Australia's water and wastewater infrastructure, including treatment plants, reservoirs, pipelines, and storage tanks.

From potable water storage to wastewater treatment facilities, our high-performance coatings, linings, and repair systems provide reliable protection against harsh conditions, extending the service life of vital infrastructure.

We understand that your assets are your livelihood, and in many cases support the community too, so we're here to protect them every step of the way.



Safeguarding our most
precious resource

Water

We deliver a range of fully certified AS/NZS 4020:2018 systems for use in direct contact with drinking water, guaranteeing the highest standards of safety and compliance.

Our solutions for potable water assets, including storage tanks, reservoirs, and treatment plants, provide exceptional resistance to erosion and chemical treatments, protecting asset integrity and safeguarding public health.



Wastewater

Wastewater assets face some of the most aggressive conditions, exposed to dangers like hydrogen gases and high acidity. Hychem offers a suite of high-performance linings and repair mortars engineered for long-term protection in these extreme environments.

Our systems provide outstanding durability for digesters, clarifiers, and chemical bunds, minimising downtime and maximising asset life.



PRODUCT & SYSTEMS SELECTION GUIDES

The Product & System Selection tables have been prepared to assist with the selection of typical solutions used to repair, protect and maintain concrete structures used in water and wastewater infrastructure.

The tables include references to the Water Services Association of Australia Manual for Selection and Application of Protective Coatings WSA201:2021 Second Edition Version 2.3 (WSA201, where possible). We have included references for additional products and systems that may also be required for the repair, sealing and waterproofing of new and existing concrete.

These tables provide general guidance only and do not replace project-specific engineering assessment or Water Agency requirements. Individual Water Agencies may have their own specifications and standards which take precedence over the WSA201. Confirm the requirements of the individual Water Agency before proceeding with the selection of products and systems.

Contact Hychem Infrastructure for further technical information and advice.

CONCRETE REPAIR

Solution	Product/ System	Potable water (Tested to AS4020)	Exposure Class (WSA201 Table 2)	WSA201 Reference
Geopolymer	Geocast Geopolymer Mortar Geopolymer mortar to 100mm	Yes	Extreme	WSA 161 Appraisal No. PA2503 C14 Geopolymer Cement Mortar Table 9 Rehabilitation of concrete sewerage structures (for saturated substrates)
High build repair mortar	Velosit SR207 Cementitious R4 repair mortar 6–100mm. Hand, spray or pourable application. Sulfate resistant.	No	Low to high	6.2.5.6 (h) shrinkage compensated high build repair mortar.
High build repair mortar	Velosit RM202 Cementitious repair mortar, feather to 100mm. Vertical, horizontal & overhead applications. Hand or spray application.	Yes	Low to high	6.2.5.6 (h) shrinkage compensated high build repair mortar.
High build repair mortar	Velosit RM203 Cementitious rapid repair mortar, feather to 100mm. Vertical, horizontal & overhead applications. Hand application.	No	Low to high	6.2.5.6 (h) shrinkage compensated high build repair mortar.
High build repair mortar	Velosit RM205 Cementitious rapid repair mortar, 6 to 100mm. Vertical horizontal & overhead applications. Hand application.	No	Low to high	6.2.5.6 (h) shrinkage compensated high build repair mortar.
Reinforcement protective coating	Velosit CP201 Cementitious corrosion protection and primer for concrete, masonry and steel. Corrosion protection of concrete embedded steel rebar.	No	No exposure	6.2.5.6 (e) exposed reinforcement protective coating. 9. Product Specifications, Table 10, P4 Concrete epoxy primer.
Epoxy mortar	Hychem E500T Epoxy mortar fairing coat or epoxy render. Hand application.	Yes	No exposure	9. Product Specifications, Table 10, P7 Epoxy mortar.
Crack repair, static	Hychem E50 LV Low viscosity epoxy injection resin	No	Low to high	6.2.5.6 static cracks: >0.3mm (atmospheric exposure), >0.2mm (immersed, water retaining or excluding structures)
Crack repair, active or static	Hychem FPO Joint Tape High-performance flexible polyolefin (FPO) waterproofing tape, Adhesive Hychem PF19.	Yes	Extreme	6.2.5.6 Active crack

PROTECTIVE COATINGS FOR TREATMENT PLANTS AND PUMPING STATIONS

Solution	Exposure Class (WSA201 Table 2)	Substrate	Product/ System	WSA201 Reference
Internal surfaces of wet wells, inlet & discharge manholes, emergency storage tanks	Extreme	Existing concrete	Geocast Geopolymer Mortar Geopolymer mortar to 100mm	WSA 161 Appraisal No. PA2503 9. Product Specifications, Table 10, T7 Novolac epoxy. C14 Geopolymer Cement Mortar
			Hychem TL5 EPL Ultra high build epoxy coating up to 6mm	9. Product Specifications, Table 10, C8 Ultra high build epoxy
Internal surfaces of Tanks, Vessels containing agitated sewage, e.g. grit chambers, inlet works, digesters	Extreme	Existing concrete	Geocast Geopolymer Mortar Geopolymer mortar to 100mm	WSA 161 Appraisal No. PA2503 9. Product Specifications, Table 10, T7 Novolac epoxy. C14 Geopolymer Cement Mortar
		New & existing concrete	Hychem TL9 Novolac epoxy coating	9. Product Specifications, Table 10, T7 Novolac epoxy
Structural members, steelworks, crane rails, gantry, conveyors, rake arm, skimmer, scum beach, conveyors, drum screen, disintegrators, dewatering presses, penstocks, lift gates	Extreme	Steel	Hychem TL5 EPL Ultra high build epoxy coating up to 6 mm	9. Product Specifications, Table 10, C8 Ultra high build epoxy
			Hychem TL9 Novolac epoxy coating	9. Product Specifications, Table 10, C8 Ultra high build epoxy
Pumps, motors, gear boxes, air blowers	Extreme	Cast iron	Hychem TL5 EPL Ultra high build epoxy coating up to 6 mm	9. Product Specifications, Table 10, C8 Ultra high build epoxy.
			Hychem TL9 Novolac epoxy coating	9. Product Specifications, Table 10, C8 Ultra high build epoxy.
Structural members, steelworks, crane rails, gantry, conveyors, rake arm, skimmer, scum beach, conveyors, drum screen, disintegrators, dewatering presses, penstocks, lift gates	Extreme	Steel	Hychem TL5 EPL Ultra high build epoxy coating up to 6 mm	9. Product Specifications, Table 10, C8 Ultra high build epoxy.
			Hychem TL9 Novolac epoxy coating	9. Product Specifications, Table 10, T7 Novolac epoxy.

WSA201 Table 7 Recommended Coating Systems

PROTECTIVE COATINGS FOR SEWAGE PIPELINES & ASSOCIATED ITEMS

Solution	Exposure Class (WSA201 Table 2)	Substrate	Product/ System	WSA201 Reference
Pipes, tunnels, maintenance structures	Extreme	New & existing concrete	Hychem TL9 Novolac epoxy coating	9. Product Specifications, Table 10, T7 Novolac epoxy
		Existing concrete	Geocast Geopolymer Mortar Geopolymer mortar to 100mm up to 6mm	WSA 161 Appraisal No. PA2503 9. Product Specifications, Table 10, T7 Novolac epoxy. C14 Geopolymer Cement Mortar
		Steel, ductile iron	Hychem TL5 Ultra high build epoxy coating up to 6mm	9. Product Specifications, Table 10, C8 Ultra high build epoxy

WSA201 Table 6 Recommended Coating Systems

PROTECTIVE COATINGS FOR CHEMICAL BUNDS HAVING OCCASIONAL CHEMICAL CONTACT

Solution	Substrate	Product/ System	WSA Reference
Acetic acid 75%, citric acid 50%, hydrofluorosilic acid 20%, hydrochloric acid 32-34% & sulfuric acid 70-95%	Reinforced concrete	Hychem TL9 Novolac epoxy coating	9. Product Specifications, Table 10, T7 Novolac epoxy

WSA201 Table 8 Recommended Systems

INJECTION, SEALING & WATERPROOFING

Solution	Product/ System	Suitable Substrate	Potable water (Tested to AS4020)	Exposure Class (WSA201 Table 2)	WSA201 Reference
Waterproofing	Velosit WP120 Cementitious waterproofing slurry for positive or negative hydrostatic pressure applications	New and existing concrete	Yes	Water immersion. Buried.	8 Coating system specifications, 8.2.2 PMM (Polymer modified membrane).
Joint waterproofing, construction joints	Velosit WS801 Hydrophilic, swellable joint waterstop	New concrete	No	Low to high	Not applicable
Joint waterproofing, construction and movement joints	Hychem FPO Joint Tape High-performance flexible polyolefin (FPO) waterproofing tape, Adhesive Hychem PF19.	New and existing concrete	Yes	Extreme	Not applicable
Crack sealing, active or static, non-structural	Spetec GT350 Hydrophilic, flexible, PU injection resin	New and existing concrete	No	Low to high	6.2.5.6 stop infiltration / hydrostatic leaks (water).
Crack sealing, active or static, non-structural	Spetec F400 Low viscosity flexible injection resin for sealing leaking cracks	New and existing concrete	Tested to NSF/ANS/CAN 61 – 2020 Drinking Water	Low to high	6.2.5.6 stop infiltration / hydrostatic leaks (water).
Plugging mortar for live water flow or seepage	Velosit PC22 Rapid set waterproofing plug	New and existing concrete	No	Low to high	6.2.5.6 stop infiltration / hydrostatic leaks (water) prior to crack repair.



CASE STUDY

High-flow water ingress solved for South East Water

Hychem Infrastructure delivered a successful water ingress and ground stabilisation solution for a critical South East Water (SEW) asset in Victoria. Using a tailored combination of SPETEC hydrophilic and hydrophobic injection resins, contractor Spartan Remedial Services was able to completely and permanently stop high-flow water infiltration into a sheet pile pit, ensuring the asset's structural integrity and safety.

Client

South East Water

Location

St Kilda West, Victoria

Challenge

Prevent high-flow water infiltration into a U-sheet pile pit through targeted injection and ground stabilisation.

Solution

SPETEC Hydrophilic (Flexible) & Hydrophobic (Rigid) Injection Resins.

Outcome

All water infiltration was successfully and permanently eliminated in a rapid, two-day operation.

Products

SPETEC® STOP H100

SPETEC® SEAL AG100





CASE STUDY

Hychem extends asset life at Sunbury Recycled Water Plant

Hychem Infrastructure, in collaboration with Downer, delivered a comprehensive concrete remediation and protective lining solution for the Sunbury Recycled Water Plant upgrade. By integrating the advanced GeoCast geopolymer system with high-performance Velosit linings, our team successfully extended the service life of critical assets, supporting increased plant capacity while adhering to modern water authority standards.

Client

Greater Western Water

Location

Sunbury, Victoria

Challenge

Refurbishing ageing concrete treatment tanks within a live operational environment to support increased plant capacity and future demand.

Solution

Extended asset life and improved chemical resistance with GeoCast geopolymer mortar and Velosit protective lining system.

Outcome

The refurbished tanks now provide increased recycled water production capacity and meet contemporary expectations for environmental performance and longevity.

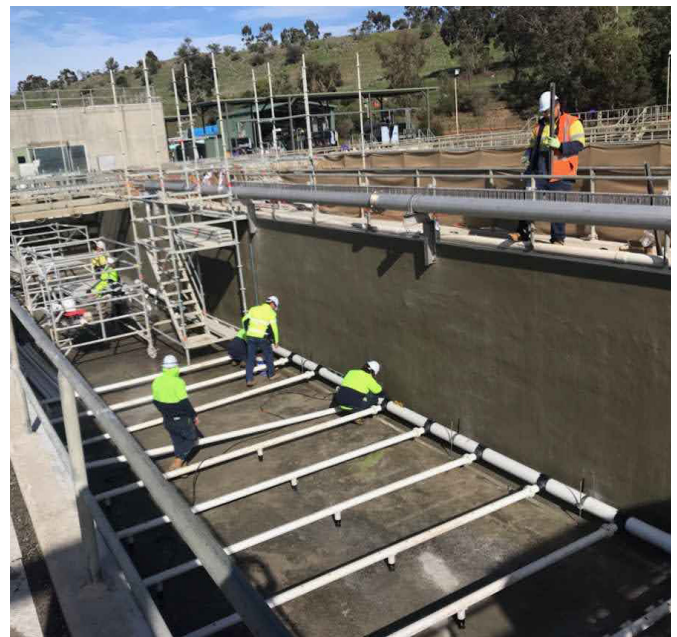
Products

VELOSIT® RM205

VELOSIT® WP120

VELOSIT® CP 201

GeoCast Geopolymer Mortar



At Hychem Infrastructure, compliance is the foundation of performance.



COMPLIANCE

Our commitment to rigorous quality assurance provides engineers, asset owners, and contractors with the certainty that every solution is engineered to meet or exceed the most stringent Australian Standards.

We integrate technical governance into every stage of a project, from material selection to on-site application, ensuring your critical infrastructure is protected by systems you can trust.

SELECTED WATER & WASTEWATER PROJECTS

	Project Name	Client	Solution	Size
WATER & WASTEWATER	Cairns Pump Station Package	Cairns Regional Council	Hychem TL5 System	12 Pump stations
	Coliban Water Tanks (x2)	Coliban Water (VIC)	GeoCast	2,100 bags
	Suburb Treatment Plant	Downer	Velosit CP201, Velosit RM205, GeoCast	2500 m ²
	Sunbury Recycled Water Plant	Greater Western Water	GeoCast geopolymer mortar	2500 m ²
	Hill 2 Reservoir	Hunter Water Corporation	Velosit RM202, WP101, WP120	900 m ²
	Eastern Treatment Plant Tank 8	Melbourne Water	GeoCast & TL5	850 m ²
	Ingress and Ground Stabilisation Solution	South East Water	SPETEC STOP H100 SPETEC SEAL AG100	15 kits
	West Camden Treatment Plant Tank	Sydney Water	GeoCast Reline	5,000 bags
	Yeppon WWTP	The Livingstone Shire Council	Hychem TL5 System	1000 m ²
	Maroochydore Manhole Package	Unity Water	GeoCast	65+ Manholes
	Caboolture South Treatment Plant	Unity Water	Hychem TL5 System	2500 m ²
	Maroochydore Treatment Plant	Unity Water	Hychem TL5 System, Velosit RM202	3500 m ²
	Bowen WWTP	Whitsundays Regional Council	Hychem TL5 System	1200 m ²



Your trusted partner in infrastructure protection

Partner with Hychem Infrastructure, where decades of product and engineering experience come together to protect Australia's infrastructure for generations to come.

OUR LOCATIONS

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MARCH 2026



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