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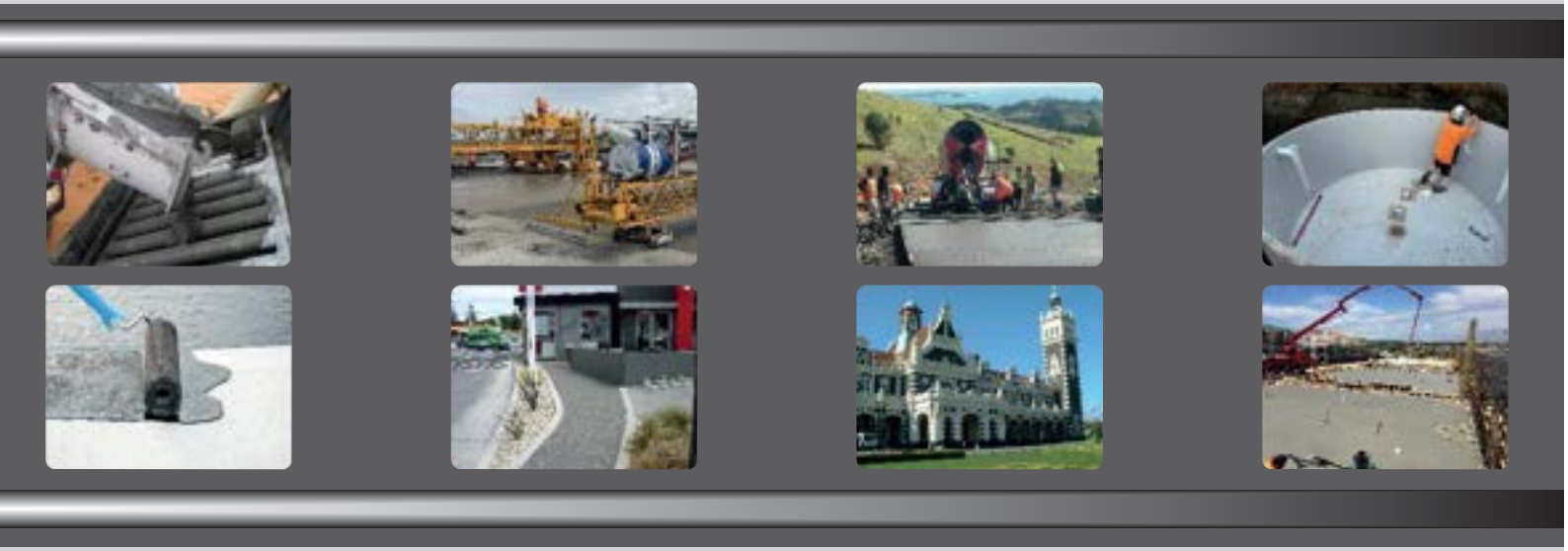

Products and Systems for Construction

Product Categories

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AUTHORIZED DISTRIBUTOR

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Waterproof Coatings & Water Repellents

Products for concrete and masonry structures to make them waterproof, repel water or keep water in.

Water Repellents

To make substrates water repellent

Product	What's it used for?	What can it be applied to?
AQUELLUX S AQUELLUX S is a state-of-the-art siloxane water repellent which is used to make porous building materials water repellent without changing their appearance. The active component used in the manufacture of AQUELLUX S is made by a world leader in water repellent technology. Siloxane water repellents are used to protect all motorway bridges in Sweden from damage caused by salt and freezing weather in the European winter; as well as being used to protect many important historical buildings throughout Europe and the USA.	AQUELLUX S is used to treat vertical and inclined exterior surfaces such as walls and roofs. AQUELLUX S is effective in hairline cracks up to 0.3mm wide. AQUELLUX S is applied to surfaces to minimise and help protect against the following: ▪ Leakage and dampness. ▪ Spalling due to frost or freezing ▪ Efflorescence and leaching of salts ▪ Growth of moss, lichen and mildew ▪ Corrosion due to waterborne chemicals ▪ Reduced thermal insulation due to dampness ▪ Surface degradation caused by penetration of waterborne dirt and soil.	Materials suitable for treatment with AQUELLUX S include concrete, cement plaster, blockwork, bricks, roofing tiles, cement asbestos and fibrous cement, GRC panels and natural stone. **Coverage:** (As a guide) Concrete blocks and porous stone: max 1m²/L Normal concrete: 2 – 3m²/L Dense concrete and brick: up to 6m²/L
AQUELLUX S WB AQUELLUX S WB is a water-based, solvent-free silane/siloxane water repellent applied to porous building materials to make them water repellent without changing their appearance.	AQUELLUX S WB is used to treat vertical and inclined concrete surfaces such as walls and roofs. AQUELLUX S WB is effective in hairline cracks up to 0.3 mm wide. Used to increase protection from: leakage and dampness; spalling due to frost or freezing; efflorescence and leaching of salts; penetration of dirt, rust etc; a reduction in growth of moss lichen and mildew due to reduced surface moisture and corrosion due to waterborne chemicals. AQUELLUX S WB is also used as a primer for CONCRETE BLOCK SEALER and PROTECTA-COAT.	Materials suitable for treatment with AQUELLUX S WB include plain and reinforced concrete and other mineral substrates. **Coverage:** 1 – 4m²/L (substrate dependent)
SILAC SILAC is an acrylic modified silicone water repellent used to render porous exterior building materials water repellent, especially Oamaru stone. Water absorption into the building material is stopped or greatly reduced while water within the material is still able to evaporate out. When applied, SILAC penetrates into the surface sealing smaller pores and lining the larger pores and capillaries with a water repellent resin.	SILAC is generally used to render vertical and inclined surfaces, such as walls and roofs, water repellent. It has been used successfully on cracked horizontal surfaces such as balconies as a remedial water repellent. Due to the acrylic content of SILAC, it is capable of sealing surfaces which are too porous for treatment with normal water repellents.	Materials suitable for treatment with SILAC include concrete, cement plaster, blockwork, bricks, roofing tiles, fibrous cement and natural stone. SILAC is very effective on Oamaru stone helping to maintain a clean and water-repellent surface and preventing degradation. **Coverage:** (As a guide) Concrete blocks and porous stone: max 1m²/L Normal concrete: 2 – 3m²/L Dense concrete and brick: up to 4m²/L

Q: Is AQUELLUX S (or SILAC or AQUELLUX S WB) a waterproof coating?

A: No. AQUELLUX S (SILAC and AQUELLUX S WB) are specialised silicone water repellents. Unlike a paint or similar product, they do not form a film on the surface to which they are applied, but instead line the pores and capillaries with a silicone material that interferes with the ability of water droplets to wet into the substrate. This allows the substrate to "breathe" and release trapped moisture within the substrate back to the atmosphere. The downside to silicone water repellents is that under certain conditions (including continual rain, wind driven rain or when applied to very porous substrates), the water repellency effect may be overcome and the substrate becomes wet. Note - as soon as the water stops contacting the substrate, the water repellent will allow the moisture to escape back to the atmosphere.

Q: Will AQUELLUX S alter the appearance of the substrate?

A: Under most circumstances, there will be no visible change in the substrate due to the application of AQUELLUX S as there is no film to modify the appearance. However, in some cases, as the AQUELLUX S allows the substrate to dry out (whether relatively new or old), then the substrate can change in colour at different rates. This effect is due to the substrate and because the AQUELLUX S doesn't create a film, the substrate colour changes are apparent. In addition, any stains or colour differences apparent in the substrate will be apparent after the application of AQUELLUX S, so must be removed prior to treatment. Furthermore, substrates that are not uniform in porosity and/or are very dense may result in AQUELLUX S silicone appearing at the surface of the substrate and may result in a noticeable colour change. It is recommended that a small area of the surface to be treated is tested for any potential colour change and to determine the correct application rate.

When applying AQUELLUX S to any surface, the solvent carrier of AQUELLUX S may flush out impurities in the substrate (including dirt, dust - especially if Oamaru stone is sanded, etc) or may react with fillers and additives incorporated into grout or plaster mixes. Ensure all surfaces are thoroughly cleaned before application and allowed to age for at least 28 days for fresh concrete and mortar. Test an area before proceeding with complete application.

Precautions and Limitations

AQUELLUX S: Is not suitable for use on horizontal surfaces (and inclined surfaces where ponding may occur), surfaces exposed to water pressure such as tank walls or building foundations, excessively porous surfaces, previously painted surfaces or below grade surfaces. It is not to be used on substrates with cracks above 0.3mm wide or in poor condition. Oamaru stone and concrete blocks are very porous surfaces and AQUELLUX S must be applied at a minimum rate of 1 litre per 1m² of substrate. Do NOT allow AQUELLUX S to contact glass, aluminium or substrates not to be made water repellent.
AQUELLUX S WB: Not suitable for use on surfaces exposed to water pressure such as tank walls and horizontal surfaces subject to ponding, previously painted surfaces and highly porous substrates. It is also not as effective on dense natural surfaces such as limestone and marble. For Oamaru stone, use SILAC or AQUELLUX S. Do NOT allow AQUELLUX S WB to contact glass, aluminium or substrates not to be made water repellent.
SILAC: SILAC is not suitable for use on horizontal surfaces (and inclined surfaces where ponding may occur), surfaces exposed to water pressure such as tank walls or building foundations, excessively porous surfaces, previously painted surfaces or below grade surfaces. It is not to be used on substrates with cracks above 0.3mm wide or in poor condition. Oamaru stone is a very porous surfaces and SILAC must be applied at a minimum rate of 1 litre per 1m² of substrate. Do NOT allow SILAC to contact glass, aluminium or substrates not to be made water repellent.

Waterproof Coatings & Water Repellents

Products for concrete & masonry structures to make them waterproof, repel water or keep water in.

Waterproof Coatings

To make substrates waterproof from the inside or outside

Product	What's it used for?	What can it be applied to?
AQUELLA AQUELLA is an inorganic powder based on white cement with a hardening accelerator, mixed with water and applied to the inside of damp walls and floors to prevent the passage of water and moisture. AQUELLA unites with the substrate to form a surface which is watertight from both sides and sets rock hard with age.	The chief application for AQUELLA is for waterproofing internal subgrade walls and floors as found in basements, tunnels, lift wells etc. AQUELLA is also used to seal floors without or with damaged damp courses prior to laying carpet or tiles. AQUELLA can also be used internally or externally on tanks and water retaining structures.	It can be used on the following surfaces: brick, concrete, mortar, cement rendering, breeze blocks, stucco, stone, terracotta tiles (roughened), fish tanks (fill and rinse three times before introducing fish). **Coverage:** 1 – 1.5m²/kg (surface dependent)

Product	What's it used for?	What can it be applied to?
CONCRETE BLOCK SEALER CONCRETE BLOCK SEALER is a clear, high solids, low VOC waterborne sealer, which when used as part of a complete system, is effective in sealing porous masonry such as concrete blocks, and acts by blocking the pores against water ingress while not changing the appearance of the substrate to any significant extent. CONCRETE BLOCK SEALER has excellent weathering, UV and yellowing resistance. CONCRETE BLOCK SEALER, when applied as part of the complete system (including AQUELLUX S WB), easily exceeds the requirements of CCANZ CP 01:2022 Code of Practice for Weathertight Concrete and Concrete Masonry Construction, section 4.4 Clear Coating System, when tested in accordance with AS/NZS 4456.16:2003 "Determining Permeability to Water" (tested by Opus International Consultants Limited).	CONCRETE BLOCK SEALER is recommended for use on all masonry, especially highly porous masonry such as concrete blocks, to seal against the ingress of water. It is especially suited to vertical surfaces and will not sag if applied at the recommended spreading rate. Once cured, it forms a non-absorbent clear coating which resists water and will not blanch when wet.	CONCRETE BLOCK SEALER may be used on all types of concrete and uncoated timber. It is recommended for masonry concrete block and may be applied externally and internally. **Coverage:** (surface dependent) 1st Coat: 2 – 4m²/L 2nd Coat: 6 – 8m²/L 3rd Coat: 10 – 12m²/L

Product	What's it used for?	What can it be applied to?
PROTECTA-COAT PROTECTA-COAT is a clear, high solids, low VOC waterborne sealer, which when used as part of a complete system, is effective in sealing porous masonry such as concrete blocks, and acts by blocking the pores against water ingress while not changing the appearance of the substrate to any significant extent. PROTECTA-COAT has excellent weathering, UV and yellowing resistance.	PROTECTA-COAT is recommended for use on all masonry, especially highly porous masonry such as concrete blocks, to seal against the ingress of water. It is especially suited to vertical surfaces and will not sag if applied at the recommended spreading rate. Once cured, it forms a non-absorbent clear coating which resists water and will not blanch when wet. PROTECTA-COAT is applied to substrates that do not require compliance with the CCANZ CP 01:2022 Code of Practice for Weathertight Concrete and Concrete Masonry Construction, section 4.4 Clear Coating System.	PROTECTA-COAT may be used on all types of concrete and uncoated timber. It is recommended for masonry concrete block and may be applied externally and internally. **Coverage:** (surface dependent) 1st Coat: 2 – 4m²/L 2nd Coat: 6 – 8m²/L 3rd Coat: 10 – 12m²/L

Waterproofing Admixture

To permanently waterproof concrete integrally without the need for membranes

Product	What's it used for?	Where can it be used?
Krystol Internal Membrane Krystol Internal Membrane (KIM) is a hydrophilic crystalline admixture used to create permanently waterproof concrete. KIM contains Krystol technology. When added to concrete, Krystol chemically reacts with water and un-hydrated cement particles to form insoluble needle-shaped crystals that fill capillary pores and micro-cracks in the concrete and block the pathways for water and waterborne contaminants. Any moisture introduced over the lifespan of the concrete will initiate crystallisation, ensuring permanent waterproofing protection.	KIM is used in concrete for new buildings - to waterproof the concrete. It is added to the concrete mix. KIM lowers the permeability of concrete and is used in place of surface applied waterproofing membranes. By stopping the transmission of water through concrete, KIM adds durability and longevity to concrete by protecting it against chemical attack and corrosion of reinforcing steel. KIM is an admixture for hydrostatic conditions (PRAH) with over 35 years history in waterproofing concrete. KIM is effective against 140 m of hydrostatic head pressure and reliably self-seals hairline cracks up to 0.5 mm. KIM also reduces concrete shrinkage and cracking and has the highest level of permeability reduction and most dependable self-sealing performance kg for kg compared to other waterproofing admixtures.	Use KIM to provide waterproofing protection for any cast-in-place, shotcrete or precast concrete that will be subject to water, such as: ▪ Below grade parking structures, basements, elevator pits and foundations of high-rise towers ▪ Recreational facilities such as aquatic centers, aquariums, zoos, water parks and marinas ▪ Architectural water features such as fountains and waterfalls ▪ Traffic tunnels, below grade pipelines and subway tunnels, bridges, dams and highway infrastructure ▪ Water containment reservoirs, water treatment tanks, sewage and manholes ▪ Concrete homes including basements, foundations, swimming pools, decks, bathrooms, garages and exteriors ▪ Sufficiently designed roof tops and plaza decks ▪ Any concrete that requires the highest level of protection and durability.

Precautions and Limitations

AQUELLA: Is not suitable for: gypsum plaster, metals, timber, silicone treated surfaces, bituminous surfaces, whitewashed surfaces, painted surfaces and other coated surfaces. Not suitable for application to substrates subject to wear such as garages, trafficked areas, etc without covering.

CONCRETE BLOCK SEALER & PROTECTA-COAT are not designed for use in areas subject to excessive wear and tear. Not recommended for use on plastics or metals. Neither product is suitable for any below grade application or tanking application. Application of the CONCRETE BLOCK SEALER SYSTEM is to be undertaken by an approved applicator that is a member of the NZ Master Painters Association or as otherwise approved by Stratmore Construction Solutions in writing.

KRYSTOL INTERNAL MEMBRANE: KIM is an effective waterproofing system for rigid concrete structures only and may not reliably self-seal dynamic, moving cracks and joints. KIM must be specified and used in accordance with the specific applications guidelines and New Zealand KIM documentation.

Protective and Decorative Coatings

A range of surface products to seal concrete against weathering, staining and chemicals.

Concrete and Exposed Aggregate Sealers

To seal concrete surfaces against weathering and staining

Product	What's it used for?	What can it be applied to?
HARDCOAT HARDCOAT is a solvent-based acrylic resin solution for use on concrete (normal and coloured), masonry and slate to seal the surface. It helps to maintain the surface clean and prevent pigment leach-out. HARDCOAT has excellent UV and weather resistance. Dries to a satin finish. More coats increase sheen.	HARDCOAT is used to put a clear glaze on concrete and masonry surfaces and provides a weatherproof (but not waterproof), stain resistant and dustproof finish. It may be used to seal dusting and porous surfaces to help against further degradation. HARDCOAT is formulated to enhance the beauty of concrete surfaces. HARDCOAT is resistant to rain, sun, water and grease offering excellent durability with good colour retention and clarity. It is non-yellowing. For a single coat system or where application to green concrete is required, see SAME DAY SEALER.	HARDCOAT can be applied to a wide range of substrates such as footpaths, driveways, lock-ups, garages, industrial floors, exposed aggregate, etc. **Coverage:** Exposed Aggregate:..4 m² per litre Broomed Surface:..7 m² per litre Trowelled Surface:..12 m² per litre To reduce slipperiness of coated substrates, add Slip Reducing Additive to HARDCOAT.
SAME DAY SEALER SAME DAY SEALER is a single-coat solvent-based acrylic resin solution for use on concrete (normal and coloured), to seal the surface. It helps to maintain the surface clean and prevent pigment leach-out. SAME DAY SEALER has excellent UV and weather resistance and may be applied to green concrete surfaces. Dries to a semi-gloss finish. More coats increase gloss. SAME DAY SEALER TEXTURED is used to put a clear, gritty, slip-reducing glaze on the surface.	SAME DAY SEALER is used to put a clear glaze on ground/polished concrete floors, exposed aggregate, imprinted (stamped) concrete drives, paths, etc. SAME DAY SEALER provides a weatherproof (but not waterproof), stain resistant and dustproof finish. It may be used to seal dusting and porous surfaces to help against further degradation. SAME DAY SEALER is formulated to enhance the beauty of concrete surfaces. It is resistant to rain, sun, water and grease, offering excellent durability with good colour retention and clarity. It can be used as a single coat system and applied to green concrete after 24 hours. SAME DAY SEALER TEXTURED is recommended for application to wet area substrates, such as pool surrounds. SAME DAY SEALER is non-yellowing.	SAME DAY SEALER can be applied to a wide range of substrates such as footpaths, driveways, lock-ups, garages, industrial floors, exposed aggregate, etc. **Coverage:** Exposed Aggregate:..6 m² per litre Broomed Surface:..8 m² per litre Trowelled Surface:..12 m² per litre
WBHP CONCRETE SEALER WBHP CONCRETE SEALER is a clear low VOC waterborne sealer for interior and exterior concrete and is effective in sealing the surface, preventing ingress of water and other contaminants, thus making it easier to keep clean and helping to maintain its original appearance for longer. WBHP CONCRETE SEALER has excellent weathering, UV and yellowing resistance as well as good open time. It also exhibits excellent flow and levelling.	WBHP CONCRETE SEALER is for sealing concrete surfaces against water and contaminants for decorative and protective purposes. It is designed for use in areas subject to foot and light vehicular traffic and generally areas subject to moderate wear and tear. WBHP CONCRETE SEALER is specifically designed for use on horizontal surfaces where it will tolerate water pooling on it intermittently. Once cured, it forms a clear, non-absorbent coating which resists water and will not blanch when wet. It has greater wear resistance than most common sealers. WBHP CONCRETE SEALER does not contain solvents and is therefore suitable for interior use.	WBHP CONCRETE SEALER is primarily intended for smooth or lightly textured concrete, but may be used on more heavily textured surfaces with care. WBHP CONCRETE SEALER is ideal for application to all types of concrete which has aged for at least 7 days after finishing operations are complete. It is also recommended for use on older concrete and most types of masonry to seal against the ingress of water and other contaminants. **Coverage:** Varies depending on new or aged concrete and the number of coats applied.

Concrete Surface Hardener

To chemically densify the concrete surface

Product	What's it used for?	What can it be applied to?
DUST-GUARD DUST-GUARD Hardening & Dust proofing Compound is formulated to harden and dustproof new or old concrete surfaces. It reacts with free lime and other components in concrete to form insoluble crystals within the pores of the concrete. Proper application gives the concrete a hard, dust-free surface that minimises staining and to which paints and resilient mastics will bond.	DUST-GUARD is recommended for hardening and dust-proofing concrete floor slabs, beams and columns. Applications include: ▪ Industrial, commercial, residential slabs ▪ Applications that are to be covered with resilient flooring or paint and dust-proofing areas where solvent-based products cannot be used.	DUST-GUARD is applied to new or old concrete surfaces. **Coverage:** (depends on surface porosity) Broomed Surface: 7m² per litre Trowelled Surface: 12m² per litre Multiple coats may be required on porous floors.

Precautions and Limitations

HARDCOAT and SAME DAY SEALER: Will wear, but can easily be overcoated, as they are resoluble. Wear rate will depend on the substrate and type of traffic. For vehicle traffic, both will wear more quickly, especially in areas where wheels turn or where traffic is restricted to one location (such as a driveway) and where forklifts operate. Soft rubber tyres, such as forklift tyres, may mark the coatings if allowed to skid on the treated surface. Neither are waterproof membranes and are not to be used as a sealer in structures containing water. Refer to the "Stratmore Guide to Sealing Concrete" for additional details. SAME DAY SEALER: Do NOT exceed two coats in total.

WBHP CONCRETE SEALER: Is designed for use in areas subject to foot and light vehicular traffic and generally areas subject to moderate wear and tear. Not suitable for areas subjected to high degrees of wear and tear. It may be used on uncoated timber but is not recommended for use on plastics, metals or other non-porous substrates.Not recommended for applications where water may pool for long periods before drying. Use PROTECTA-COAT GLOSS for vertical substrates.

DUST-GUARD: Do not allow to puddle or over apply as white crystals may form on the surface of the concrete. If white crystals start to form on concrete surface, flush immediately with water and brush away by broom. If concrete treated with DUST-GUARD is to be subsequently coated (paint, resilient flooring, etc) or to which sealants and adhesives are to be applied, check with manufacturer of coating/adhesive system for any compatibility issues prior to application of DUST-GUARD.

Precast & Site Products

Release agents for all types of formwork, concrete retarders for exposed aggregate or formwork, concrete curing agents, evaporation retarders, etc.

Concrete Curing Compounds

To ensure concrete develops the best physical properties by minimising moisture loss

Product	What's it used for?	What can it be applied to?
FRACURE FRACURE is a synthetic hydrocarbon resin in solvent. When applied to newly poured concrete FRACURE quickly dries to form a film with low water vapour permeability. By reducing the rate of evaporation, the water necessary for hydration of cement is maintained in the concrete. During the early curing period, this allows the maximum development of compressive and tensile strength and results in more durable finished concrete with lower permeability and less shrinkage.	FRACURE is applied to all exposed concrete elements of a structure subject to water loss due to evaporation. It creates a temporary coating on the surface that reduces moisture loss. FRACURE is ideally suited to applications where no coating remains after time due to weathering. FRACURE can also be used to seal the surface of a newly poured concrete slab prior to using DISCRETE release agent to cast off the concrete.	FRACURE is suitable for use on all concrete surfaces. All exposed elements of a structure subject to water loss due to evaporation will benefit from treatment. These include floor slabs, columns, beams, walls, precast panels etc. **Coverage:** ..... 6 – 7m²/litre
FRACURE EMULSION FRACURE EMULSION is a water-based emulsion concrete curing compound. When applied to newly poured concrete it dries fast to form a wear resistant film with low water vapour permeability. By reducing evaporation from the concrete surface, the water necessary for cement hydration is maintained. This allows the maximum development of compressive and tensile strength in the finished concrete and results in a more durable surface with lower permeability.	FRACURE EMULSION is applied to all exposed concrete elements of a structure subject to water loss due to evaporation. It creates a wear resistant film with low water vapour permeability and good UV stability. FRACURE EMULSION is ideally suited to applications where the curing compound will not only help cure the concrete but also protect against dirt and discolouration during the construction phase.	FRACURE EMULSION is suitable for use on all concrete surfaces. All exposed elements of a structure subject to water loss due to evaporation will benefit from treatment. These include floor slabs, columns, beams, walls, precast panels etc. **Coverage:** .....up to 7m²/litre
FRACURE EMULSION 3109 FRACURE EMULSION 3109 is a water-based emulsion concrete curing compound that exceeds the moisture retention requirements of ASTM C309-97 when applied at 5m² per litre (conformance testing completed by BRANZ). When applied to newly poured concrete it dries fast to form a wear resistant film with low water vapour permeability. By reducing evaporation from the concrete surface, the water necessary for cement hydration is maintained. This allows the maximum development of compressive and tensile strength in the finished concrete and results in a more durable surface with lower permeability.	FRACURE EMULSION 3109 is applied to all exposed concrete elements of a structure subject to water loss due to evaporation. It creates a wear resistant film with low water vapour permeability and good UV stability. FRACURE EMULSION 3109 is recommended for applications where the curing compound must meet ASTM C309-97 requirements.	FRACURE EMULSION 3109 is suitable for use on all concrete surfaces. All exposed elements of a structure subject to water loss due to evaporation will benefit from treatment. These include floor slabs, columns, beams, walls, precast panels etc. **Coverage:** .....5 – 7m²/litre
FRACURE WAX EMULSION A water-based wax emulsion concrete curing compound which helps ensure that maximum strength and wear resistance of the concrete are achieved. When applied at 5 – 10m² per litre, it creates an impermeable seal which optimises water retention. FRACURE WAX EMULSION achieves the highest degree of protection from moisture loss compared to other curing compounds.	FRACURE WAX EMULSION can be used on either interior or exterior, horizontal or vertical concrete applications where subsequent coatings or treatments will not be applied. FRACURE WAX EMULSION exceeds ASTM-C-309-97 and NZS 3109 when applied at 5m² per litre. It is recommended for critical curing applications where the highest level of moisture retention is required. A white pigmented version is also available for curing areas exposed to high levels of sunlight to help reflect heat away from the concrete surface.	FRACURE WAX EMULSION can be used for: ▪ Areas that are not to be subsequently coated, such as pavements, hard-standing areas, etc ▪ Curing where flammable solvents must be avoided ▪ Applications with very high moisture retention requirements. **Coverage:** 5 – 10m²/litre

Precautions and Limitations

FRACURE: Not recommended for application to rough broomed concrete, otherwise breakdown and removal is difficult. If applied to interior surfaces not subject to normal weathering and traffic during construction, film breakdown will be delayed and may only breakdown due to the action of traffic. Any loose residue remaining before painting should be removed as far as possible by wire brushing or, for larger areas, use a mechanical floor scrubber fitted with a synthetic abrasive pad.
FRACURE EMULSION/EMULSION 3109: Both create long-lasting, wear resistant films on the surface of the concrete. If subsequent coatings are to be applied that require bonding into the concrete, then consider FRACURE curing compound. Subsequent coatings should not be applied over FRACURE EMULSION without checking with the manufacturer or supplier of the coating system for compatibility.
FRACURE WAX EMULSION: Do not apply to any surface where subsequent coatings are to be applied (including paint, epoxies, membranes, coatings, etc that must bond onto or into the concrete). Do not use on brick, stone, masonry, etc. Once applied, it is unlikely that all traces of FRACURE WAX EMULSION will be able to be removed from the surface or pores of the concrete to which it is applied.

Precast & Site Products

Release agents for all types of formwork, concrete retarders for exposed aggregate or formwork, concrete curing agents, evaporation retarders, etc.

Evaporation Retarder

To control moisture loss during concrete finishing operations

Product	What's it used for?	What can it be applied to?
ER-921 ER-921 is a surface-active agent used to reduce the water evaporation rate from the surface of newly laid concrete. It is designed to form a thin film to reduce rapid moisture loss from the concrete surface. Supplied as a concentrate, diluted 1 part ER-921 to 9 parts clean water.	Use ER-921 as an evaporation retarder for concrete flatwork surfaces when the evaporation rate exceeds the bleeding rate during finishing operations. ER-921 is especially recommended for use on concrete subjected to rapid drying conditions.	ER-921 is recommended for use on all concrete surfaces except dry shake hardeners and toppings. **Coverage:** up to 10m²/litre (when diluted)

Concrete Retarders - Surface

To retard (prevent setting) of the concrete surface for exposed aggregate

Product	What's it used for?	What can it be applied to?
RETARDÉ E (STD and XTRA) RETARDÉ E is a concrete surface retarder applied to the surface of freshly poured concrete and retards its set to a depth of 3 – 6mm while the underlying concrete hardens normally. The retarded concrete is then brushed or washed off leaving aggregate exposed but firmly embedded. RETARDÉ E XTRA is for concrete strength above 25MPa.	RETARDÉ E is used to produce decorative and non-slip exposed aggregate finishes to in-situ and precast concrete. Areas of use include paths, driveways, swimming pool surrounds etc.	RETARDÉ E is applied to freshly poured concrete after all free water has disappeared from the concrete surface and before the concrete starts to set. **Coverage:** 5m²/litre

Concrete Retarders - Formwork

To retard (prevent setting) of the concrete poured against formwork

Product	What's it used for?	What can it be applied to?
RETARDÉ M RETARDÉ M is a solvent based paint-like liquid which, when applied to formwork or moulds, prevents concrete poured against it from setting for up to 72 hours. This allows the retarded concrete to be removed by hose after the formwork has been stripped, resulting in an exposed aggregate finish.	RETARDÉ M is used to create a mechanical key on a concrete surface which is to have more concrete poured against it. An example of this is where RETARDÉ M is painted on stop ends which confine individual pours of a floor slab. When the stop ends are removed and the retarded concrete is washed off, the resultant exposed aggregate finish makes an excellent key for the next pour.	RETARDÉ M can be applied to timber, steel or other types of moulds and formwork that are resistant to a solvent-based material. Absorbent timber formwork should be first sealed with FORMSEAL. **Coverage:** .....5 – 6m²/litre

Product	What's it used for?	What can it be applied to?
ETCHING GEL ETCHING GEL is a water based gel for use as a concrete set retarder on vertical and horizontal formwork. It prevents concrete setting (curing) for up to 48 hours and to a retarded depth of up to 10mm depending on concrete strength. This allows the retarded concrete to be removed by hose and/or brush after the forms have been stripped, resulting in an exposed aggregate finish.	ETCHING GEL is used to create a mechanical key on a concrete surface which is to have more concrete poured against it. An example of this is where ETCHING GEL is painted on stop ends which confine individual pours of a floor slab. When the stop ends are removed and the retarded concrete is washed off, the resultant exposed aggregate finish makes an excellent key for the next pour.	ETCHING GEL can be applied to timber, steel or other types of moulds and formwork. Absorbent timber formwork should be first sealed with FORMSEAL. **Coverage:** 5 – 6m²/litre (surface dependent)

Precautions and Limitations

ER-921: Is not to be used as a finishing aid for cementitious materials such as dry shake hardeners or toppings. ER-921 should not be worked into the concrete surface nor should it be used to re-temper concrete. Not suitable for application onto vertical surfaces or where excessive run-off may occur.
RETARDÉ E: Slows down the set of the surface concrete for up to 24 hours at normal temperature. Sun and shade on the treated concrete can vary the effectiveness of RETARDÉ E – avoid variations in temperature across the treated area. If necessary due to temperature and wind, remove retarded concrete sooner. If the surface is not removed during the retarded period the concrete will set and reach ultimate strength. Use RETARDÉ XTRA on concrete strengths above 25MPa and/or where high early age strengths are expected. Correct application of an even film is essential. Avoid puddling.
RETARDÉ M: Is resistant to light rain but should be protected from heavy rain and direct sunlight. Multiple coats of RETARDÉ M increase the dry film thickness and depth of retardation. If unusual aggregate sizes are being used it is advisable to make preliminary tests to determine the correct depth of retardation. Accelerating admixtures, steam curing and hot weather all reduce the effectiveness of RETARDÉ M.
ETGHING GEL: Will retard to a depth of up to 10mm depending on concrete strength. Decorative concrete mix designs should be tested for appearance and retarded depth. ETCHING GEL has no release value so that forms should get normal treatment with DISCRETE before application. This will prevent any build up on the stripped forms sticking after the retarded concrete has eventually set. Normal concrete placed at normal temperatures should be removed within 48 hours. High strength concrete or concrete placed at higher temperatures will not be retarded for as long and consequently should have forms stripped and retarded concrete removed within 24 hours or sooner.

Precast & Site Products

Release agents for all types of formwork, concrete retarders for exposed aggregate or formwork, concrete curing agents, evaporation retarders, etc.

Concrete Release Agents

To release concrete from formwork with a clean, blemish-free surface with minimum voids

Product

DISCRETE

DISCRETE is a chemical release agent which reacts with the alkaline products of setting cement to form insoluble soaps. These soaps prevent any bond developing between the concrete and formwork to ensure a clean, even, blemish free surface with minimum voids. DISCRETE provides a very high quality release.

What's it used for?

DISCRETE is used to release concrete from formwork and moulds as well as being suitable for tilt-up construction work. DISCRETE sprayed daily onto mixers, hoist buckets, wheelbarrows and all other equipment and machinery on which concrete may adhere, will keep the concrete soft and easily removed.
DISCRETE increases the life of wood forms by impregnating the timber rendering it water-resistant and improving lifetime.

What can it be applied to?

DISCRETE can be applied to a wide range of concrete formwork and moulds. These include timber, steel, fibreglass, plastic, etc.
DISCRETE is particularly effective in the release of high-quality, high-strength precast concrete and is very economical when applied to steel moulds used in the precast industry.
DISCRETE can be used for tilt-up construction where it is applied to the casting area (refer datasheet).

Coverage:
Timber Formwork.....up to 20m²/litre
Metal Formwork.....up to 30m²/litre

Product

DISCRETE EMULSION

DISCRETE EMULSION is a stable, water-emulsion concrete release agent that reacts with the alkali content of concrete to form a bond-breaking film. Zero VOC, non-toxic and environmentally safe.

What's it used for?

DISCRETE EMULSION is used to release concrete from formwork and moulds. Being water based it is more environmentally safe and less hazardous to users than other types of release agents.

What can it be applied to?

DISCRETE EMULSION is effective on all types of moulds and formwork, especially rubber and plastic (test on aluminium forms prior to use). It may be used for architectural and precast concrete as well as for general forming applications. DISCRETE EMULSION may be sprayed daily onto mixers, hoist buckets, wheelbarrows and all other equipment and machinery on which concrete may adhere to keep the concrete soft and easily removed. It offers excellent resistance to being removed from rotating moulds.

Coverage:
Timber Formwork (porous)..up to 19m²/litre, Metal Formwork (dense)..up to 40m²/litre

Product

FRE-FORM

FRE-FORM concrete release agent is a chemically active form release agent designed specially for use with steel forms, steam curing and general formwork.

What's it used for?

FRE-FORM is effective on all types of moulds and formwork. FRE-FORM is recommended for steam-cured metal formwork.
FRE-FORM promotes easy stripping, minimises form clean up, is non-staining and reduces the number of surface air voids (bugholes).

What can it be applied to?

FRE-FORM can be applied to a wide range of concrete formwork and moulds. It is ideally suited for application to steel moulds used in the precast industry, especially where steam curing is employed to increase early-age concrete strength and allow for earlier removal of the formwork/moulds.

Coverage:
Non-absorbent surfaces (e.g., steel, fibreglass): ..up to 20m²/litre
Absorbent surfaces (e.g., wood, concrete, etc):... up to 15m²/litre

Product

BIO-FORM

BIO-FORM is a diesel-free concrete release agent which reacts with the alkaline products of setting cement to form insoluble soaps. These soaps prevent any bond developing between the concrete and formwork and ensure a clean, even, blemish free surface with minimum voids. Recommended as an alternative to FRE-FORM if diesel based release agents cannot be used.

What's it used for?

BIO-FORM is used to release concrete from formwork and moulds. It is effective on all types of moulds and formwork (except polystyrene, latex and some plastics - check before use as BIO-FORM may soften or damage some plastics/rubber) and is recommended for steam-cured or heated moulds.
BIO-FORM may be sprayed daily onto mixers, hoist buckets, wheelbarrows and all other equipment and machinery on which concrete may adhere to keep the concrete soft and easily removed.

What can it be applied to?

BIO-FORM is effective on all types of moulds and formwork, but should not be applied to rubber, plastic or polystyrene moulds. It may be used for architectural and precast concrete as well as for general forming applications. Recommended for steam or heat cured moulds.

Coverage:
Timber Formwork (porous): up to 19m²/litre
Metal Formwork (dense): up to 40m²/litre

Product

BIO-GEL

BIO-GEL is a chemically active form release agent with a gel-like viscosity designed for complex formwork or where normal liquid release agents are removed due to the abrasive action of flowing concrete.

What's it used for?

BIO-GEL is designed for complex formwork where normal release agents will not work. It can be used on formwork subject to abrasion such as rotating concrete pipe moulds and slip forms.
BIO-GEL is recommended for complex forms used in precast concrete manufacture.

What can it be applied to?

BIO-GEL is effective on all types of moulds, formwork and complex forms (test on plastic/rubber & aluminium forms prior to use). BIO-GEL is designed to be used on forms where flowing concrete removes ordinary release agents resulting in sticking and where ordinary release agents run off the form (for example, complex internal corners).

Coverage: Will vary depending on surface porosity.

Precautions and Limitations

DISCRETE: Must not be applied over any other surface treatments or coatings, especially when used for tilt-up release. Contains diesel so handle and use in accordance with the application instructions and safety data sheet.
DISCRETE EMULSION: Is not suitable for tilt slab construction work. Forms and moulds coated with DISCRETE EMULSION should be cleaned between use or when any build-up of release by-product occurs on the forms/moulds. Protect from frost and freezing.
FRE-FORM: Must not be applied over any other surface treatments or coatings. Test before use on any non-standard formwork such as plastic, polystyrene, etc. FRE-FORM is not suitable for tilt slab construction work or sandwich type release. Contains diesel so handle and use in accordance with the application instructions and safety data sheet.
BIO-FORM: Is not suitable for tilt-up or sandwich type release work. Do not apply to any formwork or moulds affected by biodiesel, including rubber, plastic or polystyrene.
BIO-GEL: Should not be used on concrete where subsequent coatings (such as paint) or adhesives are to be applied without first testing for suitability and compatibility. Do not use for tilt-up or sandwich type release. Use DISCRETE data sheet for these types of release. For non-standard concrete mixes, including those with special admixtures, pigments and other additives, test for release properties and final appearance.

Precast & Site Products

Release agents for all types of formwork, concrete retarders for exposed aggregate or formwork, concrete curing agents, evaporation retarders, etc.

Concrete Release Agents

To release concrete from formwork with a clean, blemish-free surface with minimum voids

Product

BIO-R

BIO-R is a diesel-free, biodegradable concrete release agent which reacts with the alkaline products of setting cement to form insoluble soaps. These soaps prevent any bond developing between the concrete and formwork and ensure a clean, even, blemish free surface with minimum voids. BIO-R has been formulated to provide users with a diesel-free, non-water based release agent providing the same release properties as other premium release agents such as DISCRETE.

What's it used for?

BIO-R is used to release concrete from formwork and moulds. It is effective on all types of moulds and formwork (except polystyrene, latex and some plastics - check before use as BIO-R may soften or damage some plastics/rubber).
BIO-R may be sprayed daily onto mixers, hoist buckets, wheelbarrows and all other equipment and machinery on which concrete may adhere to keep the concrete soft and easily removed.

What can it be applied to?

BIO-R is effective on all types of moulds and formwork, but should not be applied to rubber, plastic or polystyrene moulds. It may be used for architectural and precast concrete as well as for general forming applications.
BIO-R is recommended for applications where solvent or diesel-based release agents cannot be used.
Coverage:
Timber Formwork (porous): up to 19m²/litre
Metal Formwork (dense): up to 40m²/litre

Product

BIOFINISH GOLD

BIOFINISH GOLD is a water-based concrete release agent that creates a bond-breaking film which reduces the adhesion between the concrete and the form. It is designed for high quality architectural concrete where surface defects must be minimised.

What's it used for?

BIOFINISH GOLD is used to release concrete from moulds used to produce high quality precast. Will not stain or discolour concrete when correctly applied (see application/precautions) and is readily biodegradable - use in concrete manufacture in areas where oil and diesel-based release agents cannot be used.

What can it be applied to?

BIOFINISH GOLD is effective on most moulds and formwork, and is recommended for steel moulds. It can be used for horizontal and vertical cast concrete applications to create a smooth, clean release with a minimum of voids and other surface defects.
Coverage: 40 to 80m²/litre depending on formwork. Do NOT over apply.

Product

TEMCOAT

TEMCOAT is a release agent for complex formwork - e.g., skip-tooth band sawn, and for long exposure, where the surface is not to be tiled, plastered or painted. Also suitable as a curing compound for concrete not to be subsequently coated or painted.

What's it used for?

TEMCOAT is used on shutters/formwork where the surface texture is complex and standard release agents would be unsuitable. Large, skip-tooth band-sawn forms, as used in motorway overpass columns, beams and retaining walls is a typical use. Recommended for formwork that remains exposed to elements prior to pouring concrete.
TEMCOAT may also be used on steel substrates subject to rusting as a temporary protective coating. Remove with white spirit.

What can it be applied to?

TEMCOAT can be used on wood, steel, aluminium and other solvent-resistant shutters/formwork.
Coverage: 10 to 15m²/litre

Formwork Sealing

To seal formwork prior to application of release agent

Product

FORMSEAL

FORMSEAL is a single pack coating designed to provide a flexible, abrasion resistant film on timber formwork.
FORMSEAL has excellent alkali resistance and is not affected by solvents and oils commonly used in release agents.

What's it used for?

FORMSEAL is suitable for use on construction ply to achieve a non-absorbent; wear resistant surface up to the specifications of melamine coated overlay ply. Up to 19 pours have been achieved off a single FORMSEAL coated construction ply form.
FORMSEAL is also ideal for use on textured timber forms such as skip-sawn ply where a uniform architectural finish is required over a number of pours. The use of FORMSEAL will extend the life of formwork, give improved concrete surface finish, and reduce the consumption of release agent.

What can it be applied to?

FORMSEAL can be applied to construction ply and timber formwork. It can also be applied to other timber surfaces to seal the surface (such as workbenches, external plywood, etc).
Coverage: 2 coats at 6 to 8m²/litre

Chemical release agents do not rely on their effectiveness based on quantity; they should be applied at the maximum rate of coverage where possible, avoiding puddling or over-application. Over-application of a release agent may lead to the concrete surface not curing properly (becoming retarded). Select the most appropriate release agent depending on application type (site, precast, steam curing, etc), product type (diesel, biodiesel, water, etc) or specialised needs.

Precautions and Limitations

BIO-R: Is not suitable for tilt slab or sandwich type release work. BIO-R should not be applied to any formwork or moulds affected by biodiesel, including rubber, plastic or polystyrene. For steam curing of moulds, use BIO-FORM.
BIOFINISH GOLD: Is for use in the release of precast concrete. It is not suitable for tilt-up or sandwich panels or for general site release work. Do NOT over apply. Excess material may cause adverse effects to the concrete surface. For non-standard concrete mixes, including those with special admixtures, pigments and other additives, test for release properties and final appearance.
TEMCOAT: Do not use on surfaces that are later to be painted, tiled, hardened, sealed or treated in any manner without testing released concrete for compatibility with subsequent coatings, etc.
FORMSEAL: Do NOT over apply to textured formwork with fine detail. Application of FORMSEAL to non-absorbent surfaces is not recommended unless tested for performance. Exposure to air causes the viscosity of FORMSEAL to increase. FORMSEAL that has thickened before application should not be used.

Product Spotlights

Showcase of where our products have been used in projects throughout New Zealand

Product Spotlight — Krystol Internal Membrane Car Park

PRODUCT DETAILS

Krystol Internal Membrane (KIM) is an integral crystalline concrete waterproofing admixture. When combined with water, KIM's proprietary chemicals react to form millions of needle-like crystals. These crystals grow and fill the capillary pores and micro cracks in the concrete, blocking the flow of water. As time passes and stresses form new cracks, any incoming moisture causes the crystals to reactivate – ensuring continuous waterproofing over the years.

KIM is used in place of externally applied surface membranes to protect against moisture transmission, chemical attack and the corrosion of reinforcing steel.

Featured Project Details

LOCATION:	Auckland District Health Board Car Park, Auckland
DEVELOPER/BUILDER:	Mainzeal
CONTRACTOR/PLACER:	V J Concrete Limited
ENGINEER/ARCHITECT:	DHC Consulting
JOB DETAILS	KIM used as waterproofing for Level 7 of the car park building. No saw cuts – 2 construction joints. KIM added to concrete at batching plant and then pumped to site. Approximately 2000m².

Product Spotlight — FRACURE WAX EMULSION Concrete Curing

PRODUCT DETAILS

The FRACURE range of concrete curing compounds includes:

- FRACURE, a resin based curing compound that slowly dusts off the surface over time.
- FRACURE EMULSION, an acrylic curing compound that forms a tough film (meets C309 and is available in a formulation that meets NZS 3109).
- FRACURE WAX EMULSION, a wax based curing compound that exceeds AS/NZS 3109.

FRACURE WAX EMULSION was used to cure the concrete at the Wiri Inland Port which required the highest level of moisture retention using an economical and easy-to-apply curing compound.

Featured Project Details

LOCATION:	Wiri, Auckland
DEVELOPER/BUILDER:	
CONCRETE SUPPLIER:	Firth
CONTRACTOR/PLACER:	
ENGINEER/ARCHITECT:	
JOB DETAILS	The rail exchange at Port's of Auckland Wiri Inland Port used Fracure Wax Emulsion curing compound to provide the highest level of moisture retention and ensure the concrete quickly developed its strength for long-term durability.

Product Spotlight — EPAR 124 Thorndon Overbridge, Wellington

PRODUCT DETAILS

A very fast curing, high strength, solventless liquid epoxy. EPAR TLS 124 is used to restore the physical integrity of cable loop saw cuts made in structural substrates such as concrete tunnels and roadways and for grouting bolts and rods into concrete. EPAR TLS 124 also offers good creep resistance to prevent failure under constant load, a requirement for anchor bolts/rods.

EPAR TLS 124 hardener and resin are coloured to aid proper mixing.

For the overbridge project, EPAR TLS 124 was used to grout the threaded bolts into the concrete for the crash barrier system. The premeasured and coloured packs eliminated onsite errors with mixing and application. The product has also been used to install bolts holding street lights on the Kaiwharawhara section below the overbridge.

Featured Project Details

LOCATION:	Thorndon Overbridge, Wellington
DEVELOPER/BUILDER:	Fulton Hogan Civil
CONTRACTOR/PLACER:	Fulton Hogan Civil
ENGINEER/ARCHITECT:	Opus International Consultants Limited
JOB DETAILS:	New crash barriers installed on the Thorndon Overbridge to replace old, existing structures. A fast setting, pourable, high strength epoxy grout was required to affix the 4 bolts per support to the concrete.

FORTA CONCRETE FIBER

PROJECT PROFILE | PAVEMENT

Concrete Access Road — Moureeses Bay, Whangarei

PROJECT DESCRIPTION

This project was a huge success. Moureeses Bay is north of Whangarei, in fact north of Whananaki, a coastal beach side village. The residential development at Moureeses Bay climbs off the beach to an area of steep terrain with high-spec housing having views out to The Poor Knights Islands.

Building the access road was a challenge for the civil contractors. The project used FORTA-FERRO® as the reinforcement method. Surveyors / Planners recently asked questions related to casting a pair of feature beams at the entrance to development. And finally, another engineer in the local area is expressing interest in a similar project; a 1.0 - 1.5 km long driveway.

KEY

- Superior Strength
- Mixed & Placed Easily
- Cost Effective

DETAILS

Date: October 2013
Location: Moureeses Bay, New Zealand
Dosage: 3.0 kg. / cubic metre
Fibre: FORTA-FERRO®
Owner Type: Individual
Application: Pavement

FORTA CONCRETE FIBER

PROJECT PROFILE | SHOTCRETE

Earthquake strengthening and stabilisation of retaining wall

PROJECT DESCRIPTION

Halverson Civil Ltd were awarded the contract to stabalise a failing retaining wall above residential houses in MT Victoria Wellington. The project specification also called for the wall to be brought up to current earthquake strengthening standards.

GHD Group engineers provided the steel reinforcement specification and used a combination of steel bar and wiremesh. There were rock anchors drilled and anchored into the hill to support the structure and contribute to the overall anchor strength.

There was a concern that even with the steel reinforcement level there was a possibility that in an earthquake small bits of the concrete may rupture or spall and break away form the wall.

The decision was made to use FORTA FERRO 54 mm macro fibre in the shotcrete to reduce plastic and hardened concrete shrinkage, improve impact strength, and increase fatigue resistance and concrete toughness. This extra heavy duty fibre also offers maximum long term durability, and guarantees that within the concrete there is a high level of 3D Fibre reinforcement to hold the small bits of concrete together if subjected to a catastrophic event like an earthquake.

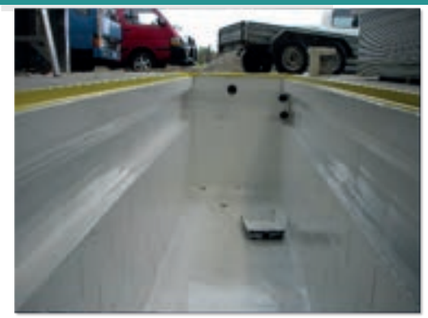
KEY

- Innovative Solution
- Enhanced Performance
- Long-term durability

DETAILS

Date: February 2018
Location: Mt Victoria, Wellington
Fibre: Forta Ferro®
Dosage: 5kg/m3
Concrete Details: 200mm thick, 40MPa.
Concrete Supplier: Allied Concrete
Contractor: Halverson Civil Ltd

Product Spotlight — EPAR 733HV Vehicle Inspection Pit



PRODUCT DETAILS

EPAR 733HV is a high build, 100% solids, solvent-free epoxy system used to coat steel and concrete structures exposed to a wide range of chemicals.

EPAR 733HV is applied in one to two coats to concrete and steel. It has excellent chemical resistance.

EPAR 733HV fully complies with the test requirements of AS/NZS 4020, Products for use in contact with Drinking Water (standard hardener only).

EPAR 733HV can be applied by brush, roller or spray. It offers good UV resistance and performance in areas exposed to sunlight.

Featured Project Details

LOCATION:	Greymouth
DEVELOPER/BUILDER:	Murray Wilkins
CONTRACTOR:	Tony Wilkins Builder
JOB DETAILS	New workshop and office building. Workshop includes a vehicle inspection pit. Epar 733 applied to inside of pit to give a hard wearing, chemically resistant coating. Normally supplied in grey to match concrete; for this job was supplied in white. Can be used over concrete and steel.

Product Spotlight — Retardé E Xtra McDonalds Nelson

PRODUCT DETAILS

Water-based concrete surface retarder. Sprayed onto concrete to produce exposed aggregate or decorative concrete.

- Provides 3 – 6mm etch.
- Cleans up with water.
- Easy to use.

RETARDÉ E is for concrete up to 20MPa; RETARDÉ E XTRA is for above 20MPa.

RETARDÉ E is used to produce decorative and non slip exposed aggregate finishes on in-situ and pre-cast concrete. Areas of use include paths, driveways, swimming pool surrounds etc. Use with HARDCOAT or SAME DAY SEALER to create a high-quality exposed aggregate finish.

Featured Project Details

LOCATION:	McDonald's Tahunanui, Nelson
DEVELOPER/BUILDER:	McDonald's
CONTRACTOR/PLACER:	Asphalt & General
ENGINEER/ARCHITECT:	–
JOB DETAILS	Coloured exposed aggregate concrete outside of recently revamped and extended McDonald's. Retardé E Xtra concrete retarder used to create a high quality, consistent exposed aggregate finish. Sealed with Same Day Sealer.

Product Spotlight — AQUELLUX S WB Parnell Branch Library

PRODUCT DETAILS

AQUELLUX S WB is a water-based, solvent-free silane/siloxane water repellent applied to porous building materials to make them water repellent without changing their appearance.

AQUELLUX S WB reacts on the concrete, generating the active ingredient, without blocking, the pores and capillaries within the surface structure. Water absorption into the building material is stopped or greatly reduced while water within the material is still able to evaporate out.

AQUELLUX S WB has excellent alkali resistance and has a low volatility, therefore little evaporation loss during application.

AQUELLUX S WB is also recommended for applications where solvent-based water repellents are not suitable such as enclosed areas or where solvent sensitive materials may be contacted.

Featured Project Details

LOCATION:	Parnell, Auckland
DEVELOPER/BUILDER:	Gary Boyce, building owner
CONTRACTOR:	Concrete Specialists NZ
JOB DETAILS	This Historic Place Category 2 listed building was built in 1924. Ongoing protection from the elements and pollution was vital. In providing solutions for the protection of this building, it was essential that the building wasn't affected in any way. AQUELLUX S WB (water based silane/siloxane) was the perfect solution, providing long-term protection against water penetration without changing the appearance of the building. Approximately 800 litres of AQUELLUX S WB were used.

Repair & Fabrication Epoxies

Epoxy mortars, pastes and glues

Epoxy mortars, pastes and glues are used to bond and repair concrete, timber, steel, etc for construction, drainage, precast, architectural and other work.

Epoxy Mortars

To glue to and repair concrete of all types and to fabricate complex concrete precast components

Product

EPAR 705

A two-part, non-slump epoxy mortar formulated to give a strong bond to dry or damp concrete, steel, glass, aluminium etc. EPAR 705 is non-shrink and has excellent chemical resistance. Also available as a 5-minute version which has a 5 minute pot life and 10 minute initial set time.

What's it used for?

The excellent mechanical properties of EPAR 705 combined with ease of use make it an extremely versatile product. Common uses for EPAR 705 include the following:

- Bedding and jointing of precast concrete units.
- Repair of damaged or spalled concrete and protection of reinforcing
- Levelling and patching of concrete floors under heavy load or impact.
- Grouting of starter bars and bolts particularly horizontal or overhead
- Fabrication of concrete pipe intersections and general drainage work.

What can it be applied to?

EPAR 705 can be applied to dry or damp concrete, steel, glass, aluminium, timber.

Product

EPAR EM

A two-part, low-slump, easy-mix epoxy mortar specially formulated to allow hand mixing. Adheres strongly to dry or damp concrete, steel, glass, aluminium, etc. EPAR EM is non-shrink and has excellent chemical resistance. EPAR EM is AS/NZS 4020:2005 compliant for contact with potable water up to 40°C and an immersion exposure level of up to 15,000mm² epoxy per litre of water.

What's it used for?

Uses for EPAR EM include:

- Assembly and repair of precast concrete units
- Repair of spalling concrete and protection of steel reinforcement
- Levelling and patching of concrete floors under heavy load or impact
- Grouting of starter bars and bolts particularly horizontal or overhead
- Fabrication of concrete pipe intersections and general drainage work, including underground work
- Applications requiring potable water contact.

What can it be applied to?

EPAR EM can be applied to dry or damp concrete, steel, glass, aluminium, timber, etc.

Product

EPAR EX

A two-part, non-slump epoxy mortar specially formulated to allow hand mixing. Adheres strongly to dry or damp concrete, steel, glass, aluminium, etc. EPAR EX is non-shrink and has excellent chemical resistance.

What's it used for?

Uses for EPAR EX include:

- Assembly and repair of precast concrete units
- Repair of spalling concrete and protection of steel reinforcements
- Levelling of concrete floors exposed to heavy load or impact
- Grouting of horizontal or overhead starter bars or bolts
- Fabrication of concrete pipe intersections, etc.

What can it be applied to?

EPAR EX can be applied to dry or damp concrete, steel, glass, aluminium, timber.

Epoxy Pastes

To repair and adhere to concrete, timber and other substrates with fine tolerances

Product

EPAR HPN

A soft, two-part thixotropic epoxy mortar/paste, gunable and trowellable. EPAR HPN has excellent adhesion to most materials including concrete, metals, bricks, ceramic, glass etc.
EPAR HPN is non-shrink and has excellent chemical resistance.

What's it used for?

EPAR HPN is used in applications where an epoxy mortar, such as EPAR 705, EM or EX, is not suitable due to viscosity. The excellent mechanical properties of EPAR HPN make it suitable for many applications including the following:

- Bedding and jointing of precast concrete units, machines and backing plates (both vertical and horizontal) and grouting of horizontal starter bars and bolts
- Repair of spalling concrete, levelling and patching of concrete floors under heavy load or impact, and tiling
- Fabrication of concrete pipe intersections
- Bonding of aggregates to concrete etc, for decorative finishes.

What can it be applied to?

EPAR HPN can be applied to most materials including concrete, metals, bricks, ceramic, glass etc.

Product

EPAR 802

EPAR 802 is a soft, smooth epoxy paste which is solventless and non-shrink. EPAR 802 can be applied up to 5mm thick on vertical surfaces without slumping and can easily be feathered out or sanded. EPAR 802 is recommended for applications requiring finer tolerances than are achievable with EPAR epoxy mortars or EPAR HPN epoxy paste.

What's it used for?

The excellent gap filling and adhesive properties of EPAR 802 make it suitable for a wide variety of applications including the following:

- Laminating and jointing and smoothing fibrous cement sheet and screw holes.
- General concrete repair and levelling and as a tile adhesive
- Production of exposed aggregate finish by bonding pebbles to a variety of surfaces
- Smoothing and patching timber, concrete or metal surfaces prior to painting. Can be trowelled to a smooth finish.

What can it be applied to?

EPAR 802 can be applied to concrete, cement fibre board, timber, tiles, metal, etc.

Precautions and Limitations

For optimal performance with any epoxy system it is important to proportion the hardener and resin accurately, then thoroughly mix together until of an even colour and consistency. Use the correct product for the conditions, especially during cold weather.
If potable water contact is required, then use EPAR EM and allow to fully cure (5 days minimum), then flush down the bonded substrate and discard the water.
EPAR 802: Not suitable for application to vertical substrates beyond 5mm build thickness.
EPAR epoxy mortars and pastes are not suitable for bonding plastics.

Repair & Fabrication Epoxies

Epoxy pastes, glues and grout

Epoxy pastes, glues and grout are used to bond and repair concrete, timber, steel, etc for construction, drainage, precast, architectural and other work.

Epoxy Glue

To repair and adhere to concrete, timber and other substrates with fine tolerances

Product	What's it used for?	What can it be applied to?
EPAR GP EPAR GP is a high-strength, two-part epoxy glue. It is non-shrink and suitable for use where gap filling properties are required. EPAR GP, having grease-like viscosity, can be feathered out or applied up to 10mm thick on vertical surfaces. EPAR GP is suitable for service in either dry or wet conditions. A fast curing (5-minute pot life) version of EPAR GP is also available.	EPAR GP is suitable for use as a gap filling adhesive or filler for wood, concrete, steel, ceramics etc. Uses include: ▪ Manufacture of timber joinery, furniture and boat building ▪ Repair and manufacture of formwork for concrete ▪ Bonding and stopping of fibrous cement sheet. EPAR GP is especially suited as a general woodworking glue for building purposes. EPAR GP 5 minute is recommended for applications where a very fast setting epoxy adhesive is required - for example, adhering kitchen benches to timber supports.	EPAR GP can be applied to a wide range of substrates including wood, steel, concrete, fibre cement board, etc.

Epoxy Fairing

To fill and fair all types of substrates

Product	What's it used for?	What can it be applied to?
FAIRFILL FAIRFILL is a two-part, light and sandable epoxy fairing and filling compound. FAIRFILL is non-shrinking, nonporous and cold curing thereby allowing application in all temperatures. FAIRFILL is easily sanded using sandpaper, a power sander or other woodworking/finishing tools.	The excellent finishing properties of FAIRFILL combined with ease of use make it an extremely versatile product for smoothing or filling surfaces before the application of a subsequent coating or paint. FAIRFILL is non-shrink and is easily sanded and finished. As FAIRFILL is a cold-curing epoxy, curing will take place at temperatures down to 0 °C. There is no need to ensure that the ambient temperature or substrate temperature is above 15°C as is common with most other epoxy products.	Common uses for FAIRFILL are: ▪ Boats – smoothing hulls and other surfaces ▪ Repairing formwork ▪ Housing applications (repairing rotten timber poles, weatherboards, wallboards, etc) and model making. FAIRFILL is particularly suitable for filling gaps and holes and smoothing over screw holes in fibre cement sheets.

Epoxy Grouting

To grout, fill and repair concrete substrates

Product	What's it used for?	What can it be applied to?
EPAR S EPAR S is a low viscosity, lightly filled, high strength epoxy grout. EPAR S has very good mechanical properties and chemical resistance. Available in a standard grade or as a FAST-SET/COLD-CURING version.	EPAR S is used for filling spalls, cracks and chips in concrete floors and for grouting holding down bolts or starter bars into concrete. It is also used for grouting under machinery, bearing plates, crane rails etc and as high strength nosings for bridges and industrial floors. EPAR S FAST SET/COLD CURE is used for applications down to 0°C.	EPAR S is applied to concrete and steel (bonding steel into concrete or under steel base plates/crane rails). EPAR S may be used to level uneven and spalled concrete substrates not subject to moisture penetration through the substrate.

Epoxy Selection & Additional Information:

Generally select the epoxy system that is most suitable for the application. For drainage (pipe intersections, etc), precast manufacture and concrete repair, epoxy mortars are most suitable as they allow high build and are more economical when large quantities are required. Choose EPAR 705, EM or EX grades.

For tighter tolerance precast work, choose EPAR HPN as this product can be applied in thinner layers and is more easily finished.

For close tolerance work, gap filling and smoothing applications choose EPAR 802 or EPAR FAIRFILL. EPAR 802 sets strongly and can be used in applications where a higher strength than EPAR FAIRFILL offers is required. However, once cured EPAR 802 will need to be sanded with a power tool whereas EPAR FAIRFILL can be smoothed with sandpaper or file.

For grouting applications that are inclined or vertical, use EPAR S as this product has a very high resin content and will "wet" the substrate with the epoxy ensuring a good bond between substrate and rebar/rod. For horizontal grouting applications (where EPAR S will flow out of the hole), use EPAR HPN or EPAR 802. Apply product into the hole and smear around the rebar or rod prior to inserting.

When bonding wood, EPAR GP is the best product as it will "wet" into the timber ensuring a strong bond.

Generally, epoxies are not suitable for bonding to plastic. However, if PVC is used with concrete and needs to have an epoxy applied, then sand the PVC thoroughly where the epoxy will be applied. Coat this sanded area with a thin layer of PVC pipe glue. Distribute clean dry sand onto the glue and shake off excess. Allow glue to fully cure (no solvent smell). Apply a thin smear of epoxy to this sanded area, then build up as required.

Precautions and Limitations

For optimal performance with any epoxy system it is important to proportion the hardener and resin accurately, then thoroughly mix together until of an even colour and consistency. Use the correct product for the conditions, especially during cold weather. If potable water contact is required, then use EPAR EM and allow to fully cure (5 days minimum), then flush down the bonded substrate and discard the water.

EPAR GP: Is not suitable for applications where the epoxy is directly exposed to weathering. Epoxy at the surface of a joint subjected to weathering will discolour/chalk over time but this will not affect the performance of the epoxy within the joint.

FAIRFILL: Should not be used in applications subject to wear as, being sandable, it will be damaged and worn. FAIRFILL may be used as an adhesive in appropriate applications (such as gluing timber back into weatherboards, etc), but a more suitable EPAR epoxy system should be used for more demanding applications.

EPAR S: Can be used to level existing concrete substrates. When used as a coating in this type of application, only experienced floor coatings applicators are to apply.

Liquid Epoxy Systems

Coating and Repair Epoxies

A wide range of liquid epoxies for site, factory, workshop and home/business use. Epoxy crack injection, sealing, joint filling and repair systems to bond, repair and coat concrete, adhere steel into concrete, protect concrete against chemical attack, etc.

Epoxy Coatings

To coat concrete for decorative and protective purposes

Product	What's it used for?	What can it be applied to?
EPAR 121B EPAR 121B is a solvent-free liquid epoxy which has very good mechanical strength, good chemical resistance and excellent flexibility. EPAR 121B adheres very well to concrete, metal and asphalt and can be used for road or driveway repairs, coating metal surfaces, protecting concrete, etc.	EPAR 121B has excellent compatibility with asphaltic surfaces. It may be used as a coating onto which grit or aggregate is bonded to form a skid resistant wearing course. EPAR 121B can be used to line steel substrates for repair or protection (for example, repairing steel gutters). EPAR 121B may be used as a chemically resistant coating for bitumen and concrete surfaces, against acids, oils, fats etc. The combination of flexibility and strength make EPAR 121B suitable as a joint filler where a small amount of movement is expected, e.g., expansion joints in concrete slabs. Rubber crumb can be mixed into EPAR 121B to increase flexibility even more.	EPAR 121B can be applied to asphaltic surfaces, concrete, steel and similar substrates. It is self-priming and does not require a prime coat (unless mixed with aggregate).

Product	What's it used for?	What can it be applied to?
EPAR 226 EPAR 226 is a low viscosity, unfilled epoxy with excellent mechanical properties. EPAR 226 may be used for a variety of applications as supplied or may be mixed with suitable aggregate to make epoxy mortars, grout or toppings. EPAR 226 fully complies with the test requirements of AS/NZS 4020: Products for use in contact with Potable Water (standard hardener only).	EPAR 226 is a versatile liquid epoxy system. It can be used for: ▪ Grouting or bedding of machinery, base plates, crane rails, precast concrete units etc ▪ General patching and repair of concrete when mixed with aggregate to form a mortar ▪ Repair of cracks in concrete by injection or gravity feed. Crack injection of structural concrete – refer to EPAR 226XLV data sheet. ▪ New to old concrete tie coat EPAR 226 can also be used as a coating/sealer for concrete floors (by approved applicators only). EPAR 226 is suitable for coating the inside of water retaining tanks or pipelines in contact with drinking water.	EPAR 226 can be applied to a wide range of substrates including concrete, steel, timber, brick, etc. For high strength concrete crack injection, use EPAR 226XLV. When applied to surfaces in contact with potable water, EPAR 226 must be fully cured (5 to 7 days), then washed down with water and the wash down water discarded.

Product	What's it used for?	What can it be applied to?
EPAR 733HV EPAR 733HV is a high build, 100% solids, solvent-free epoxy system used to coat steel and concrete structures exposed to a wide range of chemicals. EPAR 733HV is applied in one to two coats to concrete and steel. It has excellent chemical resistance. EPAR 733HV fully complies with the test requirements of AS/NZS 4020, products for use in contact with Drinking Water (standard hardener only).	Use EPAR 733HV to protect concrete and steel structures exposed to chemical immersion or contact, including concrete pipes and precast concrete used in sewerage systems. EPAR 733HV is also used to coat concrete or other surfaces for water retaining or reticulation in contact with drinking water. Other uses are for lining vehicle inspection pits, manhole access points, bunds, etc.	EPAR 733HV can be applied to clean, sound concrete or steel substrates. It is suitable for both horizontal and vertical applications.

Epoxy Crack Repair and Joint Sealing

To restore strength back to cracked concrete and fill and seal joints

Product	What's it used for?	What can it be applied to?
EPAR 122 COLD CURE EPAR 122 COLD CURE is an unfilled, non-shrink solvent-free epoxy liquid that is primarily used as a cold-curing concrete crack and joint repair system. It may also be used as a cold-curing primer for concrete surfaces prior to the application of other epoxy systems. Cures down to 0°C.	EPAR 122 COLD CURE is also used as a concrete crack and joint repair system in low temperature applications. Common applications are the repair of cracked and spalling concrete joints in freezers or other low temperature storage areas. EPAR 122 COLD CURE can be used as a primer for EPAR liquid epoxies and mortars when used on rough, absorbent surfaces at low temperatures.	EPAR 122 COLD CURE is suitable for application to concrete substrates.

Product	What's it used for?	What can it be applied to?
EPAR 226XLV EPAR 226XLV is a low viscosity, unfilled solvent-free epoxy with excellent mechanical properties.	EPAR 226XLV is used as a crack injection epoxy for concrete repairs by injection or gravity feed. Due to its low viscosity, EPAR 226XLV will fill the pores and cavities within the concrete, restoring strength to the structure under repair.	EPAR 226XLV is applied into concrete substrates under pressure or gravity feed.

Precautions and Limitations

EPAR 121B: Not suited to vertical application due to its self-levelling properties. For chemical bunding applications, testing of EPAR 121B using the proposed chemicals (and length of exposure) should be undertaken prior to application.
EPAR 226: Not suitable for application to plastic substrates. When used as a floor coating, application must be by an experienced coatings applicator approved by Stratmore Construction Solutions.
EPAR 226 fully complies with the test requirements of AS/NZS 4020:2005 (contact with potable water) to cover a cold water application up to <40°C, at the recommended 'total immersion' exposure of ~30,000mm² per litre of water (standard hardener only). Refer to technical data sheet for application requirements for potable water applications.
EPAR 733HV: If this product is to be used as a floor coating, sealer, floor levelling and repair, etc it must be applied by a professional applicator only i.e. those that are professionally trained flooring applicators and are approved by Stratmore. If the substrate coated with EPAR 733HV is exposed to chemicals listed as "Not Suitable" or "Suitable for Intermittent Contact only" according to the chemical resistance chart on the data sheet (or if the chemical is not listed), then the coating must be inspected for signs of damage due to chemical action.
EPAR 122 COLD CURE will cure down to 0°C. Initial and final cure times will be increased at lower temperatures (compared to testing at 18°C). Ensure epoxy is cured prior to opening to traffic.
At very low temperatures, warm the substrate (with hot air). Warm the epoxy hardener and resin (stand in hot water) prior to mixing and application.

Waterstops & Joint Repair

Hydrophilic waterstops for construction joints to stop the passage of water.
Epoxies for joint rehabilitation and repair.

Hydrophilic Waterstops

To seal construction joints and penetrations in concrete against the passage of water

Product

KRYTONITE

KRYTONITE Swelling Waterstop is a high performance elastomeric waterstop made from hydrophilic synthetic rubber. KRYTONITE delivers high performance waterproofing in a cost effective and easy to install solution. KRYTONITE uses swelling pressure to seal concrete construction joints and penetrations to stop water in the most extreme conditions. KRYTONITE is extremely durable and will not deteriorate over time. KRYTONITE does not contain Bentonite.

What's it used for?

Use KRYTONITE Swelling Waterstop to permanently waterproof horizontal or vertical construction joints, pipe penetrations, between precast elements and other concrete joints. Use standard (yellow) KRYTONITE for all typical waterstop applications – including where salt and other water contaminations are anticipated. Use rain-protected (blue) KRYTONITE RP in wet environments where premature swelling is a risk.

What can it be applied to?

KRYTONITE is designed to replace moulded PVC waterstops and bentonite based waterstops in construction joints to prevent the passage of water through the joint. KRYTONITE can be used by itself as a single protection waterstop or with other components of the KRYSTOL WATERSTOP SYSTEM as part of a double protection system.

Product

HYDROTITE

HYDROTITE CJ 0720-2K is a hydrophilic (water swelling) material for site formed construction joints based on the proven effectiveness of HYDROTITE. HYDROTITE CJ 0720-2K has a composite structure: non expanding inner core with an expanding outer structure.
The holes of HYDROTITE CJ 0720-2K are designed to absorb expansion pressure during the initial stage of expansion and thus avoid cracking the concrete as it develops strength. The coating on HYDROTITE CJ 0720-2K delays premature expansion by rain or ground water before installation. The expansion-delay coating also allows freshly poured concrete to cure before swelling occurs.

What's it used for?

HYDROTITE CJ 0720-2K is used to stop water from penetrating concrete construction joints, pipe penetrations and areas likely to allow water through. It is easy to install and does not contain Bentonite or other components that can leach out over time.

What can it be applied to?

HYDROTITE CJ 0720-2K is applied to the formed surface of a construction joint prior to the next concrete pour. It can also be wrapped around pipes prior to the pipe being embedded into new concrete.

Product

LEAKMASTER

LEAKMASTER is a one-component water-swelling sealant for concrete construction joints and pipe penetrations. Swells to over double its size when exposed to water.

What's it used for?

LEAKMASTER is used to seal rough and irregular joints or penetrations in concrete by swelling and applying pressure to the surrounding concrete thereby stopping water from penetrating.
LEAKMASTER can be used to bed HYDROTITE or KRYTONITE onto rough concrete.

What can it be applied to?

LEAKMASTER is applied to concrete or around pipe penetrations or steel to be encapsulated in concrete. LEAKMASTER can be applied underwater.

Epoxy Joint Filling and Repair

To fill and seal joints and restore strength back to cracked and damaged joints

Products

EPAR S: EPAR S is a low viscosity, lightly filled, high strength epoxy grout. EPAR S has very good mechanical properties and chemical resistance.

EPAR 121B: EPAR 121B is a solvent-free liquid epoxy which has very good mechanical strength, good chemical resistance and excellent flexibility. The combination of flexibility and strength make EPAR 121B suitable as a joint filler where a small amount of movement is expected, e.g., expansion joints in concrete slabs. Rubber crumb can be mixed into EPAR 121B to increase flexibility even more.

EPAR 122 Cold Cure: EPAR 122 COLD CURE is an unfilled, non-shrink solvent-free epoxy liquid that is primarily used as a cold-curing concrete crack and joint repair system. It may also be used as a cold-curing primer for concrete surfaces prior to the application of other epoxy systems.

Please refer to Liquid Epoxy Systems in this booklet for more information on these products.

Precautions and Limitations

KRYTONITE: Not for use at expansion joints. Do not use KRYTONITE RP in high-salt environments. Apply to a dry surface and keep dry. Do not place near the edge of the concrete. Leave a minimum concrete cover of 65 mm from all edges.
HYDROTITE: HYDROTITE CJ 0720-2K requires a minimum concrete cover of 100mm from all edges for unreinforced concrete or 50mm from all edges for reinforced concrete (HYDROTITE is placed within the reinforcement). HYDROTITE should be protected from moisture or ponding of water prior to placement of concrete to avoid pre-expansion.
LEAKMASTER: It requires a minimum amount of concrete cover depending on the bead size. For a large bead size, a minimum of 100mm cover (for unreinforced concrete) or 50mm (reinforced concrete) is required from all sides of the bead. When applied, concrete cannot be poured until the LEAKMASTER is cured and resilient (can support weight).

Crystalline Waterproofing

AUTHORIZED DISTRIBUTOR

The renowned, high-performance Krystol range of crystalline waterproofing products manufactured by Kryton Canada.

Crystalline Waterproofing and Repair

To waterproof and repair existing concrete structures against water penetration

Product

KRYSTOL T1

Krystol T1 is a surface applied crystalline slurry treatment that transforms new or existing concrete into a permanent waterproof barrier. Krystol T1 lowers the permeability of the concrete to protect against the ingress of water and waterborne chemicals. Since it becomes integral to the concrete, it can be applied to either the positive (wet) or negative (dry) side of the water pressure which allows reliable hydrostatic waterproofing protection and remediation for even the most difficult applications.

How it Works

Krystol T1 contains Krystol technology. When applied to concrete, Krystol chemically reacts with water and un-hydrated cement particles to form needle-shaped crystals that fill capillary pores and micro-cracks in the concrete and permanently block the pathways for water and waterborne contaminants. Any moisture introduced over the lifespan of the concrete will initiate crystallisation, ensuring permanent waterproofing protection.

Where is it used?

Krystol T1 can be used to waterproof the following structures:

- Concrete basements, walls, slabs, footings, rooftops and roof decks
- Marine structures
- Elevator pits and equipment pits, parking structures
- Swimming pools, water reservoirs and storage tanks
- Tunnels, pipes and underground vaults
- Water treatment reservoirs
- Bridge decks, elevated slabs and ramps.

Coverage: 1.2 – 1.6kg/m² (depending on two coat or single coat application)

Product

KRYSTOL REPAIR GROUT

As part of the Krystol Leak Repair System, Krystol Repair Grout is a crystalline concrete waterproofing that stops the flow of water to permanently repair leaking cracks, holes and joints in concrete, and can also be used to resurface and waterproof defective, damaged or deteriorating concrete.

How it Works

Krystol Repair Grout employs advanced fibre technology and shrinkage controlling additives to prevent cracking. Krystol Repair Grout contains Krystol technology. When applied to concrete, Krystol chemically reacts with water and un-hydrated cement particles to form insoluble needle-shaped crystals that fill capillary pores and micro-cracks in the concrete and block the pathways for water and waterborne contaminants. Any moisture introduced over the lifespan of the concrete will initiate crystallisation, ensuring permanent waterproofing protection.

Where is it used?

Krystol Repair Grout is used in conjunction with Krystol Plug and Krystol T1 (crystalline waterproofing system) to repair any leaking crack, joint or other defect in concrete, or by itself to repair spalled or honeycombed concrete.

Coverage: Krystol Repair Grout covers:
~ 15 m per 25 kg pail when used with Krystol Plug
~ 10 m per 25 kg pail when used without Krystol Plug.
Coverage based on filling a 40 mm x 30 mm chase.

Product

KRYSTOL PLUG

Krystol Plug is a rapid-setting hydraulic cement that when mixed with water is used to stop flowing water and repair leaking cracks, holes and joints in concrete.

How it Works

Krystol Plug sets hard within two minutes and has high-compressive strength, which allows it to stop water even under high hydrostatic pressure. Stopping water flow then allows permanent repair of the leak using Krystol Repair Grout and Krystol T1 crystalline waterproofing system.

Where is it used?

Krystol Plug is used as part of the Krystol® Leak Repair System to repair leaking cracks, joints and holes. It provides an impervious, non-shrinking seal to prevent seepage around pipes and metal fixtures in masonry and concrete.

Product

KRYSTOL WATERSTOP TREATMENT

Krystol Waterstop Treatment is a cementitious crystalline slurry that is applied to horizontal and vertical construction joints to provide additional waterproofing protection, and protect rebar from corrosion.

Krystol Waterstop Treatment is used in conjunction with Krytonite as part of the Krystol Waterstop System wherever water penetration through static concrete-to-concrete joints is a concern. Krystol Waterstop Treatment can also be used by itself as a dampproofing treatment.

How it Works

Krystol Waterstop Treatment contains Krystol technology. When applied to concrete, Krystol chemically reacts with water and unhydrated cement particles to form insoluble needle-shaped crystals that fill capillary pores and micro-cracks in the concrete and block the pathways for water and waterborne contaminants. Any moisture introduced over the lifespan of the concrete will initiate crystallisation, ensuring permanent waterproofing protection.

Where is it used?

Krystol Waterstop Treatment is used in conjunction with Krytonite to waterproof and protect:

- Static concrete-to-concrete joints where there is any concern regarding water penetration
- Preplanned and unintended shotcrete cold joints
- Crack control joints
- On its own for damp-proofing applications.

Coverage: 1.0kg/m²

Product

KRYSTOL LEAK REPAIR SYSTEM

The Krystol Leak Repair System is a permanent crystalline waterproofing solution used for repairing leaking cracks, holes and joints found in concrete. It reliably stops high water flow, even under high-hydrostatic pressure, and outperforms injection systems. Repairing leaks is a simple 3-step process that involves preparing a chase by chiseling into the concrete, stopping flowing water with Krystol Plug (if required), and then filling the chase flush to the surface with Krystol Repair Grout. Krystol T1 is used to coat the repair and surrounding concrete.

How it Works

The Krystol Leak Repair System contains Krystol technology. When applied to concrete, Krystol chemically reacts with water and un-hydrated cement particles to form insoluble needle-shaped crystals that fill capillary pores and micro-cracks in the concrete and block the pathways for water and waterborne contaminants. Any moisture introduced over the lifespan of the concrete will initiate crystallisation, ensuring permanent waterproofing protection.

Where is it used?

The leak repair system comprised of Krystol Plug, Krystol Repair Grout, and Krystol T1 is primarily used to repair leaking cracks in concrete. The system, as well as components therein, can also be used to:

- Repair leaking cracks or construction joints
- Seal around pipes and metal fixtures in masonry concrete
- Repair spalled or honeycombed concrete
- Use as a waterproof parge coat on masonry walls
- Plug and seal construction form tie holes.

Precautions and Limitations

KRYSTOL T1: Krystol T1 Concrete Waterproofing is an effective waterproofing system for rigid concrete structures only and may not be reliable for structures with unstable, moving cracks or joints. Cementitious coatings, including plaster, must either have a bonding aid incorporated or the Krystol T1 coating be primed with a bonding aid prior to overcoating with the coating.
KRYSTOL PLUG: Is effective for rigid structures only and may not reliably seal cracks that experience variable loading or repeated movement.
KRYSTOL WATERSTOP TREATMENT: Is effective for rigid structures only and may not reliably seal joints that experience variable loading or repeated movement. Consult Stratmore for project specific recommendations.
KRYSTOL LEAK REPAIR SYSTEM: Is an effective waterproofing system for rigid concrete structures only and may not be reliable for structures with unstable, moving cracks or joints.

Fibre Reinforcement Systems

Synthetic fibre reinforcement for concrete

FORTA CONCRETE FIBER

High-performance FORTA synthetic fibre reinforcement systems for concrete that can replace steel mesh or steel in a wide range of applications.

Macro Synthetic Fibre Reinforcement

Replace steel in slab-on-grade and precast applications

Product

FORTA-FERRO®

FORTA-FERRO® is an easy-to-use and mix macro synthetic blended fibre system and is used to reduce plastic and hardened concrete shrinkage, improve impact strength, and increase fatigue resistance and concrete toughness.
This extra heavy-duty fibre also offers maximum long-term durability, structural enhancements, and effective secondary temperature crack control.

What's it used for?

FORTA-FERRO® represents the next generation of synthetic fibre technology. It is capable of a much higher replacement level of conventional steel reinforcement in slab on grade and precast applications.
The FORTA FERRO® macro fibre system maximises each of the critical fibre characteristics that contribute to long-term durability and crack-control performance. Using advanced co-polymer chemistry, a blend of fibre shapes along with twisted bundles and special grey colour to assure uniform mixing and an excellent surface finish, this unique best-of-its-kind macrosynthetic fibre system may be used at much higher dosages (3.5kg, 4.5kg or more per m³) without losing its user-friendly reputation.
FORTA FERRO® provides the highest slab curling reduction and post-crack performance values of any synthetic fibre in its class.

Where can it be used?

Projects using FORTA-FERRO® macro synthetic fibres are typically commercial and industrial type projects. These include:

- Warehouse slabs, storage unit slabs, heavy-duty parking and entrance ways, roads and accessways
- Precast tanks and wastewater projects
- Composite steel decks and shotcrete.

FORTA-FERRO® is used in projects where steel reinforcement reduction or replacement is the objective. FORTA-FERRO® is a blended fibre system and includes a fibrillated micro fibre to provide early-age plastic shrinkage crack reduction as well as the macro polymer fibre for high levels of post crack load carrying capacity. Unlike other macro fibres, FORTA-FERRO® is easily finished and will not pose any safety hazard if fibres are present at the surface of the concrete.

Micro Synthetic Fibre Reinforcement

Use as an alternative to wire mesh for slab-on-grade applications and for precast

Product

FORTA MIGHTY-MONO®

MIGHTY-MONO® is a fully oriented, 100% virgin homopolymer polypropylene monofilament fibrous reinforcement. Due to its fine-filament nature, MIGHTY-MONO® is virtually undetectable on the surface finish of most concrete applications.

What's it used for?

MIGHTY-MONO® fibres are designed to reduce plastic shrinkage cracking in concrete in the first 24 hours after placing and finishing. Very fine monofilament fibres are used at a typical dosage of 0.6kg per cubic metre of concrete to reduce plastic shrinkage cracking prior to initial set. They are easy to add and mix and result in a near-invisible surface finish.
By reducing or eliminating plastic shrinkage cracking, the concrete is less likely to develop long-term drying shrinkage cracks and perform better than traditionally reinforced concrete.

Where can it be used?

MIGHTY-MONO® fibres are recommended for concrete applications such as:

- Slabs-on-ground, basement floors, garage floors
- Overlays/toppings, curbs, driveways, foot paths and coloured concrete.

Anywhere that the objective is to control plastic shrinkage cracking while improving basic durability properties. Requires no mix design or placement changes or specialised finishing techniques.

Product

FORTA SUPER-NET®

SUPER-NET® is a softer, grey-coloured fibrillated (net-shaped) fibre that mixes and performs well without sacrificing a premium surface finish. Its 'SUPER-NETWORKING' power, long-term durability, and true secondary/temperature control incorporates a fibrillated pattern into the concrete mix.

What's it used for?

SUPER-NET® fibres are designed to reduce plastic and hardening shrinkage cracking in concrete and to act as an alternative reinforcing system to wire mesh in non-structural applications. These fibrillated, or net-shaped, fibres are used at a typical dosage of 0.9kg per cubic metre of concrete to reduce plastic and hardening shrinkage. By reducing or eliminating plastic shrinkage cracking, the concrete is less likely to develop long-term drying shrinkage cracks and perform better than traditionally reinforced concrete. Should a crack develop, SUPER-NET® fibres provide a higher level of post crack performance than mono filament fibres.

Where can it be used?

SUPER-NET® fibres are recommended for use in quality concrete applications such as:

- Slabs-on ground, overlays/toppings, curbs, sloped paving, roads, driveways, footpaths and shotcrete
- Tilt-up panels, architectural/coloured concrete, precast, water tanks, and sewage treatment facilities.

Anywhere that peak fibre performance is desired and where the objective is to control temperature/shrinkage cracking while improving basic durability properties. Requires no mix design or placement changes or specialised finishing techniques.

Product

ECONO-CAST®

ECONO-CAST® is a fibre specifically designed and engineered by FORTA® for the precast industry. It is used to reduce plastic and hardened concrete shrinkage, improve impact strength, reduce handling stresses, and increase fatigue resistance and concrete toughness.
This medium-duty fibre offers superior bonding power, long-term durability, and sharper edge control by incorporating a fibrillated pattern. Non-corrosive, chemically inert, and 100% Alkali Proof!

What's it used for?

ECONO-CAST® fibres are designed to reduce plastic and hardening shrinkage cracking in concrete and to act as a viable alternate to non-structural handling steel reinforcement in a variety of precast products. These fibrillated, or net-shaped, fibres are used at a typical dosage of 0.9kg per cubic metre of concrete to reduce plastic and hardening shrinkage.
By reducing or eliminating plastic shrinkage cracking, the concrete is less likely to develop long-term drying shrinkage cracks and perform better than traditionally reinforced concrete. Should a crack develop, ECONO-CAST® fibres provide a higher level of post crack performance than mono filament fibres.

Where can it be used?

ECONO-CAST® fibres are recommended for use in precast applications. It can improve every precast and is compatible with all precast ion manufacturing technologies. It is used to reduce slumping, cracking, and fallouts during precast stripping procedures – it increases production.
FORTA ECONO-CAST® meets all A.S.T.M. C-1116 requirements.

Precautions and Limitations

FORTA FERRO®: For applications with expected high loadings (forklift, racking, truck, etc) or unusual applications, the FORTA design data request form must be completed and sent to Stratmore Construction Solutions to provide the correct dosage of fibres.
MIGHTY-MONO® & SUPER-NET®: These fibres are used for residential and light-duty applications. Under NZBC, micro fibres cannot be used to replace steel specified for house slabs. However, MIGHTY-MONO® and SUPER-NET® fibres can be added to any mix to be used in conjunction with steel reinforcing.
ECONO-CAST®: For precast applications requiring replacement of higher levels (or structural) steel, then use FORTA-FERRO® fibres.

Concrete Admixture & Maintenance Products

To modify concrete mixes for strength and workability. Other building products for concrete etching and removal and general and specialised use.

Concrete Admixture, Lubricant and Paint Stripper

To modify concrete mixes, remove paint or lubricate concrete pipes

Product	What's it used for?	What can it be applied to?
BOND-R MODIFIER BOND-R is an acrylic polymer which, when added to Portland cement compositions, greatly improves their physical and chemical performance, whether used indoor or outdoor. The properties improved include tensile and flexural strengths, abrasion and impact resistance, adhesion to existing concrete and resistance to oil and grease.	Uses for BOND-R modified concrete and plaster include: ▪ Heavy duty flooring, topping and patching mix for existing damaged floors ▪ Levelling screed or underlay for decorative flooring ▪ Terrazzo ▪ Precast panels and patching of spalled concrete ▪ Bridge deck repairs. BOND-R is also added to cement and applied as a prime coat to substrates prior to application of plaster or other cementitious coatings.	BOND-R is added to Portland cement mixes. It may also be added to other cementitious materials. BOND-R is added in place of gauging water.
TEXOL PAINT STRIPPER TEXOL is a non-flammable, highly effective paint remover, with excellent adhesion to vertical surfaces. TEXOL is suitable for brush or spray application to most acrylics, enamels, varnishes as well as many other coatings. TEXOL will not attack wood or metals. Does not contain phenols.	TEXOL is used to strip paint from a variety of surfaces. It can also be used to remove other similar coatings, and is suitable for use on many epoxy esters, epoxy amides and stoved finishes.	TEXOL is applied to painted surfaces. It may be applied to vertical or inclined surfaces due to its thixotropic properties. **Coverage:** Is dependent on the type of paint to be removed, the surface texture of the painted surface and the number of coats.
SEAL RING LUBRICANT SEAL RING LUBRICANT is specially formulated pipe lubricant for use with concrete pipes (non-potable water) having skid ring type joints. It is non-toxic and fully soluble in water.	SEAL RING LUBRICANT is used to lubricate the inside of concrete pipes with skid ring type joints. It is non aggressive to rubber and concrete and may be applied by hand. Seal Ring Lubricant may also be used for other applications where a non-toxic, water-soluble lubricant is required.	SEAL RING LUBRICANT is applied to the inside face of concrete pipes where the skid ring is located.

Concrete Etching and Removal

To etch or remove existing concrete or concrete splashes

Product	What's it used for?	What can it be applied to?
DECEMENT DECEMENT is a mild water based concrete splash and efflorescence remover. DECEMENT may also be used to remove efflorescence from a substrate.	DECEMENT is used as an alternative to strong acid solutions commonly employed to remove cement splashes from a range of surfaces. It can also be used to remove efflorescence from substrates (refer to Precautions and Limitations below)	DECEMENT may be applied to a wide range of substrates including concrete truck mixer bowls, concrete tools and equipment. DECEMENT may also be applied to substrates for the removal of efflorescence. **Coverage:** Variable - surface dependent
MISTIC ACID MISTIC ACID is a concrete etching and removal acid which consists of hydrochloric acid modified with wetting and foaming agents to allow even coverage of vertical or horizontal surfaces. It is not subject to NZ Health and Safety "Restricted to use in a workplace" Legislation. MISTIC ACID is less toxic than full strength hydrochloric acid.	MISTIC ACID is used for etching of concrete surfaces to give a mechanical key prior to application of surface coatings, or to make the surface non-slip. It may also be used for the removal of cement splashes from decorative or exposed aggregate panels and other surfaces. MISTIC ACID works on concrete substrates more effectively than ordinary hydrochloric acid as it "wets" the substrate and reacts more efficiently. MISTIC ACID can be used to remove iron oxide (rust) from steel.	MISTIC ACID is applied to concrete, steel and other surfaces requiring etching or cleaning. MISTIC ACID will react with iron, steel, aluminium and zinc so care must be taken when applying to these substrates. **Coverage:** up to 2m²/litre (dilution dependent)

Precautions and Limitations

BOND-R: Should be protected from frost and mixes containing BOND-R should be protected from rapid drying conditions. The quantity of BOND-R to be added to different mix types must be determined by testing.
TEXOL: Will remove most paints with a single application. However, old (especially lead based paints) may require multiple applications. Wear full skin protection, including face shield, nitrile or similar gloves and overalls. Do not use in confined space without adequate ventilation. Lead based paint that has been removed from the surface must be disposed of in accordance with local or national regulations.
SEAL RING LUBRICANT: Not tested for potable water contact.
DECEMENT: Before using DECEMENT on decorative or delicate surfaces such as aluminium, painted or powder coated surfaces, etc test for suitability by applying a small amount of DECEMENT to an inconspicuous area. Wash off and check for no undesirable side-effects of the application. Surfaces cleaned of efflorescence must be protected against further potential efflorescence using products such as AQUELLUX S and PROTECTA-COAT (refer data sheets for details). DECEMENT is used in the process of removal of efflorescence and will not prevent recurrence.
MISTIC ACID: MISTIC ACID may be applied as supplied or diluted with clean water depending upon the application. Dilution will slow the reaction proportionally. Multiple applications may be required to etch concrete or remove concrete splashes. MISTIC ACID should not be used on marble or galvanized steel or decorative surfaces. MISTIC ACID will not remove acrylic sealers or other coatings from the surface of concrete.

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