



PRODUCTS AND SYSTEMS



Waterproofing of Foundations and Underground Structures



***MAXSEAL® SUPER System for Waterproofing
of Foundations and Underground Structures***



COMPANY PROFILE

DRIZORO S.A.U. is a Spanish company established in 1977, beginning its activity as a manufacturer of chemical products for construction. Nowadays, the company is a leader on supplying speciality products and systems designed for waterproofing, concrete repair, flooring and decorative finishes.

Our Headquarters and Production Plant is based in Madrid (Torrejon de Ardoz) - Spain. This is also the base for all operations of the different departments; Production, Research & Development, Laboratory, Technical, Sales, Marketing and Administration.

COMMITMENT TO QUALITY AND ENVIRONMENT

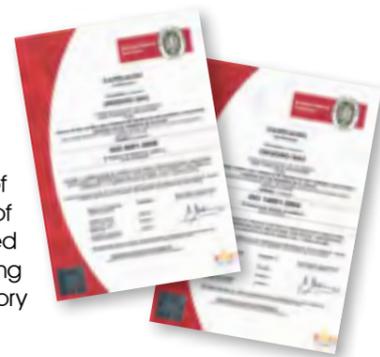
Our strong commitment to Quality Control and the Environment has led us to establish an Integrated Quality and Environmental Management System. This is based on the ISO 9001:2008 and ISO 14001:2004 standards. This system was certified by Bureau Veritas Quality International.

COMMITMENT TO RESEARCH, DEVELOPMENT AND INNOVATION

Our strong commitment to Research and Development of both our product range and of human resources enables us to offer the market innovative systems with a high standard of quality whilst being mindful of environmental concerns. These developments are transferred into improvements to our products range. This is based on substantial market research, including on-site experience under the most adverse worldwide conditions, combined with laboratory studies.

TECHNICAL ASSISTANCE

Our Technical Department and Sales Network comprises of highly qualified professionals with wide experience and trained in the construction industry. They provide personalized advice to our clients during all phases of construction in order to specify the most suitable system of products.



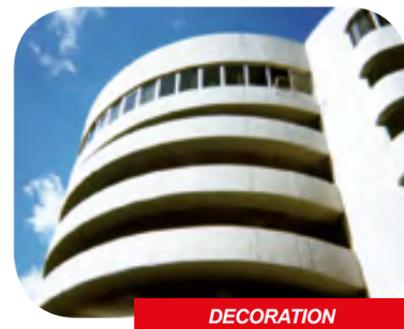
DRIZORO TECHNICAL SOLUTIONS



WATERPROOFING



STRENGTHENING



DECORATION



REPAIR



PROTECTION



OTHER USES



ADVANTAGES

- **OSMOTIC PERFORMANCE:** Internal sealing and protection
- **RESISTS HIGH HYDROSTATIC PRESSURE:** Positive and negative
- **APPLICATION ON WET SURFACES**
- **EASY TO APPLY:** Dry-shake method
- **EC-MARKING:** EN-1504
- **BREATHABLE:** Allows moisture to escape
- **SUITABLE FOR DRINKING WATER**
- **SUITABLE FOR FINISHING:** Coating, tiling, etc.



DRIZORO Waterproofing system for underground concrete structures is based on the osmotic performance for **MAXSEAL® SUPER**, i.e. a cement-based mortar with special additives and controlled aggregates which when cured becomes a suitable waterproof coating for both direct and indirect hydrostatic pressure conditions, and provides higher protection against ingress. Its special formula improves the osmotic effect of the application, allowing the **MAXSEAL® SUPER** penetration in the concrete through its capillary system. Thus, product crystallises inside of the capillary network, sealing, waterproofing and protecting the concrete element. Mortar has been designed to be applied on both fresh and cured concrete (pre-cast concrete, concrete blocks or cement plasters) but is also suitable for applications on brick, porous stone, panels, cement renders and masonry units in general. Environmentally friendly; cement-based and solvent-free product.

SEALING PROCESS BY OSMOSIS

MAXSEAL® SUPER is the most suitable option for waterproofing of concrete surfaces by dry-shake method, that is directly on blinding concrete before pouring the slab. Thus, active chemicals in the powder formula react with alkalis from concrete leading a total watertight coat. This is a suitable system for waterproofing of large horizontal concrete surfaces providing a continuous waterproofing barrier without joints, or overlapping.



Applying **MAXSEAL® SUPER** on slab reinforcement prevents any deterioration of the waterproofing, and moreover, the proposed system can be adapted to work progress without causing delays or interference with other areas.

MAXSEAL® SUPER can also be mixed with water to produce a mortar to be applied directly on the hardened concrete by brush for waterproofing and sealing of the capillary network thereof. It is a suitable system for sealing of underground walls on interior face, hardened concrete slabs, walls and pillars junctions, etc.



CRYSTALLIZATION AND SEALING OF CAPILLARY NETWORK FOR CONCRETE



WATERPROOFING OF FOUNDATION SLABS



1 Prepare the substrate, and patch damages/holes on the retaining wall surface using any suitable structural repair mortar: **MAXREST®** or **MAXRITE®-F**.



2 Apply two coats of the **MAXSEAL® SUPER** waterproofing mortar with osmotic performance.



3 Insert the bars into the foundation slab-retaining wall connection area using the **MAXFIX® E** or **MAXEPOX® FIX**. Seal of areas around the bars with the **LEAKMASTER** water-swelling sealant is highly recommended.



4 Place the **MAXJOINT® W-SEAL**, water-swelling profiles along the foundation perimeter using the **MAXFLEX® 100 W** polyurethane-based sealant and concrete nails each 30 or 40 cm to fix the profiles onto concrete surface. When small surface damages, use **LEAKMASTER** for filling before placing the profiles.



5 Place the **MAXURETHANE® INJECTION TUBE** injection-hose onto retaining wall in a position close to the upper bars.



6 Dampen the blinding slab surface with clean water before application starting the mortar application by dusting.



7 Apply **MAXSEAL® SUPER** by dry-shake method, providing a uniform coating on surface to be waterproofed.

Observe one hour for reaction time before pouring. Thus, **MAXSEAL® SUPER** goes into blinding slab capillary network, while the remaining will perform the same action once slab concrete has been poured.



8 Pour the foundation slab, extend it, and finally level it out.

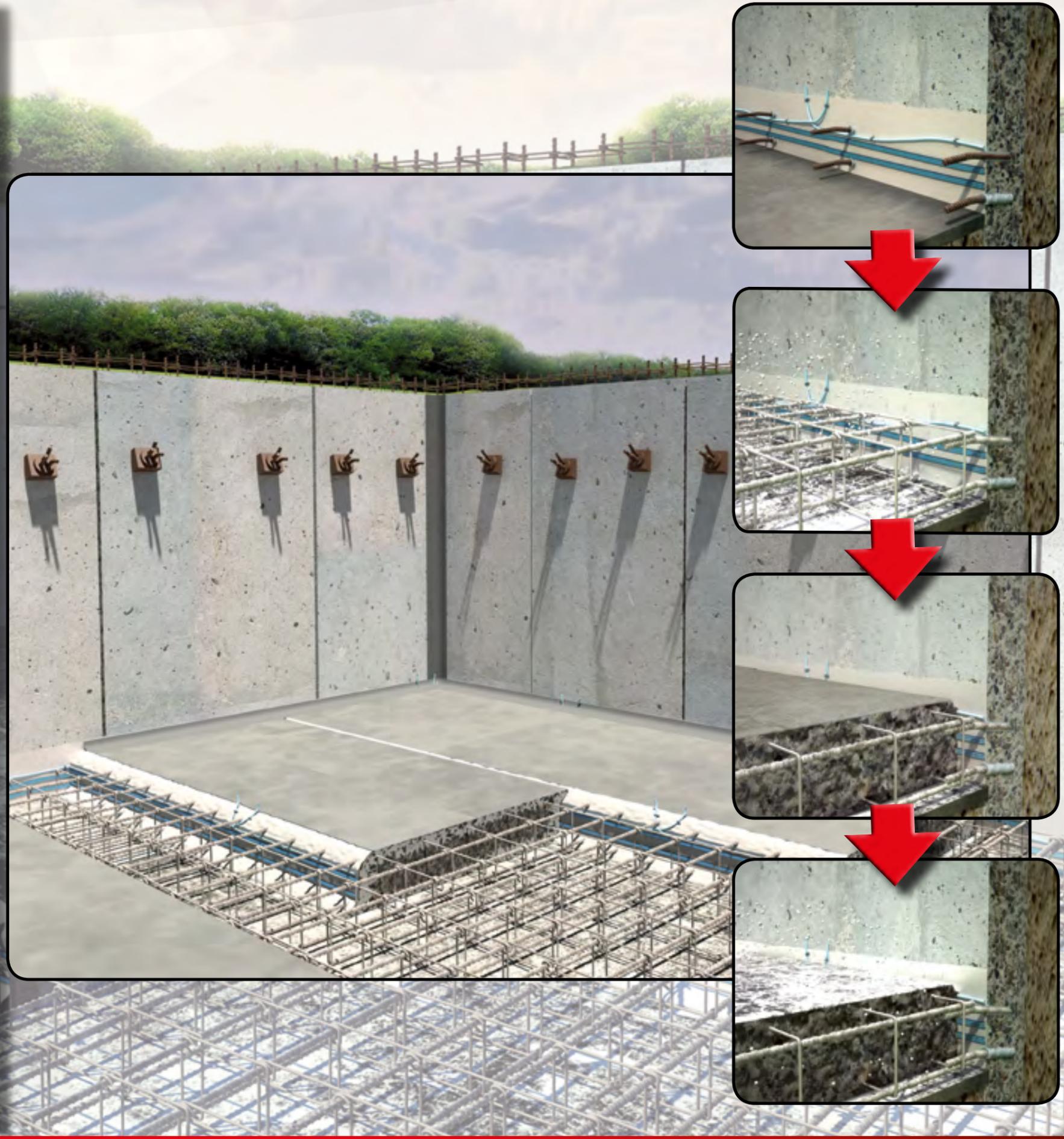


9 If needed, an additional application for **MAXSEAL® SUPER** can be carried out to 7 cm from the final thickness for slab. Allow a reaction time of about one hour before pouring the remaining concrete until getting the total desired thickness.



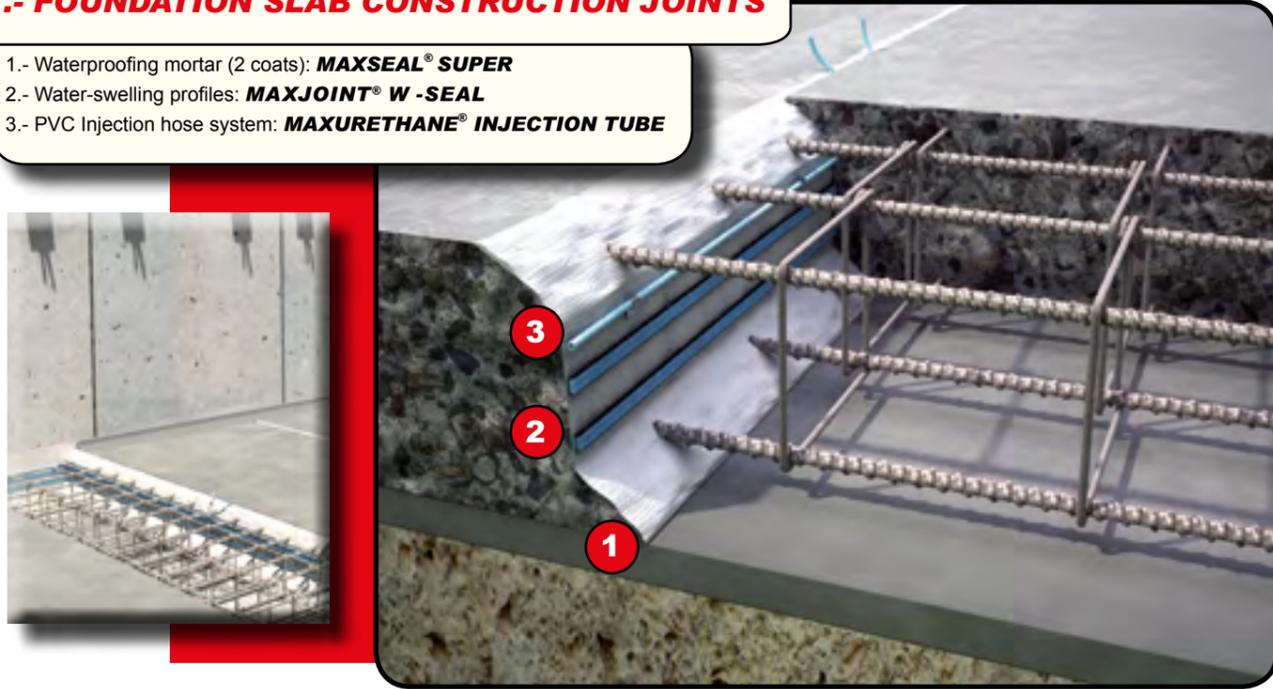
10 For standard uses, make the second application of **MAXSEAL® SUPER** in powder form, i.e. by dry-shake method when slab concrete has enough strength to be walked over but still fresh. Endeavour to achieve a complete and uniform coverage.

11 Hose down immediately the concrete surface to prevent the superficial drying of the slab, and finally make a the power trowelling for getting a smoother surface.



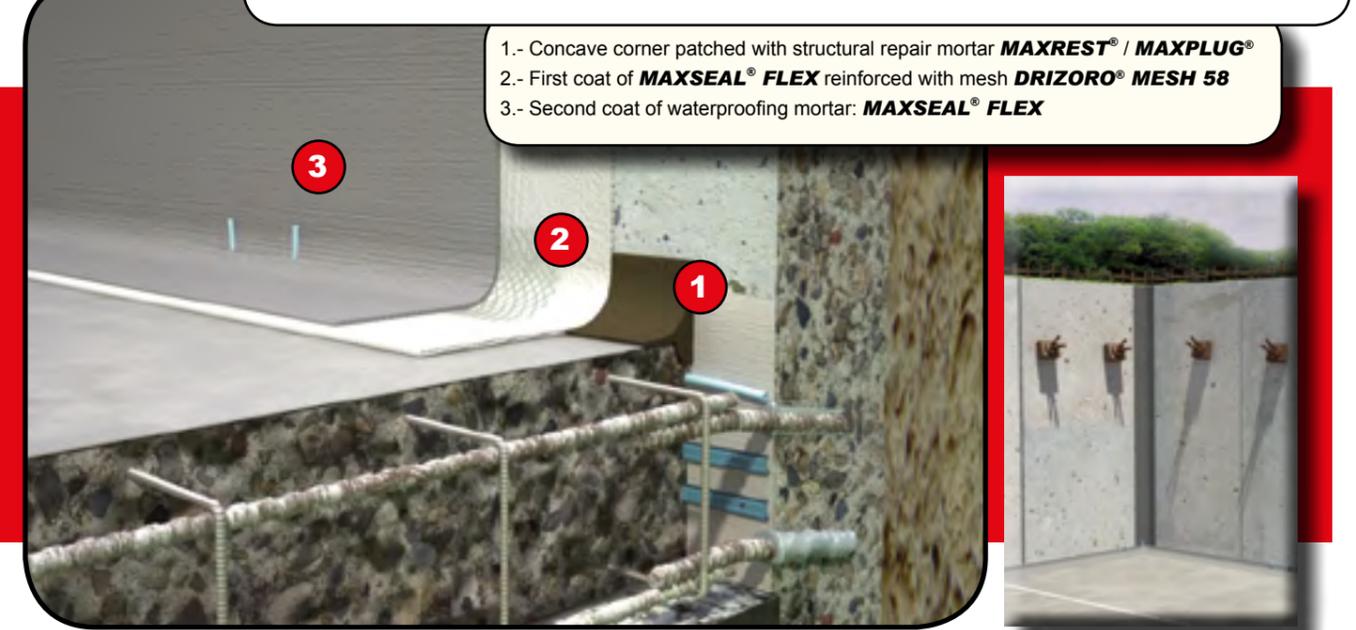
1.- FOUNDATION SLAB CONSTRUCTION JOINTS

- 1.- Waterproofing mortar (2 coats): **MAXSEAL® SUPER**
- 2.- Water-swelling profiles: **MAXJOINT® W -SEAL**
- 3.- PVC Injection hose system: **MAXURETHANE® INJECTION TUBE**



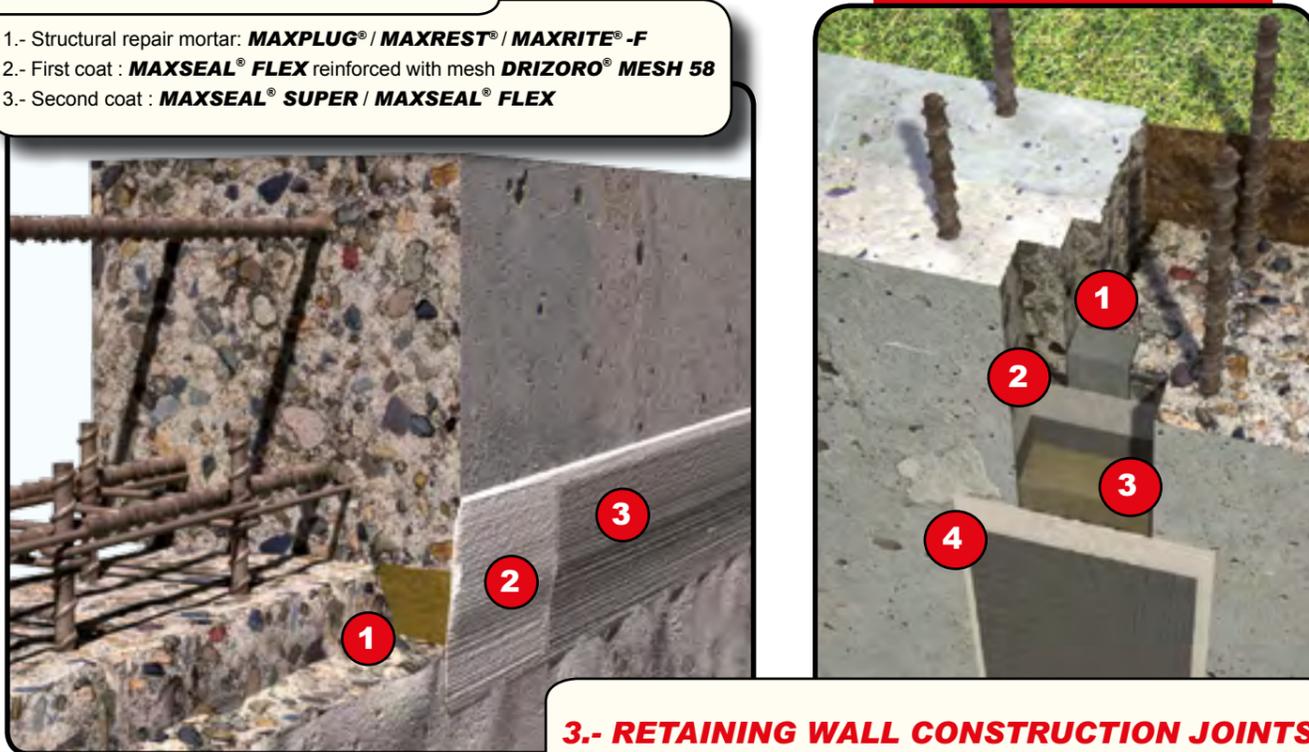
4.- FOUNDATION SLAB-RETAINING WALL CONSTRUCTION JOINT

- 1.- Concave corner patched with structural repair mortar **MAXREST® / MAXPLUG®**
- 2.- First coat of **MAXSEAL® FLEX** reinforced with mesh **DRIZORO® MESH 58**
- 3.- Second coat of waterproofing mortar: **MAXSEAL® FLEX**



2.- CAPPING BEAM

- 1.- Structural repair mortar: **MAXPLUG® / MAXREST® / MAXRITE® -F**
- 2.- First coat : **MAXSEAL® FLEX** reinforced with mesh **DRIZORO® MESH 58**
- 3.- Second coat : **MAXSEAL® SUPER / MAXSEAL® FLEX**



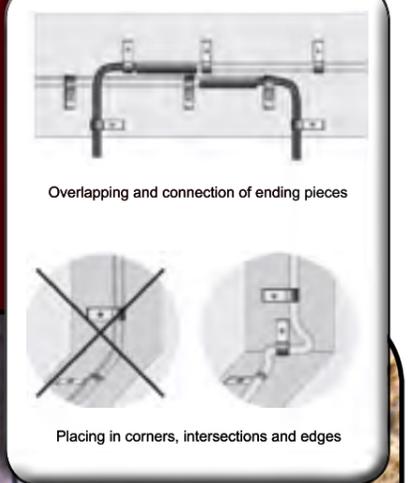
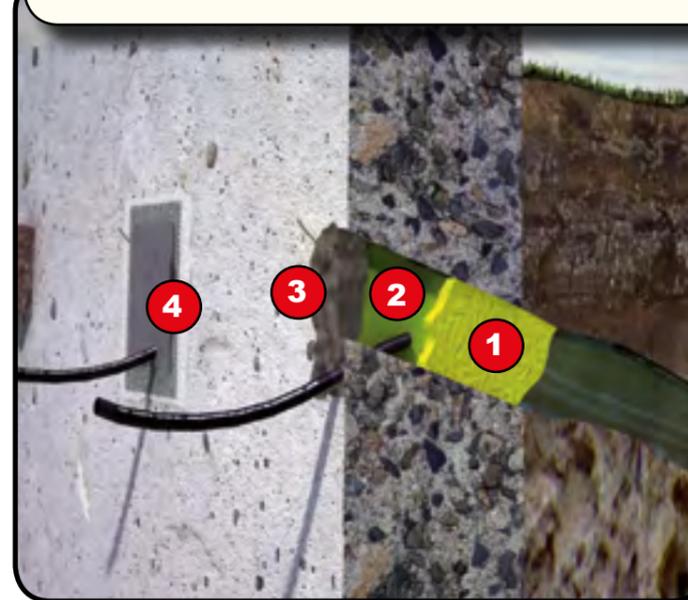
3.- RETAINING WALL CONSTRUCTION JOINTS

- 1.- Water-stop mortar: **MAXPLUG®**
- 2.- Waterproofing mortar (two coats): **MAXSEAL® SUPER**
- 3.- Structural repair mortar: **MAXREST® / MAXRITE® -F**
- 4.- Waterproofing mortar (two coats): **MAXSEAL® FLEX** reinforced with mesh **DRIZORO® MESH 58**



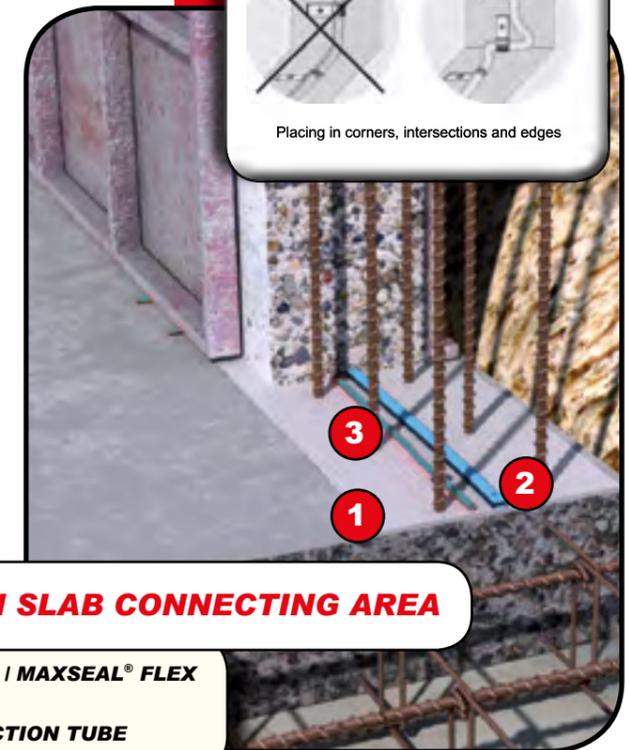
5.- SEALING OF ANCHORING

- 1.- Backing foam
- 2.- Water-reactive injection resin: **MAXURETHANE® INJECTION**
- 3.- Water-stop mortar: **MAXPLUG®**
- 4.- Two coats of **MAXSEAL® FLEX** reinforced with mesh **DRIZORO® MESH 58**



6.- RETAINING WALL-FOUNDATION SLAB CONNECTING AREA

- 1.- Waterproofing mortar (two coats): **MAXSEAL® SUPER / MAXSEAL® FLEX**
- 2.- Water-swelling profile: **MAXJOINT® W -SEAL**
- 3.- PVC Injection hose system: **MAXURETHANE® INJECTION TUBE**



Complementary Products

DESCRIPTION	CONSUMPTION	PACKAGING	APPLICATION FIELDS
<p>MAXSEAL® SUPER</p> <p>Osmotic, cement-based, waterproof coating for concrete surfaces and masonry subjected to positive, negative hydrostatic pressure conditions or both. Suitable for drinking water.</p>	1,5 - 2,5 kg/m ²	25 kg bags and drums	Waterproofing and coating drinking water tanks. As a waterproof coating for exterior and walls. Basements and below-grade structures subjected to positive or negative water pressure. Waterproofing and protection of concrete foundations, retaining walls and foundation slabs. As a waterproof coating for concrete blocks and prefabricated panels. As a decorative, waterproof finish for silos and cooling towers in thermal plants.
<p>MAXSEAL® FLEX</p> <p>Flexible, cement-based, waterproof and protective coating for concrete structures and masonry subjected to positive, negative hydrostatic pressure conditions or both. Suitable for drinking water. Pigmented version: MAXSEAL® FLEX DECOR.</p>	2,0 - 3,0 kg/m ²	Standard: Pre-weighed sets of 35 and 7 kg Smooth: Pre-weighed sets of 32 and 7 kg	Waterproofing and protection of water retaining structures, such as drinking water tanks, reservoirs, water mains and swimming pools. Waterproofing of below-grade structures like basements, retaining walls, foundations, tunnels, galleries subjected to both positive or negative high water pressure. Internal and external waterproofing and protection of new and old buildings, façades against dampness, rain, pollution and aggressive environments. Waterproofing and protection of concrete against carbonation, freeze-thaw cycles, de-icing salts in highways and chlorine penetration in public works, irrigation channels, dams, retaining walls and water treatment plants, bridges, etc.
<p>MAXPLUG®</p> <p>Quick-setting hydraulic mortar for stopping of active water leaks under hydrostatic pressure.</p>	1,67 kg/l	25 kg drums and 5 kg cans	Sealing of leaks in concrete surfaces, solid masonry and other sound substrates wherein water flows through cracks and holes. Emergency repairs on concrete water pipes. For broken concrete pipes, MAXPLUG® will even work when the concrete pipes are under hydrostatic pressure.
<p>MAXREST®</p> <p>Non-shrink, quick-setting structural repair mortar for concrete and masonry.</p>	1,7 kg/m ² and mm thickness	25 kg bags and drums and 5 kg cans	Restoration of structural concrete elements, recovering original shape and function. Structural strengthening of concrete elements. Restoration of passivity for rebars on concrete elements. Patching of cold joints and making of concave corners prior to waterproofing jobs in reservoirs, swimming-pools, basements, etc.
<p>MAXRITE® -F</p> <p>Non-shrink, thixotropic, normal-setting, microsilica-enhanced, polymer-modified, fiberreinforced structural repair mortar.</p>	1,85 kg/m ² and mm thickness	25 kg bags	General structural concrete repair, on vertical or overhead surfaces, without form works. Repairing of lines and shapes in pre-fabricated concrete elements and structures damaged by mechanical impacts, corrosion of reinforcements, freeze cycles, etc. Repair of pillars, lintels, raincaps and architectural concrete exposed permanently to extreme weather condition.
<p>MAXEPOX® FIX</p> <p>High strength, solvent-free epoxy-based grout with high fluidity for filling, anchoring and structural repair applications.</p>	1,9 kg/m ² and mm thickness	Sets of 32,5 kg	Anchoring of bolts in horizontal surfaces. Filling of column bases and machinery foundations. Anchoring of bolts, cables, and metal elements in concrete and stone. Repairing of cracks and joints in pavements. Fixing of rebars for connection in horizontal surfaces. Structural concrete repair by pouring.
<p>MAXFIX® E</p> <p>Two-component, epoxy-based, fastening, anchoring and bonding cartridge system with long open time life for threaded rods and reinforcing bars into concrete and solid masonry.</p>	----	Cartridges of 385 ml	Fastening of rebars for end supports and structural connections (stairs, manholes, corbels). Fastening for structural repairs: bridge deck renovation, structural upgrading, etc. Placing of heavy machinery, cranes and bridge cranes. Fastening of cantilever connections: balcony, access platforms, landings, etc. Fastening of stud anchors for concrete slab-beam or wall-beam connections: construction joints, structural extension and horizontal starter bars.
<p>MAXFLEX® 100 W</p> <p>One-component, modified-polyurethane, isocyanate-free, elastomeric sealant with high weathering resistance, suitable for sealing joints or cracks in permanent immersion and contact with potable water.</p>	100 ml/m per joint of 10x10 mm	Cartridges of 300 ml and bags of 600 ml	Sealing of expansion joints in heavy and light pre-fabricated panels or pre-cast units, as well as sealing jobs in traditional masonry. Waterproofing of joints in façade panels, curtain walls, exterior glazing, etc. Sealing of joints between door and window frames, etc.
<p>MAXJOINT® W -SEAL</p> <p>Elastic and water swelling profile made of pre-formed hydrophilic resins that increases its volume up to 4 times when it is in direct contact with water for sealing joints and cracks in concrete and masonry.</p>	----	Rolls	Sealing of concrete construction joints subject to permanent water immersion in reservoirs, dams, channels, etc. Sealing of joints between pre-cast elements: tunnel shields, panels, sections, boxes, pipes, etc. Repair and sealing of fissures and cracks subject to continuous presence of water. Sealing of walls, joints and underground structures such as foundations, tunnels, galleries, etc. Sealing of metal or concrete pipes through walls.
<p>MAXURETHANE® INJECTION TUBE</p> <p>Injection system for sealing of fissures and joints with low viscosity injection resins.</p>	----	50 m rolls	Sealing of cold or construction joints in concrete structures and masonry using MI-LV. Water cut-off, sealing and elastic filling of joints between slab – walls, walls – walls, cracks and fissures, in both dry or wet state. Control of raising dampness by capillarity in masonry.
<p>LEAKMASTER®</p> <p>One-component water-swelling sealant for joints and cracks.</p>	100 ml/m per joint of 10x10 mm	Cartridges of 320 ml	Sealing construction joints and wall/slab joints subject to permanent water immersion. Sealing joints in heavy or light pre-fabricated panels, pre-cast units such as box culvert, utility vaults, etc. Sealing of joints in pipe penetrations, form ties, around rebars, H-section steel beams and other waterproofing works. Sealing of cracks in watertight concrete structures. Adhesive for MAXJOINT® W -SEAL profiles on concrete or metal surfaces.



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