



**HYGRO
SMART**[®]
SYSTEM

ADVANCED CEMENTITIOUS MORTARS

FOR THE CONSTRUCTION INDUSTRY

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High performance products for demanding applications

EDITORIAL

CEMENTITIOUS REPAIR, WATERPROOFING AND TILE ADHESIVES MORTARS

ALCHIMICA's advanced range of cementitious repair and waterproofing mortars offers complete and reliable solutions for concrete repair and reinforcement, waterproofing applications as well as masonry and coatings repairs.

With extensive research, development, and practical expertise, ALCHIMICA offers advanced systems to restore and rehabilitate concrete structures affected by various issues like corrosion, water infiltration, and structural damage. Their solutions address diverse challenges, ensuring long-lasting durability and structural integrity.

HYGROSMART® products are CE certified and designed to provide maximum efficiency in concrete and structural elements repairs and sealing of old or new structures, in wet areas, basements and balconies achieving their successful upgrade and ensuring their longevity.



1.

ALCHIMICA'S TECHNICAL EXPERTISE

Through its modern production facilities and fully automated production processes, ALCHIMICA has the ability to produce up to 90 tons of dry mortars daily. Moreover, the direct link of our Production to the Quality Control and R&D departments, ensures high quality at every stage of production.

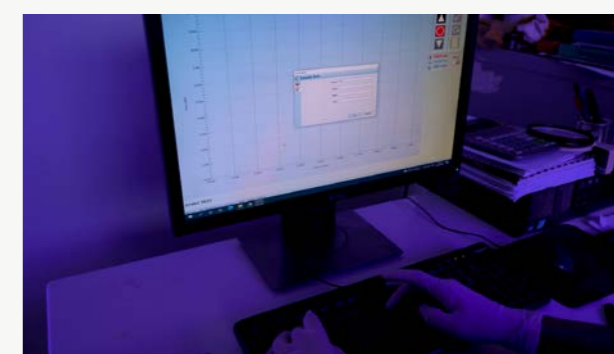
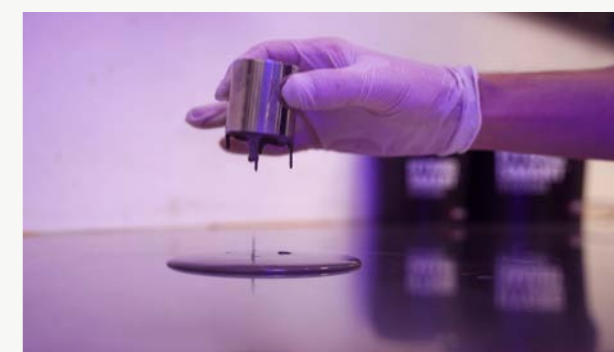
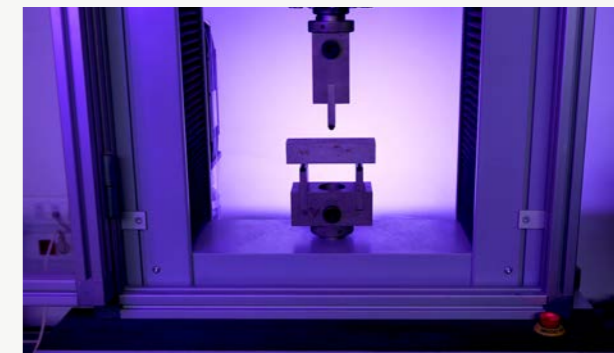
The R&D department, staffed by specialized and experienced scientists, creates innovative, quality and easy-to-use products, offering complete, reliable and durable solutions in the field of construction materials.

In addition to, the strict adherence to sustainable production processes and by applying international standards, we ensure maximum quality and reliability which is proven through our CE marked products.

Our mission is to offer innovative technical solutions to the construction industry, hence offering added value to our partner's work. By developing complete and durable systems, we satisfy a broad range of repair and renovation needs in new or existing constructions, with the high performance and quality guarantee of ALCHIMICA.

THE HYGROSMART® RANGE OF PRODUCTS OFFERS SOLUTIONS FOR:

- 1 REINFORCEMENT AND REPAIR OF CONCRETE
- 2 REPAIR OF COATINGS AND MASONRY
- 3 UNDER TILE WATERPROOFING AND TILING
- 4 SURFACE HARDENING FOR INDUSTRIAL FLOORS AND INDUSTRIAL FLOORING SYSTEMS
- 5 SELF-LEVELLING UNDERLAYMENT SYSTEMS



2. REINFORCEMENT AND REPAIR OF CONCRETE

ALCHIMICA has developed advanced technologies in the field of concrete repair, protection, and refurbishment. Through extensive research, development, and practical expertise, ALCHIMICA offers advanced systems to restore and rehabilitate damaged concrete structures and structural elements. Our solutions ensure long-lasting durability and structural integrity.

Concrete, Reinforcement and Repair System

Our concrete reinforcement and repair system involves strengthening and restoring concrete structures. It typically includes inhibiting the corrosion of the steel reinforcement and then repairing and stabilizing the concrete. This process enhances structural integrity, durability, and longevity of concrete elements.



HYGROSMART® BUILDING-F

High-tech, single component CLASS R3 fiber reinforced repair mortar.

APPLICATIONS

- General concrete repairs
- Repair of damaged concrete reinforcement exposed in acidic environments and/or seawater.
- Repair of imperfections in concrete, coatings and masonry.

FEATURES

- Easy application with long open time.
- Excellent adhesion to building materials, with high strength without presenting cracks.
- Can be overpainted a few hours after application.

CE certification according to EN 1504-03

HYGROSMART® BUILDING-45 THIXO

High-tech, thixotropic, single component CLASS R4, fiber reinforced repair mortar.

APPLICATIONS

- General concrete repairs
- Repair of damaged concrete reinforcement exposed in acidic environments and/or seawater.
- Repair of imperfections in concrete, coatings and masonry.

FEATURES

- Easy application with long open time.
- Excellent adhesion to building materials, with high strength without presenting cracks.
- Can be overpainted a few hours after application.

CE certification according to EN 1504-3:2005
Concrete repair product for structural repair (CC) mortar, Type R4, Class III.

HYGROSMART® FER

Cementitious steel reinforcement anticorrosive coating, corrosion inhibitor and adhesion bridge.

APPLICATIONS

- Suitable for preventive protection of the reinforcement steel from corrosion, and the protection of steel reinforcement in structural concrete repairs.
- It can also be used as adhesion bridge between old and new concrete or mortars.

FEATURES

- Polymer-modified cementitious mortar with corrosion inhibitors suitable for application on reinforcement steel bars against corrosion but also as an adhesion bridge for cementitious repair mortars.

HYGROSMART® FIX & FINISH

Revolutionary CLASS R4, fiber reinforced, cementitious repair mortar that offers unique ease of application, displaying low viscosity while being highly thixotropic.

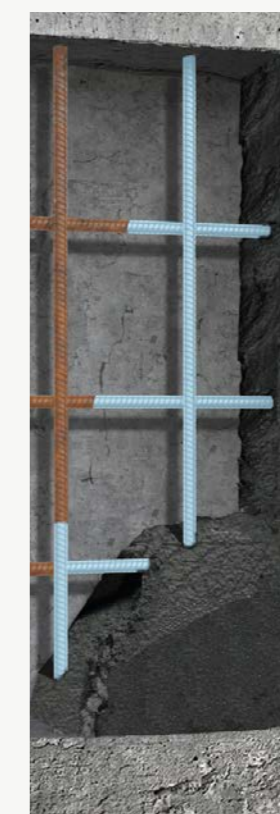
APPLICATIONS

- Quick repairs to deteriorated parts in concrete, the corners of beams, pillars, buffer walls, cornices and the front edges. Wet rooms, roofs & balconies, swimming pools (under tiles)
- Quickly smoothing over surface defects in cast concrete, such as honeycombs, spacer holes, construction joints, etc., before painting the surfaces
- Repairing and smoothing over concrete mouldings on civil buildings, such as skirt roofs and protruding decorative elements.
- Repairing pre-cast concrete structures.

CE certification according to EN 1504-03:2005

FEATURES

- Easy application and thixotropic: For professionals or homeowners. It offers long open time, fast setting and excellent adhesion.
- Non-shrinking: Apply generously without worry – stability and durability guaranteed.
- Versatile: From 3 to 40mm thick, it's your go-to for small touch-ups or large-scale repairs.
- Defends against the elements: Ideal for structures constantly exposed to air and water.



ANCHORING AND GROUTING

Anchoring mortars are essential for securely fastening metallic elements to concrete or masonry surfaces. They provide high load-bearing capacity, durability, and resistance to environmental factors. By filling gaps and ensuring a strong bond, they prevent movement, reduce vibration, and enhance the structural integrity of the installation over time.



HYGROSMART® MAK-FLOW

A non-shrink, high-strength, CLASS R4 single component flowable mortar for anchoring, grouting and concrete repairs.

APPLICATIONS

- Precision grouting and anchoring of machines and steam or wind turbines. Suitable for indoor and outdoor use.

FEATURES

- High resistance to bending and crushing.
- Shrinkage Compensated.
- High flow for full compaction.



The product is CE certified according to EN 1504-6 and EN 1504-3 (Class R4)



SELF-LEVELLING UNDERLAYMENT SYSTEM

Self-leveling underlayment systems are essential for creating a smooth, even surface on uneven or damaged substrates before installing flooring.

They ensure proper adhesion, prevent future cracking, and provide a stable, flat base for various flooring types, improving durability and performance.



HYGROSMART® SLU-RAPID

Self-leveling, non-shrink and fast-setting cementitious mortar.

APPLICATIONS

- Filling and leveling of cavities and floors.
- Suitable for floor preparation for laying tiles / parquet / carpets.

FEATURES

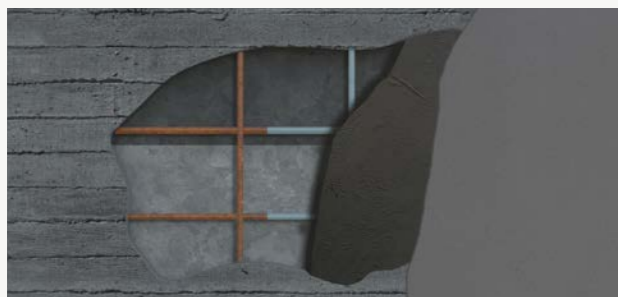
- Excellent workability and rheology.
- Gives a perfectly smooth surface.
- High adhesion to cement.
- Easy and fast application.
- Zero shrinkage.



COATING AND MASONRY REPAIR

Coating and masonry repair systems are essential for protecting and restoring the structural integrity of buildings. They prevent water infiltration, resist weathering, and enhance durability. By sealing cracks, filling voids, and repairing damaged surfaces, these systems extend the lifespan of masonry, improve appearance, and reduce long-term maintenance costs.

- Repair mortar.
- Anticorrosion primer.
- Cementitious plaster.
- Stuccoing surfaces.



HYGROSMART® BUILDING-F

High-tech, single component CLASS R3 fiber reinforced repair mortar.

HYGROSMART® BUILDING-45 THIXO

High-tech, thixotropic, single component CLASS R4, fiber reinforced repair mortar.

HYGROSMART® FIX & FINISH

Revolutionary CLASS R4, fiber reinforced, cementitious repair mortar that offers unique ease of application, displaying low viscosity while being highly thixotropic.



HYGROSMART® STUCCO

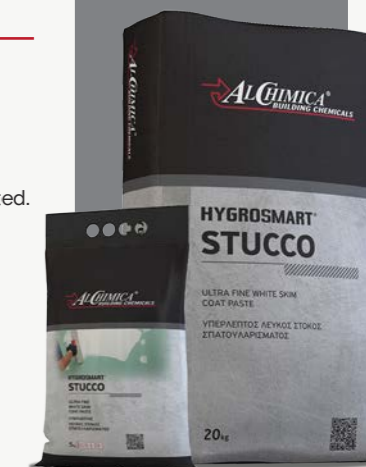
Very fine cement-based mortar for stuccoing surfaces before painting.

APPLICATIONS

- Application on plasters, gypsum boards, cement boards, concrete. Suitable for indoor and outdoor applications.

FEATURES

- Suitable for application by spatula or spraying.
- Easy to grind, excellent adhesion and hiding power and shrinkage compensated.



HYGROSMART® S-10

A ready-to-use fiber-reinforced, semi quick setting one layer plaster

APPLICATIONS

- Ideal for blockwork repairs and plastering.

FEATURES

- Easy to apply in one coat with long pot life.
- Excellent adhesion in building materials, offering high strength and crack-free finish.
- Thick coat application possible in one layer.



CE certified as Class CSIV according to EN 998-1.



CEMENTITIOUS UNDER TILES WATERPROOFING SYSTEM

CEMENTITIOUS WATERPROOFING MORTARS

ALCHIMICA's cementitious waterproofing mortars are advanced, high-performance solutions designed for long-lasting protection of concrete surfaces. These products create a durable, waterproof barrier, ideal for areas exposed to moisture, such as wet rooms, basements, balconies, and swimming pools.

Formulated for superior adhesion and flexibility, they resist cracking and provide exceptional resistance to water penetration and weathering. Easy to apply, HYGROSMART® waterproofing mortars ensure seamless coverage, enhancing the structural integrity of any surface.



HYGROSMART® IMPER-C-1K-ELASTIC

Elastic and flexible single component cementitious mortar, for under tiles waterproofing.

APPLICATIONS

- Waterproofing and protection of:
- Concrete surfaces, wet rooms, terraces, balconies and swimming pools (under tiles).
- Concrete tanks, prefabricated walls, basement walls, retaining walls.

FEATURES

- Flexible with excellent workability.
- Single component, just add water.
- Strong adhesion to various substrates.
- Easily covers any cracks.

Certification according to EN 14891:2012

HYGROSMART® IMPER-C-2K-FLEX

Two-component waterproofing mortar based on cement, plus special aggregates, and inorganic & synthetic polymers in water.

APPLICATIONS

- Waterproofing and protection of:
- Wet areas, terraces, balconies and swimming pools (under tiles).
- Concrete tanks, prefabricated elements, basement elements, retaining walls.

FEATURES

- Easy to apply with long service life.
- Strong adhesion, waterproof, high weathering resistance.
- High resistance to positive & negative pressure.
- Very good mechanical properties.

CE certification according to EN 1504-02:2004

HYGROSMART® IMPER-C

Single component fiber-reinforced waterproofing mortar based on cement.

APPLICATIONS

- Waterproofing and protection of concrete, concrete structural elements, basement walls, tanks.

FEATURES

- Easy to apply with a long service life.
- Strong adhesion, waterproof, high resistance to weather conditions.
- High resistance to positive & negative pressure.
- Very good mechanical properties.

CE certification according to EN 1504-02:2004

SAME DAY APPLICATION

HYGROSMART® IMPER-C-2K ELASTIC SUPERFAST

Super fast-drying, two-component waterproofing membrane based on cement, combined with specially formulated polymer emulsions, fine aggregates, and high-tech additives.



CE certification according to EN 14891:2012

APPLICATIONS

- Waterproofing and protection:
- Wet areas, terraces, balconies, and swimming pools (under tiles)
- Tanks, precast elements, basement structures, retaining walls.

FEATURES

- Completely waterproof making tile application after 90 minutes and offering full waterproofing after 4 hours.
- Fast drying even in low temperatures and humid environments.
- High resistance to positive and negative pressure.
- Easy application with strong adhesion and high weather resistance.
- Slows down the carbonation process of concrete.
- Excellent mechanical properties: its flexibility allows for effective crack-bridging of up to 1mm wide.



7. TILE ADHESIVES

For tiling applications the range of HYGROSMART® ADHESIVES offers certified, high strength cementitious tile adhesives, with excellent adhesion, slip resistance and extended open time for any demanding indoor and outdoor project.

- Easy application on vertical or horizontal surfaces.
- Maximum performance in high and low temperatures.
- Fast setting – highly deformable.
- Tiling on existing tiles.
- Prevent moisture from being trapped under the tiles.
- Excellent adhesion over the HYPERDESMO® System.



HYGROSMART® ADHESIVE A30

High quality, C1T cement based tile adhesive for installation of ceramic tiles on floors and walls, for internal use.

APPLICATIONS

- Wet rooms, walls / floors.
- Suitable for application on surfaces with high adhesion requirements, cement screeds, concrete and gypsum plaster.

FEATURES

- Easy application with long open time.
- Excellent adhesion on construction substrates.
- Excellent technical characteristics with no vertical slip.
- Non-Toxic.

CE certified as Type C1T according to EN 12004:2007 + A1:2012

HYGROSMART® ADHESIVE A60

High quality, C2TE cement based tile adhesive for installation of ceramic tiles on floors and walls, for both internal and external use.

APPLICATIONS

- Installation of ceramic tiles on floors and walls for both internal and external use. Suitable for application on surfaces with high adhesion requirements.

FEATURES

- Easy application with long open time.
- Excellent adhesion on construction substrates.
- Excellent technical characteristics with no vertical slip.
- Non-Toxic.

CE Certified as Type C2TE according to EN 12004:2007+A1:2012

HYGROSMART® ADHESIVE A100

High performance C2TS1 cement-based tile adhesive modified with high-quality synthetic resins.

APPLICATIONS

- Tile adhesive for installation of ceramic tiles on floors and walls (internal and external use). Wet rooms, walls, floors, roofs, balconies.
- Adhesive for cement screeds, concrete and gypsum plaster.

FEATURES

- Easy application & long open time.
- Excellent technical characteristics and no vertical slip.
- The product is easily applied on both horizontal and vertical substrates, irrespective of climatic conditions.

CE Certified as Type C2TS1 according to EN 12004:2007



HYGROSMART® ADHESIVE ULTRA 2K

Specialized, C2FTE classified, two-component cementitious adhesive with zero shrinkage that has been developed to offer superior adhesion over porous and non-porous substrates. Thanks to its advanced technology, it is ideal for the installation of tiles over existing tiles as well as the HYPERDESMO® System liquid applied membranes. Classified as C2FTE.

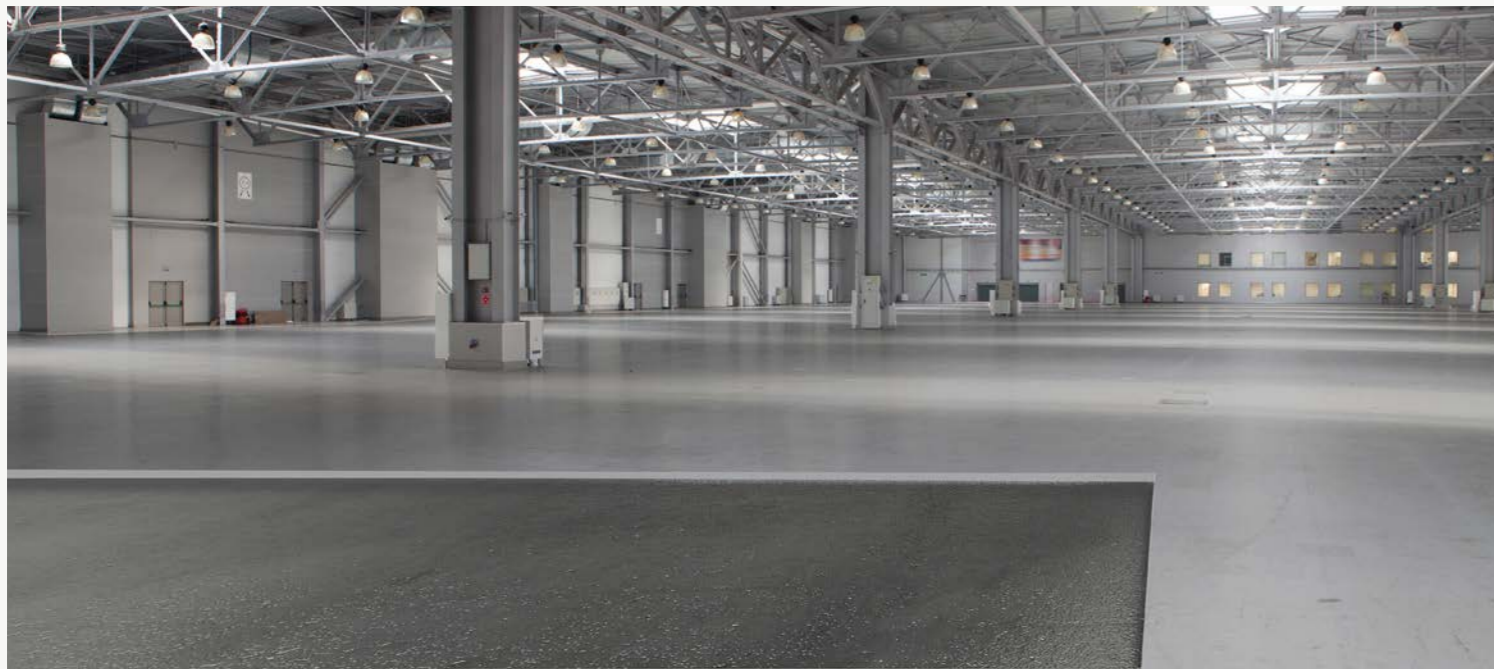
APPLICATIONS

- Bonding to internal and external walls and floors of all types and sizes of ceramic tiles, natural stones and artificial materials.

FEATURES

- Two-component, high performance, highly deformable, quick-setting and drying cementitious adhesive with no vertical slip and extended open time for ceramic tiles and stone material.

FLOOR REPAIR AND PROTECTION



INDUSTRIAL FLOOR HARDENING

HYGROSMART® FLOOR-H

High strength reinforced mortar based on cement and quartz aggregates, reinforced with special modified polymers which make it suitable for hardening the surface of industrial flooring.



APPLICATIONS

- Suitable for high-performance heavy-duty flooring such as industrial floors, basements, parking spaces, warehouses, loading-unloading spaces.

FEATURES

- Outstanding mechanical properties in high-performance heavy-duty flooring.



SELF-LEVELLING PRIMER AND PROTECTION MORTAR

HYGROSMART® DUR CEM 3K

Revolutionary epoxy-modified mortar that is hydrophobic, and addresses issues encountered in waterproofing applications on porous and/or wet concrete, and also serves as a protective mortar. The material is available in self-levelling or thixotropic versions.



APPLICATIONS

- Primer/adhesion bridge for the entire range of HYPERDESMO® products and the ALCHIMICA flooring systems.

FEATURES

- Effective primer for highly porous concrete.
- Prevents osmotic blistering of resinous coatings on wet substrates.
- Very long open application time of over 50 minutes.
- Odorless, safe, and non-flammable (zero VOC).
- Suitable for application in enclosed spaces.



INDUSTRIAL FLOORING SYSTEM

HYGROSMART® PU-CEMENT 3K

Three-component polyurethane flooring system designed for use in high strength and chemical resistant requirements for industrial floors and protection coverings in the field of heavy industries, chemical manufacturing, food and beverage, pharmaceuticals and electronics industries



APPLICATIONS

- Protection of industrial floors in heavy industries food and beverage, chemical manufacturing, pharmaceuticals and electronics industries.
- Anti-static, non-sparking, anti-slip, anti-bacterial and anti-dust.
- Waterproofing and protection of terraces, roofs and balconies.

FEATURES

- Excellent adhesion to all construction materials.
- Sound, monolithic, wear resistant coating.
- Resistant to wide range of temperature, non-combustible.
- Excellent biological and chemical resistance.



ADDITIONAL PRODUCTS



HYPERLATEX

Advanced polyacrylic emulsion latex used as an additive for cement mortars to enhance adhesion. It improves the quality of cement mortars and plasters by increasing adhesion and reducing shrinkage. This versatile product ensures better durability and performance in various construction applications, making it an essential component for achieving superior results.



APPLICATIONS

- Bonding agent for concrete floors and walls.
- For reconstruction work and latex modified overlays.
- To increase adhesion of old with new concrete.
- To repair mortars and concretes.
- To produce waterproof glues for ceramic tiles, etc.

FEATURES

- Improves bond strength to hardened concrete.
- Increases impermeability or water tightness.
- Reduces shrinkage.
- Increases mortar elasticity.
- Provides friction resistance.
- Increases adhesion strength to most substrates.



HYGROSMART® PLUG

Very fast setting cementitious water plug.



APPLICATIONS

- For pressure leaks and seepage through cracks.
- For leaks through construction joints between concrete and steel.
- In applications such as water tanks, tunnels, basements etc.

FEATURES

- Easy application.
- Fast setting.
- Rapid strength build-up.
- Resistance to chemically treated water.



ADVANCED CEMENTITIOUS MORTARS

FOR THE CONSTRUCTION INDUSTRY

HYGROSMART® SYSTEM

HIGH PERFORMANCE
FOR DEMANDING APPLICATIONS



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CERTIFIED QUALITY,
ENVIROMENTAL
AND OCCUPATIONAL
HEALTH AND SAFETY MAN-
AGEMENT SYSTEMS:
ISO 9001/14001 & ISO 45001



PRIOR APPLICATION
Please consult
Product's Technical
Data Sheet (TDS)
and Safety Data Sheet (SDS)