DECORATIVE FLAKE SYSTEMS

ALCHIMICA® BUILDING CHEMICALS

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WHY CHOOSE ALCHIMICA IN DECORATIVE FLAKE SYSTEM PROJECTS?

Decorative Flake Systems offer a blend of aesthetics and functionality, providing durable and visually appealing solutions for indoor and outdoor spaces. ALCHIMICA, as a leader in liquid applied polyurethane waterproofing materials, enhances the performance and beauty of Decorative Flake Systems applications, which can be applied on top of both waterproofing and flooring systems, making them ideal for a wide range of projects and needs. ALCHIMICA's Decorative Flake Systems are exceptionally versatile. Whether the requirement is waterproofing, flooring, or both, these systems can be customized to meet specific project demands, allowing precise adjustments for optimal performance and durability. The seamless integration of waterproofing and flooring systems ensures a cohesive and uniform application, beneficial for areas needing both functionalities, like balconies, terraces, and water-exposed spaces.

Adaptable to expected traffic load, ALCHIMICA's systems can be adapted for high-traffic areas, ensuring long-term performance without sacrificing aesthetic appeal. The product range includes waterproofing solutions that protect structures from water infiltration and extend their lifespan, and flooring solutions that offer aesthetically pleasing, durable surfaces for various traffic levels. Combined systems provide robust waterproofing with a visually appealing, durable flooring purpose. Offering a single-source solution for waterproofing and flooring needs, ALCHIMICA enhances project efficiency by simplifying the application process, reducing the need for multiple suppliers, and ensuring compatibility between components. Alchimica's systems offer long-term performance, with materials designed to withstand environmental influences, UV radiation, and varying traffic levels, providing lasting protection and maintaining aesthetic appeal over time.

Choosing systems according to project needs and traffic requirements offers a cost-effective solution, minimizing unnecessary expenses by providing exactly what is needed. In residential projects, combined systems protect underlying structures and provide attractive, durable surfaces for everyday use. In commercial and industrial projects, flooring solutions withstand wear and tear the traffic resistance properties and aesthetically pleasing surfaces.

Waterproofing is essential for building structures to prevent water damage and structural deterioration, especially in reinforced concrete structures with embedded steel reinforcement. Waterproofing acts as a barrier, preventing water from penetrating the concrete and preserving its integrity. It extends the structure's lifespan by shielding it from water's harmful effects, such as corrosion and freeze-thaw cycles. It prevents mold and mildew growth, contributes to a healthier indoor environment, and enhances energy efficiency by preserving insulation properties and reducing energy consumption. The initial investment in waterproofing is significant but cost-effective compared to future repair costs, making it a proactive long-term strategy. Liquid-applied membranes offer ease of application and installation, providing self-leveling properties and versatile installation alternatives. They are a cost-effective investment compared to repairing water damage and removing sheet and roll membranes. Liquid-applied waterproofing systems prevent long-term leakage and costly repairs, as membranes with high ponding water resistance bond with the substrate, protecting against puddles from poor slope design. HYPERDESMO® waterproofing membranes offer excellent water resistance, zero water swelling, high UV, chemical, and mechanical resistance, and protection against harsh conditions.

Alchimica's customizable solutions for waterproofing and flooring through Decorative Flake Systems provide unparalleled flexibility and adaptability. Each project can meet its specific requirements and perform optimally under varying conditions. This versatility makes Alchimica's Decorative Flake Systems a preferred choice for architects, contractors, and property owners seeking reliable, durable, and visually appealing solutions.

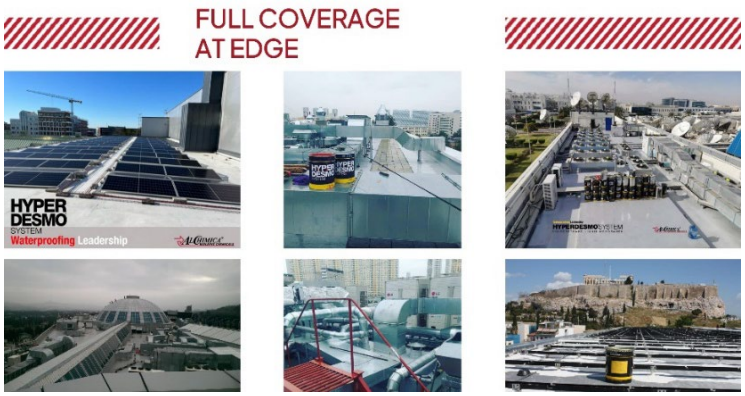
ALCHIMICA is a pioneer and a global leader in complete polyurethane waterproofing solutions. With pedigree and expertise in this field, ALCHIMICA overcomes the challenges that others deem impossible. The technological depth and know-how of ALCHIMICA allow the formulation of innovative PU-based materials that can achieve

performance levels that are not typically met. ALCHIMICA has been active in the research, development, and production of building chemicals for 42 years providing solutions for liquid waterproofing, reparations, sealing, flooring, and ETICs. The know-how of ALCHIMICA in Research and Development laboratories in construction, repair, and renovation solutions of buildings and infrastructure meets international industry standards.

ALCHIMICA'S POLYURETHANE LIQUID MEMBRANES

To ensure effective waterproofing, it is crucial to select PU membranes that meet specific criteria: impermeability, flexibility, durability, breathability, and resistance to environmental factors such as UV radiation, heat, humidity, and chemical exposure.

ALCHIMICA is a leader in the waterproofing industry, pioneering the use of liquid applied polyurethane membranes. With a commitment to high performance and durability, ALCHIMICA's products excel in applications where seamless systems are paramount, whether for structural integrity or aesthetic appeal. These membranes offer decisive advantages, particularly in complex scenarios like geometrically complicated connections with ventilation outlets or upturns.



Throughout its history, ALCHIMICA has continuously expanded its range of polyurethane liquid membranes to provide versatile installation alternatives and long-lasting solutions. From one and two-component polyurethane liquid membranes to bitumen-extended polyurethanes, water-based liquid polyurethane membranes, and advanced technology polyurethane dispersion (PUD) products, each solution is meticulously designed to address a wide array of waterproofing challenges with optimal performance and durability.

ALCHIMICA's liquid membranes offer durability upon application, elasticity to withstand various stresses and traffic, and resistance to chemicals, and ponding

water. These properties meet stringent technical specifications, making them suitable for a diverse range of applications. The core objective of ALCHIMICA is to develop waterproofing systems that are competitive, simple to apply, and accessible to all professionals. By prioritizing ease of application and reliability, ALCHIMICA empowers users to achieve effective waterproofing solutions efficiently and effectively. The membranes are seamless, durable, and flexible and provide superior waterproofing performance, waterproof and moisture permeable, preventing water penetration, allowing moisture to escape, and reducing the risk of degradation and failure over time. With mechanical, thermal, and chemical resistance properties and breathability, ALCHIMICA's PU membranes ensure the longevity and efficiency of waterproofing systems.

ALCHIMICA's commitment to innovation and excellence has revolutionized waterproofing technologies globally. With a comprehensive range of polyurethane liquid membranes tailored to meet the demands of modern construction projects, ALCHIMICA remains the premier choice for effective, long-lasting waterproofing solutions.

DECORATIVE FLAKE SYSTEMS: AN ADDITIONAL AESTHETIC CHOICE

The choice of flooring and waterproofing solutions for both indoor and outdoor spaces significantly influence the aesthetic and functional aspects of a space. Among the various options available, Decorative Flake Systems are rapidly becoming the preferred choice for their versatility, and visual appeal. ALCHIMICA has developed an additional option for Decorative Flake Systems that can be adjusted to the chosen ALCHIMICA’s waterproofing and flooring systems. This caters to diverse settings, ensuring optimal performance and client satisfaction across a spectrum of construction professionals including contractors, developers, architects, engineers, and product distributors.

Decorative Flake Systems incorporate colored flakes embedded in a resin (usually PU-based), creating a light textured and visually appealing surface suitable for both indoor and outdoor use. These systems are popular due to their aesthetic appeal, and customizable designs. The main components of a Decorative Flake System include

the colored flakes and a binding resin. The flakes can be of various colors, sizes, and types, allowing for extensive customization to suit aesthetic needs and preferences. In general, the cost can vary depending on factors such as the type of flakes used, the size of the area covered, and the complexity of the installation process. Generally, they are more expensive than traditional flooring but are a popular choice due to their durability, aesthetic appeal, and versatility. Consult with professionals in the flooring or construction industry for guidance on your specific needs and aesthetic preferences.

TYPES OF DECORATIVE FLAKE SYSTEMS OFFERED BY ALCHIMICA

Decorative Flake Systems are versatile and can be used in residential homes, commercial spaces, garages, walkways, and wet areas. Alchimica's Decorative flake systems are durable, easy to clean, and provide a unique aesthetic design and appearance. Alchimica's flake systems can be tailored to meet specific project needs, providing flexibility in application based on traffic requirements and environmental exposure. This makes them suitable for a wide range of indoor and outdoor applications.

A. DECORATIVE FLAKE WATERPROOFING SYSTEMS

Decorative Flake Waterproofing Systems are applied on top of waterproofing solutions like HYPERDESMO Systems. They enhance visual appeal while providing robust waterproofing properties, making them ideal for surfaces exposed to water, such as balconies and terraces.

B. DECORATIVE FLAKE FLOORING SYSTEMS

Decorative Flake Flooring Systems meet traffic requirements and incorporate a flake finish for aesthetic purposes. Suitable for areas with varying levels of traffic, they provide a durable and visually appealing surface, perfect for commercial and residential spaces.

C. COMBINED DECORATIVE FLAKE SYSTEMS.

Combined Decorative Flake Systems offer both waterproofing and flooring benefits, meeting traffic requirements while ensuring waterproofing properties. They are ideal for multifunctional spaces where both durability and water resistance are essential.

THE KEY ADVANTAGES OF ALCHIMICA'S DECORATIVE FLAKE SYSTEMS

ALCHIMICA's decorative flake systems are an ideal choice for both residential and commercial applications due to their durability, longevity, aesthetic flexibility, and system components compatibility. Choosing an addition of a Decorative Flake Systems offers several advantages. Firstly, it provides a enhanced aesthetic appeal, offering a visually stunning finish with a variety of colors and textures, allowing customization to match specific design preferences and creating unique, eye-catching surfaces. Secondly, it does not affect the ALCHIMICA's system's durability, waterproofing or flooring, that is underneath offering high performance and durability. These systems are developed to withstand harsh environmental conditions, including UV radiation, chemicals, and mechanical wear, ensuring long-lasting performance and maintaining the integrity of the surface over time. Thirdly, Alchimica's flake systems can be tailored to meet specific project needs, providing flexibility in application based on traffic requirements and environmental exposure, making them suitable for a wide range of indoor and outdoor applications. The seamless application ensures a cohesive and uniform finish, particularly beneficial for surfaces requiring both waterproofing and aesthetic enhancements, providing a smooth and continuous appearance.

ALCHIMICA's Decorative Flake Systems are an ideal choice for both residential and commercial applications due to their durability, longevity, and aesthetic flexibility. The combination of high-quality colored flakes and polyurethane binders creates a flooring system that withstands heavy foot traffic, resists wear and tear, and is suitable for both high-traffic commercial areas and residential settings. Clients can choose from a wide range of colors, textures, and flake sizes to perfectly match the architectural and design requirements of any space. This adaptability makes Alchimica's flake systems a versatile and comprehensive flooring solution, capable of meeting the varied demands of modern construction and design.

Installation and maintenance are easy, requiring only regular cleaning with simple detergents or high-water pressure, reducing long-term maintenance costs. Thermal and UV resistance is another advantage of Alchimica's flake systems, particularly in outdoor formulations, which can withstand extreme temperatures and prolonged UV exposure. Technical support and expertise from Alchimica ensure that each flooring

project is executed to the highest standards, satisfying all stakeholders involved. Choosing Alchimica's flake systems means opting for a solution that offers durability, aesthetic flexibility, and reliability. Suitable for a wide array of applications, these systems not only meet the functional demands of modern architecture but also cater to the creative aspirations of those involved in building design. Whether for a residential balcony or a commercial pathway, Alchimica provides a comprehensive range of products that ensure long-term performance and aesthetic coherence in any project.

PREPARATION

For successful and safe waterproofing applications specific tools and equipment are required. Each application might have different requirements.

Minimum application equipment includes protective clothing, a 1KW slow-speed drill, and a brush, roller, or airless spray machine for mixing and application. Before installing the system, the weather working conditions should be considered in order to ensure the correct and safe application of the system. Overall, avoid extreme cold or hot surface conditions. In case of high heat, contractors may apply the products either in the morning or afternoon. The application temperature range is 5°C to 35°C, with no dew point conditions, a maximum 95% relative humidity, and substrate temperature above 3°C. Store materials cool, tools dry, and avoid application during hot hours.

Substrate: To ensure successful application, substrate preparation is crucial. New concrete should be at least 28 days old, clean, dry, and free of substances that could reduce adhesion. Dust removal is recommended, and Alchimica's primer application can be done over damp concrete.

In case of doubtful conditions, please contact ALCHIMICA's technical assistance for instructions.

REPAIR AND LEVELING MORTARS

REPAIRING

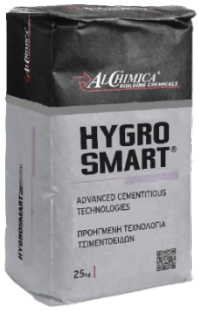
In case any spots on the concrete surface require repairs, filling, and/or smoothing such as large cracks, cavities, or surface levelling, ALCHIMICA's HYGROSMART® range of cementitious mortars may be used:

1. **HYGROSMART®-FIX&FINISH** (Single component, rapid-setting shrinkage-compensated, thixotropic, fiber-reinforced, cementitious mortar applied in a single layer from 3 to 40 mm thick, for repairing and smoothing concrete, certified according to EN1504-03, Type R4 CLASS III), or
2. **HYGROSMART®-BUILDING-45-THIXO** (Single-component, shrinkage-compensated, thixotropic, fiber-reinforced cementitious repair mortar, certified according to EN1504-03, Type R4 CLASS III), or
3. **HYGROSMART®-BUILDING-F** (Single-component, reinforced, quick-setting, cementitious repair mortar with excellent adhesion and mechanical properties, easy application in horizontal/vertical substrates. Long pot life allows the application of thick coats without cracking. CE Certified as Class R3 class III repair mortar according to EN 1504-03.
4. **HYGROSMART®-MAK-FLOW** (Single-component, highly flowable and shrinkage compensated mortar for structural repairs and anchoring, certified according to EN 1504-6: 2006 (Anchoring cementitious mortar for strengthening concrete by installing reinforcing steel) and EN 1504-3: 2005, Class R4(Hydraulic mortar (R4-CC) for structural repair of concrete in building and civil engineering works).

HYGRO SMART® SYSTEM Advanced Cementitious Technologies

LEVELING

In cases where the concrete needs to be levelled or slopes need to be created prior to the installation of the waterproofing membrane, the following products from the HYGROSMART® range can be used, depending on the requirements and desired outcome.



1. **HYGROSMART®-MAK FLOW** (as described above)
2. **HYGROSMART® -DUR CEM 3K** (Three-component, epoxy modified mortar, waterborne, solvent-free, low viscosity, self-levelling, quick curing, zero VOC. Primer for flooring and waterproofing applications, floor-levelling compound. Will effectively seal the substrate as a solution to the problems arising in waterproofing applications on porous and/or humid concrete. The material is available as SELF LEVELLING (**HYGROSMART®-DUR CEM 3K SL**) or THIXOTROPIC (**HYGROSMART®-DUR CEM 3K THIXO**).
3. **HYGROSMART®-SLU RAPID** (One-component, Quick Setting, Non-shrink, Self-Levelling Underlayment Cement Screed. Ready to use, based on high-strength cement, aggregates and special enhancing additives for fast and easy self levelling coating of floors. It provides strong adhesion and excellent rheology to any mineral substrate).

PRIMER SELECTION

After checking the weather conditions and having completed the substrate preparation along with any repairs that might be needed, you can start the waterproofing system's build-up with the selection of a suitable primer. ALCHIMICA's primer range provides unique properties for different substrates.

SUBSTRATE AND CONDITIONS	CONCRETE	HUMID CONCRETE	GYPSUM	METAL STEEL	POROUS CERAMIC TILES	GLASS / GLAZY TILES	PVC MEMBRANES	TPO MEMBRANES	BITUMEN MEMBRANES	LOW TEMPERATURE APPLICATION	VAPOR BARRIER	NEGATIVE PRESSURE / RISING HUMIDITY (tanks)
PU PRIMERS												
PRIMER-PU	X	-	-	X	-	-	-	-	-	-	-	-
MICROPRIMER-PU	X	-	-	X	X	-	-	-	-	-	-	-
MICROSEALER-PU	X	X	X	X	X	-	-	-	-	-	-	-
MICROSEALER-50	X	X	X	X	X	-	-	-	-	-	-	-
GEODESMO 50	X	X	-	X	-	-	-	-	-	X	-	-
UNIVERSAL PRIMER-2K 4060	X	X	-	-	-	-	-	-	X	X	-	-
PRIMER T	-	-	-	-	-	X	-	-	-	-	-	-
PRIMER W	-	-	-	-	-	X	-	-	-	-	-	-
PRIMER TPO/FPO	-	-	-	-	-	-	-	X	-	-	-	-
PRIMER PVC	-	-	-	-	-	-	X	-	-	-	-	-
WATER-BASED PRIMERS												
AQUADUR	X	X	X	-	-	-	-	-	-	-	X	X
AQUASMART-DUR	X	X	X	-	-	-	-	-	-	-	X	X
AQUASMART-PRIMER PU-2K	X	X	-	-	-	-	-	-	-	X	-	-

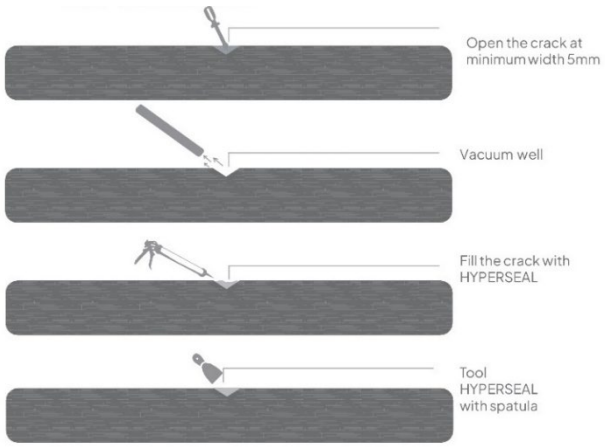
ALCHIMICA's primers are designed to secure your waterproofing application in every substrate by strengthening the substrate, stabilizing, and sealing it, offering remarkable adhesion with their respective main membranes and sealants.

SEALING SOLUTIONS

HYPERSEAL®-EXPERT-150 is a low-modulus expansion and construction joints PU sealant designed to ensure a bubble-free cure even in high temperature and humidity conditions. It exhibits excellent thixotropy, making it suitable for large expansion joints. The ratio width to depth should be 2:1 subject to a minimum depth of 10mm. It cures by reacting with atmospheric humidity, producing a joint sealant with a 50% joint movement accommodation factor, elongation >700% (ASTM D412 / EN-ISO-527-3), and excellent adhesion to a variety of substrates (Adhesion to concrete >20 kg/cm² (>2 N/mm²) ASTM D4541) with or without the use of special primers. The sealant's extrusion rate and tooling remain consistent across various temperature and humidity conditions. HYPERSEAL®-EXPERT-150 is CE certified according to EN 15651-1:2012 (Sealants for Facades) and 15651-4:2012 (Sealants for Floor Joints with Foot traffic). HYPERSEAL®-EXPERT-150 is a highly flexible PU sealant, with elastic recovery of >70% (EN ISO 7389) allowing for the movement and expansion of structure components, preventing cracks, and ensuring a lasting seal. It adheres to various substrates, making it durable and able to withstand harsh environmental conditions and heavy traffic loads. As a PU sealant, it is also chemically resistant, protecting the structure from corrosion. Because of its excellent chemical and hydrolysis resistance, it is widely used for sealing joints in swimming pools and chemically treated water environments. HYPERSEAL®-EXPERT-150 provides excellent waterproofing, preventing moisture ingress, and has high elasticity, allowing for flexibility and elasticity. It does not shrink as it cures, ensuring no gaps or openings in the sealed

joint. Its excellent heat resistance makes it suitable for application where exposure to temperatures >60°C takes place and its resistance to cold allows the sealant to remain elastic even down to -40°C (service temperature range -40 to +80°C). It has tack free time (@ 77°F (25°C) & 55% RH) of 2.5-3.5 hours and a cure rate of 2-3 mm/day, low VOC content, and remains resistant and unaffected by microorganisms, fungi, and algae growth, making it the most versatile PU sealant, usable in a variety of applications.

HYPERSEAL®-EXPERT-150 is available in various colors and compatible with a wide range of construction materials in general. Can be easily applied using standard caulking or gun techniques.



REINFORCEMENT OF WATERPROOFING MEMBRANES WITH GEOTEXTILE

Geotextile reinforcement is a crucial component in the construction industry, providing long-term protective solutions for waterproofing systems. These fabric-made sheets are used in various applications, including drainage and construction projects. They are divided into two categories: non-woven and woven geotextiles. Woven geotextiles have high load capacity and tensile strength, making them ideal for stabilization and reinforcement applications. Non-woven geotextiles, on the other hand, offer durability and ease of application benefits. Nonwoven geotextiles are manufactured by binding short and long fibers together through needle punching or other alternative methods. The term “pressed” in relation to non-woven geotextiles usually refers to the process of needle punching. In this context, “pressed” refers to a non-woven geotextile that has undergone the needle punching process, while “unpressed” usually refers to a non-woven geotextile before this process. The needle-punching process can improve the strength of the geotextile. For cold climatic conditions, it is recommended to choose the PRESSED geotextile.

UNSOUND SURFACES AND DETAILS

Geotextiles protect and separate membranes from structures due to their higher pre-break elongation capacity than other materials like glass mesh or fiberglass mesh. They can follow the movement of elastomeric waterproofing materials, achieving reinforcement and long-term durability. However, unsound substrates often have high movement or large cracks, which can cause problems on unarmed waterproofing membranes. Geotextiles can prevent future cracks by sealing and protecting details in areas like roofs, flashing, and joints, and repairing existing cracks and gaps. They are often made of Polyester, which is a strong fiber with excellent oxidation resistance and good mechanical stability. It offers strong oxidation or mildew resistance because it stays resilient when wet. It is used as a reinforcement material embedded between the waterproofing coats, so it does not have direct exposure to the conditions. in this case, any resistance concerns those materials that are in direct contact with the environment and conditions. The HYPERDESMO® System remains elastic at -40ºC. Another very important advantage of our materials that are in the technology of liquid polyurethane waterproofing membranes is the fact that they can easily be reinforced with geotextile if needed.

ALCHIMICA offers a high-tensile strength range of non-woven geotextiles made of 100% polyester fibers, manufactured with the needle punching process. They can be applied on the full surface between the first two layers of the HYPERDESMO® System, providing the required reinforcement for certain applications, such as over old bitumen membranes and unsound screeds. They are suitable for solvent-based or water-based liquid waterproofing systems.

GEOTEXTILE-50 (1X200m)

GEOTEXTILE-50 is a non-woven geotextile, from 100% polyester fibers, manufactured with the needle punching process.

COLOR	PACKAGING
WHITE	200m

GEOTEXTILE-50 PRESSED (1.02X100m) (0.17X100m)

GEOTEXTILE-50 PRESSED is a non-woven geotextile, from 100% polyester fibers, manufactured with spun-lacing process (hydro-entanglement).

COLOR	PACKAGING
WHITE	100m
WHITE	100m

GEOTEXTILE-45 PRESSED (1.02X100m)

COLOR	PACKAGING
WHITE	100m²

METHOD STATEMENT

DECORATIVE FLAKE SYSTEMS

		FLAKE WATERPROOFING SYSTEM	FLAKE FLOORING SYSTEM	COMBINED FLAKE SYSTEM
1.	PRIMER	MICROSEALER-50/GEODESMO 50	UNIVERSAL-PRIMER-2K-4060	SELECT A SUITABLE PRIMER FOR YOUR SUBSTATE TYPE AND AREA OF APPLICATION
		AQUASMART-DUR	AQUASMART-DUR/ AQUASMART-PU PRIMER 2K	
2.	SEALANT	HYPERSEAL-EXPERT-150,	HYPERSEAL-EXPERT-150,	HYPERSEAL-EXPERT-150,
3.	WATERPROOFING MEMBRANE / FLOORING COAT	HYPERDESMO SYSTEM (CLASSIC, -LV, -C-LV,- HAA)	HYPERFLOOR-2K	HYPERDESMO-ADY-610
			EPOXY RESIN-51-FLOORING	HYPERDESMO-ADY-810
4.	COLORED TOP COAT FOR UV PROTECTION OVER WHICH ONE YOU BROADCAST THE FLAKES WHILE IT'S WET.	HYPERDESMO-ADY-E	HYPERDESMO-ADY-E	NO NEED
		HYPERDESMO-ADY-610/810	HYPERDESMO-ADY-610/810	NO NEED
5.	FLAKES	FULL FLAKES SYSTEM OR FLAKE SYSTEM WITH SPACING IN BETWEEN THE FLAKES	FULL FLAKES SYSTEM OR FLAKE SYSTEM WITH SPACING IN BETWEEN THE FLAKES	FULL FLAKES SYSTEM OR FLAKE SYSTEM WITH SPACING IN BETWEEN THE FLAKES
6.	FLAKES ENCAPSULATION	The next day, after everything is dry, you vacuum any loose flakes that are not adhered to the system. Then apply the transparent layer of HYPERDESMO-ADY-E TRANSPARENT or HYPERDESMO-T, on top of flakes.		
7.	TRANSPARENT TOP COAT	HYPERDESMO-ADY-E (TRANSPARENT)	HYPERDESMO-ADY-E (TRANSPARENT)	HYPERDESMO-ADY-E (TRANSPARENT)
		HYPERDESMO-T	HYPERDESMO-T	HYPERDESMO-T
8.	ADDITIONAL TOPCOAT	AQUASMART TC FLOOR PROTECT	AQUASMART TC FLOOR PROTECT	AQUASMART TC FLOOR PROTECT

GENERAL SYSTEM CONDITIONS

EQUIPMENT

For successful and safe applications specific tools and equipment are required. Each application might have different requirements in terms of application and protection equipment.

The following application equipment is at minimum required:

- Protective clothing: Protective overalls, masks, and gloves.
- Mixing equipment: 1KW slow speed drill, 400 or 500 rpm, and suitably sized mixing vessel.
- When stirring (or pigmenting) take care not to introduce air into the fluid, which may result in bubbling on the cured membrane. Stirring can either be done manually or with a low speed (300 rpm) mixer.
- Application equipment: Brush, roller, notched trowel, squeegee, rubber spatula, caulking gun, spatula. Specific airless spray machines can also be used. Caulking guns.
- Extra equipment: Digital scale or other measuring equipment

Products can be applied with a variety of equipment. Please choose the desired equipment and method of application according to your preferences and experience after consulting the proposed method of application on TDS of the Product.

APPLICATION WITH AIRLESS SPRAY MACHINE.

For the application of ALCHIMICA's liquid applied PU systems we recommend the following minimum performance for the equipment to be used. This however it is not exclusive, as applicators should use our products with the equipment that is more suitable according to their application method, prior experience, and expertise:

- Minimum pressure: around 200-250 bar
- Minimum capacity: 5.1 lt/minute
- Minimum nozzle diameter: 0.83mm (0.033 inches)
- Examples of such minimum-spec equipment:
  - ✓ *Wagner Heavycoat HC 940 E-SSP Spraypack*
  - ✓ *Graco Mark-X*
  - ✓ *Larius Thor*

Use clean equipment when switching from different products, to prevent contamination between different products.

DISCLAIMER: IMPORTANCE OF EQUIPMENT CLEANING

To maintain the integrity and efficacy of products, especially when working with liquid chemicals, it is crucial to use equipment that is thoroughly cleaned prior to use. Residual chemicals on containers, mixers, or other tools can initiate unintended chemical reactions or cause contamination **when switching between different products**. Such occurrences may lead to product degradation, and project failure. Adherence to rigorous cleaning protocols is essential to prevent these risks. All users must strictly follow the equipment cleaning guidelines specified herein to ensure product performance and project success.

WORKING WEATHER CONDITIONS

- Application temperature range: 5°C to 35°C.
- Avoid dew point conditions during application.
- Relative humidity must be a maximum of 95% and substrate temperature must be at least 3°C above measured dew point temperatures.
- Do not apply under rain or snow.
- If temperature is above 35°C, the following guidelines are recommended:
    - Store materials in a cool environment, avoiding exposure to direct sunlight.
    - Keep application tools cool and dry.
    - Try to avoid application during the hottest hours of the day.

SURFACE PREPARATION

THE FOLLOWING FACTORS PRIOR TO APPLICATION SHOULD BE CHECKED:

- ✓ Substrate type and condition.
- ✓ Previous substrate mechanical preparations (sanding, polishing, shot blasting, or milling)
- ✓ Porosity of the surface
- ✓ Existing cracks or damaged areas.

- ✓ In existing dilatation joints, remove old material, clean it, and replace it with HYPERSEAL®.
- ✓ Existing membranes or coatings.
- ✓ The substrates must be both durable and cohesive. Check the substrate for contamination (oil, grease, etc.).

CONCRETE SUBSTRATES

Concrete substrates are used in the construction of roofs and foundations in modern architectural designs. However, because concrete is a porous surface exposed to different climatic conditions, it can absorb water which can then cause damage. Waterproofing is a basic need at almost all stages of construction work, in order to protect structures from the adverse effects of moisture and water ingress. In the case of exposed concrete roofs, it is vital to avoid any water leak in order to prevent any wear and corrosion of reinforcing steel in the concrete structure.

ALCHIMICA's high-quality concrete roof waterproofing and protection systems consist of quality products that hold excellent workability, durability, elasticity, and resistance to weather, chemical, mechanical, and thermal effects, as well as to UV radiation on either flat or sloping roofs.

Standard concrete substrate conditions

- Hardness: R28 = 15 MPa.
- Humidity: W < 10%.
- Temperature: 5-35 °C.
- Relative humidity: < 85%

PREPARATION

Proper preparation of the concrete substrate is essential for complete adhesion and successful application.

- New concrete or other cementitious substrates should be at least 28 days old.
- The substrate should be clean and free of loose particles, oil, and grease.
- The substrate should be free of any irregularities. If needed, it should be ground with the appropriate mechanical equipment in order to achieve a flat and sound surface.
- The substrate should be free of dust. Vacuum treatment or/ and high-pressure washing is recommended to remove dust.
- Primer application can be done over damp concrete too. But any ponding water should be removed before primer application.
- Metal details should be free of rust, oils, and old paints.

- The surface of PVC pipes should be treated with sandpaper in order to become rough.
- Surface irregularities can be filled with the appropriate HYGROSMART® products.
- For concrete levelling or sloping the appropriate HYGROSMART® products must be used.
- For more information about surface preparation please contact our technical assistance team.

MANDATORY DISCLAIMER BEFORE APPLICATION:

Testing the products to be used in this build-up application on the specific substrate and conducting mock-up tests are essential steps to ensure good adhesion. Mock-up tests replicate real-world conditions and provide a practical way to evaluate the performance of the products in situ. Pull-out tests conducted on these mock-ups help assess the bond strength between the products and the substrate, giving valuable insights into their adhesion capabilities.

By testing the products on the specific substrate and conducting mock-up tests, any potential issues or concerns regarding adhesion can be identified and addressed before full-scale implementation. This proactive approach helps mitigate risks associated with poor adhesion, ensuring the long-term durability and effectiveness of the build-up system.

ALCHIMICA advises the thorough testing of the system to be performed prior to proceeding with full surface application in order to determine the suitability of the system based on project requirements.

THE FOLLOWING STEPS ARE THE SAME NO MATTER THE SYSTEM THAT YOU MAY IMPLEMENT:

SUBSTRATE PRIMING

PRIMER	AQUASMART-DUR / AQUADUR	MICROSEALER-50	GEODESMO-50	AQUASMART-PU PRIMER 2K	UNIVERSAL PRIMER-2K-4060
CONSUMPTION	- 150-200 gr/m²	- 150-200 gr/m² per coat	- 150-200 gr/m² per coat	- 150-200 gr/m² per coat	- 150-200 gr/m² per coat

	- water/humidity barrier –three coats with total cons. of 500-600 gr/m²	- 100-300 gr/m², subject to substrate porosity	- 100-500 gr/m², subject to substrate porosity.		- subject to substrate porosity
COMPOSITION	WATER BASED EPOXY	SOLVENT-BASED PU	SOLVENT-BASED PU	WATER BASED PU	100% SOLIDS PU
APPLICATIONS METHODS	brush, roller	brush, roller	brush, roller	brush, roller	brush, roller
TACK FREE TIME, @ 77 °F (25°C) & 55% RH	3-5 Hours	6-12 Hours	1-3 Hours	1-2 Hours	1-2 Hours
RECOAT TIME OF PRODUCT WHEN NEEDED	When the material has hardened to the degree where it can no longer be punctured by fingernail 6-24 Hours	6-12 Hours	1-3 Hours	1-2 Hours	1-2 Hours
NEXT COAT TIME (HYPERDESMO® MEMBRANE)	Once the colour on the current coat goes from milky white to transparent 6-24 Hours	12-24 Hours	2-24 Hours	2-24 Hours	3-6 Hours
RECOMMENDED DILUTION	10% WATER	X	X	10% WATER	5-10% SOLVENT-O1
ADDITIVES	X	X	X	X	X
COLORS	TRANSPARENT	TRANSPARENT	TRANSPARENT	TRANSPARENT	TRANSPARENT
POT LIFE	1 Hour	X	X	25 min	20-30min
COMPONENTS	TWO COMPONENTS	SINGLE COMPONENT	SINGLE COMPONENT	TWO COMPONENTS	TWO COMPONENTS

Choose a suitable primer for your project needs and requirements:

■ AQUASMART-DUR is a medium viscosity epoxy-based primer. It is a water-based epoxy primer and humidity barrier, suitable for application in closed spaces too. It is a two-component product with a 1:1 mixing ratio by volume with zero VOC, low odor, and non-flammability. It has a long pot life while being fast curing, easy to clean, and suitable for concrete and humid concrete too.

Mixing: Mix the two components well manually or using a low speed (300 rpm) mixer.

Application: You choose to apply this primer over a sound concrete surface. AQUASMART-DUR primer will create a slight film sealing the concrete and increasing the adhesion. After the AQUASMART-DUR application, you should wait at least 12 hours to apply the main membrane. The main membrane application has to be done within 48 hours after the AQUASMART-DUR application. AQUASMART-DUR is completely solvent-free and low VOC primer. If a negative pressure humidity barrier is required, increase total consumption of AQUASMART-DUR at a minimum of 500 gr/m² in 3 successive layers (150-200gr/m² per coat)

■ MICROSEALER-50 is a polyurethane based primer/concrete sealer suitable for both porous and non-porous substrates. It is a single component with low viscosity, deep penetration, and slow cure, offering excellent wetting, impregnation, and paint-over time on various substrates. It seals and stabilizes substrates, ensuring good adhesion of the main coat. It is suitable for concrete, humid concrete, metal/steel, porous ceramic tiles, and gypsum boards.

Mixing: Mix the product well manually or using a low speed (300 rpm) mixer.

Application: You choose this primer if your concrete surface is porous. MICROSEALER-50 primer will penetrate, stabilize, and seal the concrete surface in depth. After MICROSEALER-50 application you should wait at least 12 hours in order to apply the main membrane. Apply the main membrane within a maximum of 3 days after primer application.

■GEODESMO-50 is a low viscosity, fast curing, polyurethane based primer. Its fast-curing profile makes it suitable for colder climates and unpredictable rain. It is a single component with excellent wetting, impregnation, and paint-over time properties. It is used for sealing and stabilizing substrates, ensuring good adhesion of the main coat. GEODESMO-50 is the faster curing version of MICROSEALER-50 and is ideal for extreme porosity in concrete surfaces where multiple coats of primer may be required. It can be used on both dry and wet concrete, even green concrete, as a primer and low-cost sealing solution, increasing substrate durability and adhesion strength. It can be used successfully on both porous and non-porous substrates.

Mixing: Mix the product well manually or using a low speed (300 rpm) mixer.

Application: You choose this primer if the concrete surface is extremely porous. GEODESMO-50 has a very fast curing profile (same-day primer), which allows it to be used more successfully in colder climates and when rain is not very predictable because 2-3 hours after this primer application, you can apply the main membrane. Although the material has such a fast-curing profile, it has a good memory also. Application over it, is possible even the next day and up to 48 hours.

■ AQUASMART®-PU PRIMER 2K is a revolutionary polyurethane water-based primer. It is a 100% polyurethane product that can be applied on damp concrete, making it an ideal same-day primer. The product is solvent-free and zero VOC, making it suitable for both indoor and outdoor use. This two-component, 1:1 volume product is fast curing, low-odor, safe, non-flammable, and non-IMO, suitable for closed spaces. It has a long pot life, easy clean-up, and strong adhesion, even on damp or green concrete. It can be used on concrete, humid concrete, metal/steel, aluminum, glass, and wood and can be applied with brush, roller, or airless spraying. The product is recommended for use as a primer for HYPERDESMO® and AQUASMART® based products and for difficult main coat applications like POLYUREA-based materials.

Mixing: Mix the two components well manually or using a low speed (300 rpm) mixer.

Application: You choose this primer when the application temperature is below 15°C and when you need a fast-curing primer that will allow same day application. Apply with roller in one or two thin coats with total consumption of 150 gr/m². Following application of AQUASMART-PU PRIMER 2K, the main membrane may be applied within 2-24 hours.

■ UNIVERSAL PRIMER-2K-4060 is a fast-curing polyurethane primer that allows same-day application for both primer and main coat membrane. It is ideal for cold weather or low humidity conditions, as its curing time is not significantly affected by climate making it suitable for use in cold climates or low humidity conditions. The 100% polyurethane product can be applied on damp concrete and performs excellent adhesion to various surfaces (exceeding the requirements of EOTA). It is non-toxic and has zero VOC. The product is an excellent bitumen-oil barrier and is solvent-less, making it suitable for closed spaces.

Mixing: Mix the two components well manually or using a low speed (300 rpm) mixer. Mix the two components well. In high temperatures, pour mixture in shallow, wide container in order to increase pot life.

Application: You choose this primer when you need an effective oil barrier and a fast curing, solventless PU primer. UNIVERSAL PRIMER-2K-4060 is an ideal solution when working over old concrete surfaces contaminated by oils, grease etc., because

it creates a very effective "oil barrier" film that protects the new coating. UNIVERSAL PRIMER-2K-4060 is solvent free and zero VOC primer and suitable for both indoors and outdoors applications. Apply with brush or roller in thin coat with total consumption not exceeding 200 gr/m^2. In order to achieve such a small consumption, you can dilute UNIVERSAL PRIMER-2K-4060 with 5-10% of SOLVENT-01 (After thinning the product no longer has zero VOC). Main coat must be applied maximum 6 hours after primer application.

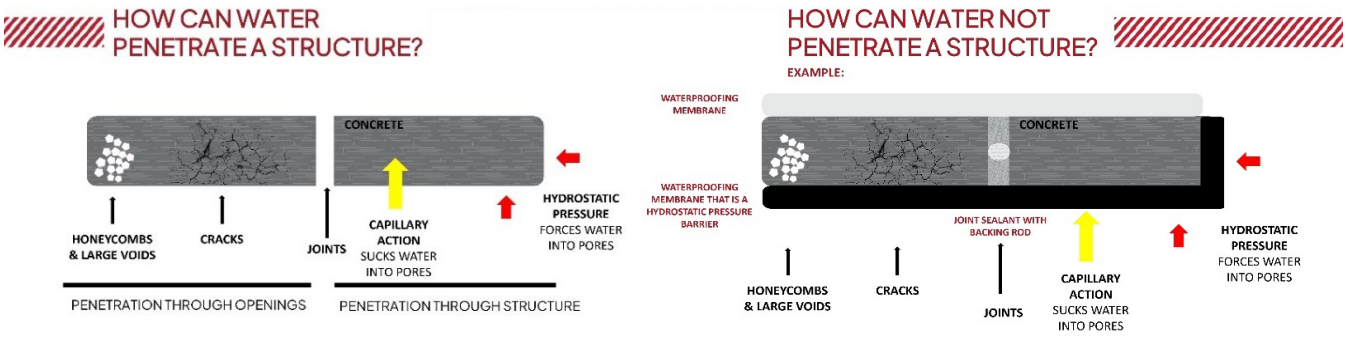
Tip: For increased pot life and/or reduced consumption, add 5-10%. Empty mixed pail contents either in a shallow container or directly on the surface to be primed in order to increase the pot life further.

Notes:

1. If it rains after the primer and before the main coat application, you may need to apply one coat of primer again.
2. More primers are available for special cases, surfaces, and weather conditions.
3. For more information about surface preparation please contact our technical assistance team.

DILATATION JOINTS, INNER ANGLES & SMALL CRACKS

Concrete expansion joints are small gaps in structures designed to prevent cracks, absorb stresses, and allow soil movement. They allow independent movement and thermal expansion without inducing stress. Concrete is susceptible to cracks due to its non-elastic nature, so joints are strategically placed to prevent failure. However, structures with expansion joints are susceptible to water leaks, so waterproofing and applying a durable sealant are essential to maintain flexibility and allow the joint to function properly. All dilatation joints, inner angles, wall-floor connections, cracks, drainage details, pipes, and other elements of equipment mechanically installed on a roof (air conditioning, antennas, photovoltaic systems, etc.) must be treated.



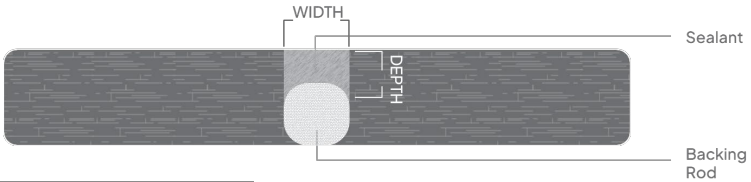
Dilatation joints and inner angles should be treated with HYPERSEAL®-EXPERT-150 or HYPERSEAL®-25LM-S, polyurethane based sealants.

Clean joints thoroughly, and ensure that no dust, oil, grease, wax contaminants, or silicone remains are present. For many applications, primer is not obligatory. However, in case of application on porous or/and wet substrate the primer is required, as there is a possibility of air bubbles blown into the uncured sealant if the substrate temperature rises.

After the primer is cured, apply in dilatation joints the right backing material (where needed) – an open cell polyurethane or a closed cell polyethylene backing rod. Be sure that when applying a closed cell polyethylene backing rod, its outer skin is not punctured, as rising temperature may cause bubbles. Backing rod application is important as it ensures the correct width-to-depth ratio and provides a firm backing against which the sealant can be tooled off. Apply the sealant HYPERSEAL®-EXPERT-150 or HYPERSEAL® 25 LM-S.

■ HYPERSEAL®-EXPERT-150 is a low modulus sealant, formulated to ensure bubble free cure even at very high temperatures and humidity climatic conditions. The product displays excellent thixotropy allowing its use even in very large expansion joints. It cures by reaction with atmospheric humidity to produce a joint sealant with a 50% joint movement accommodation factor and excellent adhesion on many types of substrates (concrete, fibrous cement, mosaic, cement roof tiles, wood, also glass, aluminum, steel, polycarbonate, etc.). The extrusion rate and tooling of the sealant remain the same throughout a very wide range of temperature and humidity conditions.

■ HYPERSEAL® 25LM-S is a low modulus expansion joint sealant. It has been modified in order to give enhanced thixotropic properties. It cures by reaction with atmospheric humidity to produce a joint sealant with a 50% joint movement accommodation factor and excellent adhesion on substrates traditionally problematic for PU sealants, e.g. glass, aluminum, steel, polycarbonate, etc. Additionally, the sealant has been modified in order to have an extrusion profile identical to hybrid PU or MS technology. The extrusion rate and tooling of the sealant remain the same throughout a very wide range of temperature and humidity conditions. The sealant is easy to apply even in very low temperatures.



CONSUMPTION					
WIDTH / DEPTH	5mm	10mm	15mm	20mm	25mm
5mm	24	12			
10mm			4	3	2,4
15mm					1,6

- Width # depth ratio 2/1
- Minimum width size 5mm

Slide the sealant HYPERSEAL®-EXPERT-150 or HYPERSEAL® 25 LM-S into the sealant dispensing gun, cut off the very end of the sealant packaging, and fit the gun with the nozzle. The nozzle should be cut to deliver the right

bead size. Extrude the sealant into the joint ensuring that no air is trapped in the joint. Tooling is recommended immediately after the application of sealant. The ratio width to depth should be 2:1 subject to a maximum depth of 25mm.

NOTE:

- Tool the sealant with a spatula.
- Do not use any solvent, alcohol, or soap to smooth the material.

POLYETHYLENE BACKER ROD

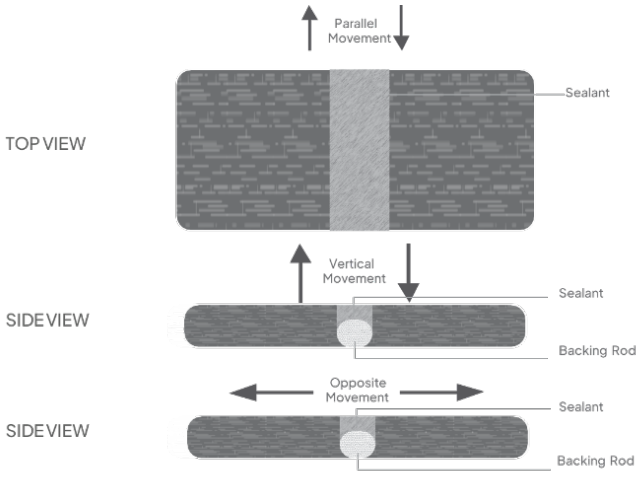
Special backer rod made of extruded polyethylene for joints where HYPERSEAL® sealants will be used.

SIZE	PACKAGING
F6	1500m
F10	680m
F15	250m
F20	180m
F25	100m
F30	100m
F40	100TEM
F50	65TEM

TREATMENT OF DETAILS

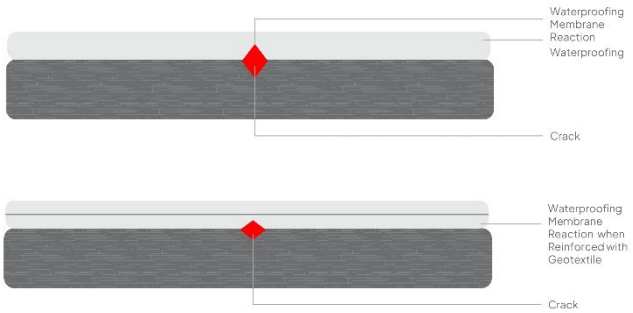
All connections, cracks, drainage details, pipes, and other elements of equipment mechanically installed on a roof (air conditioning, antennas, photovoltaic systems, etc.) should be treated. Select the preferable treatment using sealants HYPERSEAL®-EXPERT-150, HYPERSEAL® 25LM-S, or/and HYPERDESMO® System with GEOTEXTILE, or/and HYPERDESMO®-PARTICULAR.

Clean details and cracks thoroughly, and ensure that no dust, oil, grease, wax contaminants, or silicone remains are present. For many applications, primer is not obligatory. However, in case of application on porous or/and wet substrate, the primer is required, as there is a possibility of air bubbles blown into the uncured sealant if the substrate temperature rises. Select a suitable primer according to the substrate type and needs.



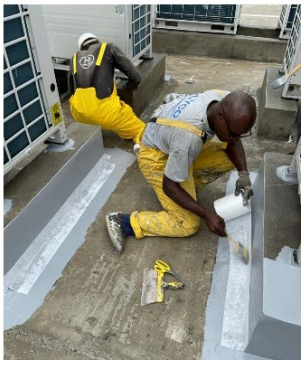
Dilatation joints, inner angles, and small cracks should be treated with HYPERSEAL®-EXPERT- 150 polyurethane-based sealant or any other suitable HYPERSEAL® sealant as described above.

THICKNESS OR TENSILE STRENGTH



Choose one of the following methods, depending on your preference and needs:

TREATMENT WITH REINFORCEMENT: HYPERDESMO® SYSTEM with GEOTEXTILE.



Cracks and details can also be treated by application of HYPERDESMO® System with GEOTEXTILE reinforcement. When the primer is fully cured, treat the details with HYPERDESMO® SYSTEM using a brush or small roller. Apply a piece of GEOTEXTILE (strips 0.17x100m, non-woven geotextile of 50-100gr/m²) cut in proper size, wet on wet, for better protection from cracks in these specific points, if movement happens in the future. After the details treatment has been completed you continue with the application of the full surface waterproofing system.

FIBER-REINFORCED PU: HYPERDESMO®-PARTICULAR.

This is an alternative option when application of HYPERDESMO® System with GEOTEXTILE is difficult. HYPERDESMO®-PARTICULAR is a thixotropic and fiber-reinforced, one component polyurethane liquid membrane used for waterproofing and protection of roof detail structures. Due to its unique formulation, it cures rapidly to form a bubble free thick layer membrane with

excellent mechanical properties. HYPERDESMO®-PARTICULAR is an effective sealing material for the treatment of installation details on roofs, such as chimneys, pipes, photovoltaic systems, air-conditioning units, and gutters. This product is ideal for usage during the winter months or in climates with relatively low humidity.

Apply the material with a spatula or a brush with the consumption required to fill in the gaps, but with a thickness of no more than 2 mm. It can be applied as the only sealing material as well as together with HYPERSEAL®-EXPERT-150 or HYPERSEAL® 25 LM-S. In this case, the depth is filled in with sealant HYPERSEAL®-EXPERT-150, and then the irregularities on the top part are treated with thixotropic HYPERDESMO®-PARTICULAR.

NOTE:

Clean tools and equipment first with a paper towel and then using SOLVENT-01.

SYSTEM PRODUCTS BUILD-UP

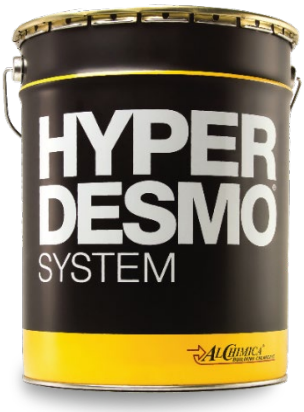
A. DECORATIVE FLAKE WATERPROOFING SYSTEM

	FLAKE WATERPROOFING SYSTEM	CONSUMPTION
1. PRIMER	MICROSEALER-50/GEODESMO 50	150-200 gr/m2
	AQUASMART-DUR	Subject to porosity
2. SEALANT	HYPERSEAL-EXPERT-150,	Subject to project needs
3. WATERPROOFING MEMBRANE / FLOORING COAT	HYPERDESMO SYSTEM (CLASSIC, -LV, -C-LV, -HAA)	Total consumption: 1,6 -2 kg/m^2
4. COLORED TOP COAT FOR UV PROTECTION OVER WHICH ONE YOU BROADCAST THE FLAKES WHILE IT'S WET.	HYPERDESMO-ADY-E	0.2 -0.3kg/m2 per coat, depending on traffic requirements
	HYPERDESMO-ADY-610	0.6-1 kg/m2 per coat, depending on traffic requirements
5. FLAKES	FULL FLAKES SYSTEM OR FLAKE SYSTEM WITH SPACING IN BETWEEN THE FLAKES	Subject to project needs and aesthetic result
6. FLAKES ENCAPSULATION	The next day, after everything is dry, you vacuum any loose flakes that are not adhered to the system. Then apply the transparent layer of HYPERDESMO-ADY-E TRANSPARENT or HYPERDESMO-T, on top of flakes.	
7. TRANSPARENT TOP COAT	HYPERDESMO-ADY-E (TRANSPARENT)	0.2 -0.3kg/m2 per coat, depending on traffic requirements
	HYPERDESMO-T	
8. ADDITIONAL TOPCOAT	AQUASMART TC FLOOR PROTECT	150-200 gr/m2

MAIN WATERPROOFING MEMBRANE

The HYPERDESMO® System is a single-component polyurethane membrane with excellent mechanical, chemical, thermal, and natural element resistance properties. It is suitable for exposed waterproofing applications like concrete roofs, metal roofs, and bitumen membrane refurbishment. The system is the only polyurethane liquid membrane in the world with CE certification at a thickness of 1.2mm without reinforcement. It has excellent adhesion, UV, and thermal resistance, and can achieve over 82% solar reflectance in white. It remains elastic even at -40°C and high temperatures up to +90°C. The system is non-toxic after full cure, has good chemical resistance, and is resistant to hydrolysis. Select the suitable version of HYPERDESMO® for your project requirement that meets your needs.

HYPERDESMO® SYSTEM	
CONSUMPTION	1.5-1.8 kg/m²
APPLICATIONS METHODS	brush, roller, airless spraying
TACK FREE TIME, @ 77 °F (25°C) & 55% RH	4-6 Hours
APPLICATION OVER PREVIOUS COAT (PRIMER)	Depending on the primer curing time
RECOAT TIME OF PRODUCT	6-24 Hours
NEXT COAT TIME (TOPCOAT)	6-24 Hours
ADDITIVES	• THIXO-TOOL • ACCELERATOR-300A CHECK THE TDS FOR COMPATIBILITY
COLORS	WHITE, GREY, TEJA
COMPONENTS	SINGLE COMPONENT



Mixing: Use a low speed (300 rpm) mixer.

TYPES OF APPLICATIONS

APPLICATION BY COATS

- First coat: 0.7-0.9 kg/m².
- Second coat: 0.8-0.9 kg/m².

Apply more coats depending on traffic requirements and system build-up.

- Minimum total consumption: 1.5-1.8 kg/m².

APPLICATION WITH REINFORCEMENT

- ✓ GEOTEXTILE
- ✓ FIBER TEXTILE

You apply the 1st coat of HYPERDESMO® SYSTEM with a minimum consumption of 0.8 kg/m². When HYPERDESMO® System is still wet, you apply the reinforcement (GEOTEXTILE-50 PRESSED (non-woven geotextile of 50gr/m²)). As soon as HYPERDESMO® SYSTEM 1st coat cures, application of the 2nd coat of HYPERDESMO® SYSTEM, with a minimum consumption of 0.8 kg/m² takes place.

SINGLE COAT APPLICATION

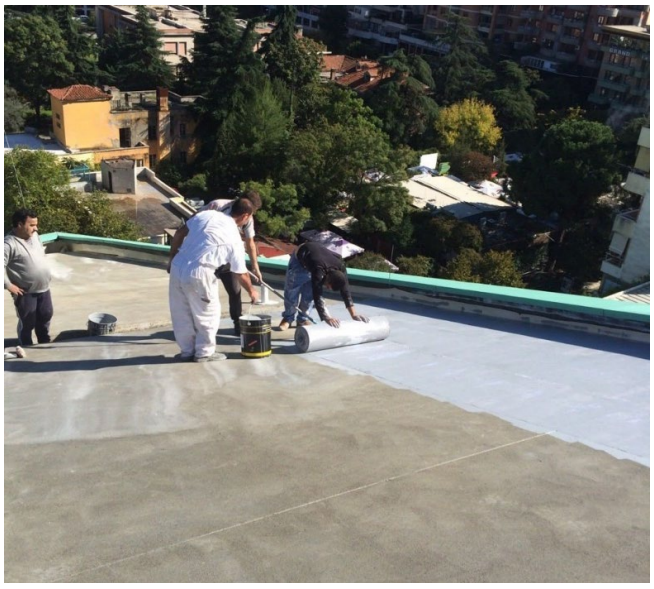
HYPERDESMO® SYSTEM can be applied in only 1 single coat, with a maximum consumption of up to 2kg/m² if you add ACCELERATOR-3000A to HYPERDESMO®. For more details refer to the ADDITIVES section below.

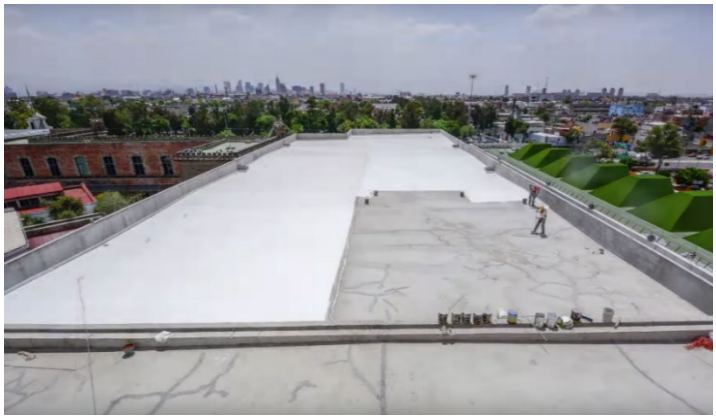
NOTE: Adding an accelerator decreases the curing time as well as the pot life of HYPERDESMO®.

APPLICATION WITH AIRLESS (200- 250 bar) SPRAY MACHINE.

1. Open the pail and stir it up to homogenize.
2. If necessary, add 5~10% SOLVENT-01 into the pail and mix it with medium-speed mechanical equipment.
3. Apply thin layers using an airless spray machine.
4. Wait for the recoat time.
5. Repeat this process until the desired or recommended thickness.

The use of an airless spray machine is not recommended when ACCELERATOR-3000A is added to the material.





COLORED TOP COAT WITH FLAKES

For UV and color protection, you should finally apply a colored topcoat of HYPERDESMO-ADY-E pigmented at the desired color over the well-cured HYPERDESMO SYSTEM surface. Additionally, apply HYPERDESMO-ADY-610. Flakes should be broadcast at a usual rate of 1 kg/m² (consumption depends on the result that the client wants) while the colored top coat is still wet.

APPLICATION WITH BROADCASTING FLAKES:

For decorative colour chips finish, apply the first coat of HYPERDESMO®-ADY-E (PIGMENTED) /HYPERDESMO-ADY-610 over the well-cured HYPERDESMO® SYSTEM surface. Over the fresh first top coat you broadcast the color flake chips. Flakes broadcast at usually 1kg/m2 (consumption depends on the result that the client wants) while the product is still wet.

The next day you remove the excess non-bonded flakes. Most applicators use a leaf blower in order to remove, but also recover any non-used flakes, instead of using a vacuum cleaner which would destroy the flakes.

Then, you apply on top a second thin coat of HYPERDESMO®-ADY-E TRANSPARENT or HYPERDESMO®-T at 200gr/m2 in order to encapsulate the flakes. Most applicators usually use a squeegee to spread the product and follow with a roller to smoothen it out. For traffic requirements, after this coat has cured, you can apply another coat of HYPERDESMO®-ADY-E TRANSPARENT or HYPERDESMO®-T at 400gr/m2.

HYPERDESMO-ADY-E (COLORED)

HYPERDESMO®-ADY-E	
CONSUMPTION	0.2 -0.3kg/m² per coat In Total: 0.2-0.6 kg/m² in one or more coats, depending on traffic conditions
APPLICATIONS METHODS	brush, roller, airless spraying
TACK FREE TIME, @ 77 °F (25°C) & 55% RH	6-8 Hours
APPLICATION OVER PREVIOUS COAT	It must be applied WITHIN 24-72 hours of HYPERDESMO® depending on weather conditions.

RECOAT TIME OF THE PRODUCT	24 Hours
ADDITIVES	X
COLORS	WHITE, GREY, NEUTRAL, TRANSPARENT
COMPONENTS	SINGLE COMPONENT

For abrasion resistance and colour protection, you should finally apply a topcoat of HYPERDESMO®-ADY-E pigmented at the desired colour. It is fully aliphatic and provides excellent color and UV protection with no yellowing effects. It increases traffic resistance, forming the highest level of protection. It can be part of both flooring and waterproofing systems. HYPERDESMO®-ADY-E is ideal for color and traffic protection of HYPERDESMO® system products, maximizing the system's working life.

HYPERDESMO®-ADY-E is a semi-glossy, fully aliphatic, high traffic polyurethane topcoat with excellent hiding power and high traffic resistance. It is suitable for anti-slip systems and has excellent UV, mechanical, and chemical properties. It is hydrophobic, strong, and durable, maintaining elasticity even at -40°C. It also offers excellent heat and ultraviolet/UV resistance, and outstanding resistance to chemicals and mechanical stresses.

Mixing: Use a low speed (300 rpm) mixer.

Application: Total consumption of HYPERDESMO®-ADY-E should be 0.2 -0.4 kg/m² in 1- 2 successive coats over the well cured HYPERDESMO® SYSTEM surface. Total consumption depends on traffic conditions and requirements.

TYPES OF APPLICATIONS

APPLICATION BY COATS	Per coat: 0.2-0.3 kg/m². Apply more coats depending on traffic requirements and system build-up.
PIGMENTATION OF HYPERDESMO®-ADY-E NEUTRAL	HYPERDESMO®-ADY-E when used as a topcoat, for colour and UV protection of HYPERDESMO® products, it is either pre-pigmented from the factory in white/grey colour or it comes in NEUTRAL version that must be pigmented with ALCHIMICA's PIGMENT PASTES only (10% max). At a maximum ratio of 10% by weight, the PIGMENTS PASTES are designed to be compatible with ALCHIMICA's products, offering high hiding power to the transparent or neutral versions of HYPERDESMO®-ADY-E. Pour the PIGMENT PASTE content of the pail into the product at a maximum ratio of 10% by weight. Mix thoroughly using a low-speed electric mixer until the product homogenizes. Apply the product as per standard application instructions.

APPLICATION WITH AIRLESS (200- 250 bar) SPRAY MACHINE.

1. Open the pail and stir it up to homogenize. Stirring can either be done manually or with a low speed (300 rpm) mixer.
2. If necessary, add up to 5% SOLVENT-01 into the pail and mix it with low-speed mechanical equipment.
3. Apply thin layers using an airless spray machine.
4. Wait for the recoat time.
5. Repeat this process until the desired or recommended thickness.

HYPERDESMO®-ADY 610

HYPERDESMO®-ADY 610 is a fully aliphatic, one-component polyurethane liquid membrane designed for waterproofing and color protection. It is based on ALCHIMICA's HAA - Humidity Activated Accelerator Technology (H.A.A) and is self-levelling, with a good viscosity profile over a large temperature range. It is recommended to be applied in one coat, saving labor costs and minimizing errors due to inter-adhesion failures. The product retains color stability even when applied in dark colors, and especially when applied in white, it provides excellent solar reflectance for many years. It is self-levelling, with excellent mechanical, chemical, thermal, UV, and natural element resistance properties. It is suitable for exposed waterproofing applications such as concrete roofs and metal roofs, and can be applied using brush, roller, or airless spraying.

WATERPROOFING	HYPERDESMO®-ADY-610
CONSUMPTION	- 0.6-1 kg/m² - >1 kg/m² Subject to traffic needs
APPLICATIONS METHODS	brush, roller, airless spraying
TACK FREE TIME, @ 77 °F (25°C) & 55% RH	6-12 Hours
APPLICATION OVER PREVIOUS COAT (PRIMER)	Depending on the primer curing time
RECOAT TIME OF PRODUCT	24 Hours
ADDITIVES	• THIXO-TOOL • CHECK THE TDS FOR COMPATIBILITY
COLORS	WHITE, GREY
COMPONENTS	SINGLE COMPONENT

The membrane's excellent weather and UV resistance, low viscosity, high elasticity, tensile and tear strength, and high hydrophobic properties make it an excellent choice for applications such as concrete roofs and metal roofs. It is highly hydrophobic and offers excellent chemical and hydrolysis resistance. Overall, HYPERDESMO®-ADY 610 is a cost-effective and efficient solution for waterproofing and color protection.

Mixing: Use a low speed (300 rpm) mixer.

TYPES OF APPLICATIONS	
APPLICATION BY COATS	- First coat: 0.6-0.9 kg/m^2. - Second coat: 0.8-0.9 kg/m^2. Apply more coats depending on traffic requirements and system build-up. - Minimum total consumption: 0.6 kg/m^2.
SINGLE COAT APPLICATION	HYPERDESMO®-ADY 610 can be applied in only 1 single coat, with a maximum consumption of up to 2kg/m^2.
APPLICATION WITH REINFORCEMENT ✓ GEOTEXTILE ✓ FIBER TEXTILE	You apply the 1st coat of HYPERDESMO®-ADY 610 with a minimum consumption of 0.8-1 kg/m^2. When HYPERDESMO®-ADY 610 is still wet, you apply the reinforcement (GEOTEXTILE-50 PRESSED (non-woven geotextile of 50gr/m^2)). Immediately, wet on wet, application of the 2nd coat of HYPERDESMO®-ADY-610 with a minimum consumption of 0.8-1 kg/m^2 takes place.
APPLICATION WITH AIRLESS (200- 250 bar) SPRAY MACHINE.	1. Open the pail and stir it up to homogenize. 2. If necessary, add 5~10% SOLVENT-01 into the pail and mix it with medium-speed mechanical equipment. 3. Apply thin layers using an airless spray machine. 4. Wait for the recoat time. 5. Repeat this process until the desired or recommended thickness.
PIGMENTATION OF HYPERDESMO®-ADY 610 NEUTRAL	HYPERDESMO®-ADY 610 is either pre-pigmented from the factory in white/grey colour or it comes in NEUTRAL version that must be pigmented with ALCHIMICA's PIGMENT PASTES only (10% max). At a maximum ratio of 10% by weight, the PIGMENTS PASTES are designed to be compatible with ALCHIMICA's products, offering high hiding power to the neutral version of HYPERDESMO®-ADY 610. Pour the PIGMENT PASTE content of the pail into the product at a maximum ratio of 10% by weight. Mix thoroughly using a low-speed electric mixer until the product homogenizes. Apply the product as per standard application instructions.

ENCAPSULATION OF FLAKES

After broadcasting the decorative color chips finish on the fresh coat of HYPERDESMO®-ADY-E (pigmented) / HYPERDESMO-ADY-610, let it cure.

The next day, remove the excess non-bonded flakes. Most applicators use a leaf blower to remove and recover any unused flakes, instead of using a vacuum cleaner which would destroy the flakes.

Then, apply a second thin Transparent coat to encapsulate the flakes. Choose HYPERDESMO®-ADY-E TRANSPARENT or HYPERDESMO®-T at 200 g/m² to encapsulate the flakes. Most applicators usually use a squeegee to spread the product and follow with a roller to smooth it out. For traffic requirements, after this coat has cured, you can apply another coat of HYPERDESMO®-ADY-E TRANSPARENT or HYPERDESMO®-T at 400 g/m².

Both HYPERDESMO-T and HYPERDESMO-ADY-E Transparent are aliphatic polyurethane materials, offering excellent UV resistance and non-yellowing properties. However, their applications differ significantly. HYPERDESMO-T is a waterproofing membrane designed **for use in thick coats**, making it suitable for protecting and waterproofing surfaces such as tiles, natural stone, wood, concrete and binder for stone carpet applications. On the other hand, HYPERDESMO-ADY-E Transparent is primarily used as a top coat for protection and can also serve as a transparent varnish. While it excels in providing a durable, UV-resistant finish, it is not practical for applications requiring significant membrane thickness due to the need for **multiple layers** to achieve 1 mm thickness.

HYPERDESMO-ADY-E TRANSPARENT

HYPERDESMO®-ADY-E TRANSPARENT	
CONSUMPTION	0.1-0.2kg/m² per coat In Total: 0.2-0.5 kg/m² in one or more coats, depending on traffic conditions
APPLICATIONS METHODS	brush, roller, airless spraying
TACK FREE TIME, @ 77 °F (25°C) & 55% RH	6-8 Hours
RECOAT TIME OF THE PRODUCT	24 Hours

ADDITIVES	X
COLORS	TRANSPARENT
COMPONENTS	SINGLE COMPONENT

HYPERDESMO®-ADY-E (Transparent) is the transparent version of HYPERDESMO®-ADY-E. It is a one-component, aliphatic, elastic polyurethane liquid top coat designed for superior performance in various applications. This product cures with atmospheric humidity to form a durable, elastic membrane with excellent adhesion to a wide range of surfaces. Notably, it is aliphatic, meaning it resists yellowing from direct sunlight exposure, making it ideal for encapsulation projects and as a transparent top coat and varnish over ALCHIMICA's Systems. The formulation is based on pure elastomeric hydrophobic polyurethane resin, providing exceptional mechanical, chemical, thermal, UV, and natural element resistance. Application is straightforward using a brush, roller, or airless spraying, typically in one or two coats with a minimum consumption of 0.1 kg/m² per coat.

HYPERDESMO®-ADY-E (Transparent) is recommended for top-coating various applications like flooring applications and protecting concrete or synthetic coatings. It maintains elasticity even in extreme temperatures down to -40°C and withstands heat up to 90°C without yellowing, peeling, or softening. This product ensures strong, uniform adhesion, high durability, and excellent resistance to chemicals and mechanical stresses, making it a versatile and reliable choice for protective coatings. Because it is transparent, it is crucial for the layer underneath to be aliphatic and UV resistant to avoid cracking of the product underneath.

Mixing: Use a low speed (300 rpm) mixer.

TYPES OF APPLICATIONS

APPLICATION BY COATS	Per coat: 0.1-0.2 kg/m². Apply more coats depending on traffic requirements and system build-up.
PIGMENTATION OF HYPERDESMO®-ADY-E NEUTRAL	HYPERDESMO®-ADY-E when used as a topcoat, for colour and UV protection of HYPERDESMO® products, it is either pre-pigmented from the factory in white/grey colour or it comes in NEUTRAL version that must be pigmented with ALCHIMICA's PIGMENT PASTES only (10% max). At a maximum ratio of 10% by weight, the PIGMENTS PASTES are designed to be compatible with ALCHIMICA's products, offering high hiding power to the transparent or neutral versions of HYPERDESMO®-ADY-E. Pour the PIGMENT PASTE content of the pail into the product at a maximum ratio of 10% by weight. Mix thoroughly using a low-speed electric mixer until the product homogenizes. Apply the product as per standard application instructions.

APPLICATION WITH AIRLESS (200- 250 bar) SPRAY MACHINE.

1. Open the pail and stir it up to homogenize. Stirring can either be done manually or with a low speed (300 rpm) mixer.
2. If necessary, add up to 5% SOLVENT-01 into the pail and mix it with low-speed mechanical equipment.
3. Apply thin layers using an airless spray machine.
4. Wait for the recoat time.
5. Repeat this process until the desired or recommended thickness.

HYPERDESMO-T

HYPERDESMO®-T is a one-component, high solids, polyurethane fluid that cures with the humidity in the atmosphere, creating an elastic, highly durable, and highly hydrophobic membrane with excellent UV resistance. Being aliphatic, it does not yellow or discolor when exposed to sunlight. The product is based on pure elastomeric, hydrophobic, aliphatic polyurethane resin, providing outstanding mechanical, chemical, thermal, UV, and natural element resistance properties.

HYPERDESMO®-T	
CONSUMPTION	0.2-1 kg/m² per coat according to application type
APPLICATIONS METHODS	brush, roller, airless spraying
TACK FREE TIME, @ 77 ºF (25ºC) & 55% RH	6 Hours
RECOAT TIME OF THE PRODUCT	24 Hours
ADDITIVES	X
COLORS	TRANSPARENT
COMPONENTS	SINGLE COMPONENT

HYPERDESMO®-T features and benefits include excellent weather and UV resistance, no need for thinning (though SOLVENT-01 can be used), and exceptional thermal resistance, remaining elastic even at temperatures as low as -40°C and never softening up to a maximum service temperature of 80°C and a shock temperature of 200°C. It exhibits excellent mechanical properties, good chemical resistance, and effective water vapor transmission, and can be applied in thick, bubble-free coats. This product is recommended for waterproofing and protecting tiles, natural stone,

wood, verandas, balconies, terraces, and as a concrete sealer. It can also be used for encapsulation and as a binder for stone carpets. HYPERDESMO®-T, while appearing colored in large containers, results in a transparent finish when applied. Because it is transparent, it is crucial for the layer underneath to be aliphatic and UV resistant to avoid cracking of the product underneath.

Mixing: Use a low speed (300 rpm) mixer.

TYPES OF APPLICATIONS	
APPLICATION BY COATS	Per coat: 0.2-1 kg/m². Apply more coats depending on traffic requirements and system build-up.
APPLICATION WITH AIRLESS (200- 250 bar) SPRAY MACHINE.	1. Open the pail and stir it up to homogenize. Stirring can either be done manually or with a low speed (300 rpm) mixer. 2. If necessary, add up to 5% SOLVENT-01 into the pail and mix it with low-speed mechanical equipment. 3. Apply thin layers using an airless spray machine. 4. Wait for the recoat time. 5. Repeat this process until the desired or recommended thickness.

B. DECORATIVE FLAKE FLOORING SYSTEM

	FLAKE FLOORING SYSTEM	
1. PRIMER	UNIVERSAL-PRIMER-2K-4060	150-200 gr/m2 Subject to porosity
	AQUASMART-DUR/ AQUASMART-PU PRIMER 2K	
2. SEALANT	HYPERSEAL-EXPERT-150,	Subject to project needs
3. WATERPROOFING MEMBRANE / FLOORING COAT	HYPERFLOOR-2K	
	EPOXY RESIN-51-FLOORING	
4. COLORED TOP COAT FOR UV PROTECTION OVER WHICH ONE YOU BROADCAST THE FLAKES WHILE IT'S WET.	HYPERDESMO-ADY-E	0.2 -0.3kg/m2 per coat, depending on traffic requirements
	HYPERDESMO-ADY-610/810	0.6-1 kg/m2 per coat, depending on traffic requirements

5.	FLAKES	FULL FLAKES SYSTEM OR FLAKE SYSTEM WITH SPACING IN BETWEEN THE FLAKES	Subject to project needs and aesthetic result
6.	FLAKES ENCAPSULATION	The next day, after everything is dry, you vacuum any loose flakes that are not adhered to the system. Then apply the transparent layer of HYPERDESMO-ADY-E TRANSPARENT or HYPERDESMO-T, on top of flakes.	
7.	TRANSPARENT TOP COAT	HYPERDESMO-ADY-E (TRANSPARENT)	0.2 -0.3kg/m2 per coat, depending on traffic requirements
		HYPERDESMO-T	
8.	ADDITIONAL TOPCOAT	AQUASMART TC FLOOR PROTECT	150-200 gr/m2

MAIN FLOORING COAT

PRIMER	HYPERFLOOR-2K	EPOXY RESIN – 51 FLOORING
CONSUMPTION	depending on the project requirements	depending on the project requirements
THICKNESS	1.3 kg/m2 gives approx. 1 mm of thickness	2 kg/m2 gives approx.1.1 mm of thickness
COMPOSITION	100% PU	
VOCs	NO	NO
APPLICATIONS METHODS	notched trowel, squeegee, roller.	notched trowel, squeegee, roller.
TACK FREE TIME, @ 77 °F (25°C) & 55% RH	2-3 Hours	-
1 COAT FULL APPLICATION	YES	YES
RECOMMENDED DILUTION	X	X
COLORS	GREY, NEUTRAL	GREY, NEUTRAL
POT LIFE	20-30 Min	>40 Min

COMPONENTS	TWO COMPONENTS	TWO COMPONENTS

Our flooring solutions expand to different indoor and outdoor applications. Our polyurethane and epoxy decorative flooring systems achieve the upgrade of interiors by providing solutions of high aesthetics and durability, allowing for creativity in interior design. They can be applied to commercial or industrial buildings in unlimited colors, in combination with colored flakes. Depending on your flooring needs and requirements, choose one of the following flooring coatings:

HYPERFLOOR-2K

HYPERFLOOR-2K is a high-performance, two-component, self-leveling polyurethane flooring coating that is 100% solids. This product forms a strong, flexible film upon curing, with excellent adhesion to a variety of substrates, making it ideal for both industrial and commercial environments. The product is solvent-free, significantly reducing VOC emissions and ensuring that indoor applications are possible. The self-levelling property of HYPERFLOOR-2K simplifies installation and achieves a smooth, even surface. It is flexible, which enables it to bridge cracks effectively, making it suitable for floors that experience vibrations or thermal shifts. The resin can be applied in varying thicknesses ranging from 1mm to 10mm in a single coat, accommodating diverse application needs. It is also temperature resistant, functioning effectively in environments from -40°C to 90°C.

HYPERFLOOR-2K offers a comprehensive solution for industrial and commercial flooring, combining ease of application with robust performance characteristics. HYPERFLOOR-2K is designed to withstand both light and heavy traffic, making it a versatile choice for industrial facilities, food and chemical processing plants, hospitals, warehouses, refrigeration cells, and secondary containment areas. This product is certified under EN 13813, verifying its mechanical strength, wear resistance, and chemical resistance. For enhanced durability and protection, especially in UV-exposed or high-traffic areas, the application of a compatible topcoat is recommended.

Mixing: Use a low speed (300 rpm) mixer.

Application: The product should be applied using a roller, trowel, or squeegee and followed by a spiked roller to eliminate any trapped air bubbles, ensuring a flawless finish.

Thickness: The dry film thickness is calculated based on the application and can be determined by considering that 1.3kg/m2 of HYPERFLOOR-2K will give you 1mm thickness. With this material you can achieve any desired thickness (from 1mm up to 10mm) in just one single coat.

Note: After applying and levelling HYPERFLOOR-2K, you over pass the surface with spike roller. This allows any air bubbles that are blocked to easily escape and assures a smooth final floor surface.

TYPES OF APPLICATIONS

SINGLE COAT APPLICATION	To apply HYPERFLOOR-2K and achieve the desired thickness, it is crucial to use the calculated material consumption rate accurately. This high-performance flooring solution allows you to reach any thickness from 1mm to 10mm in a single coat. Ensure that the application rate is precisely followed to obtain the desired thickness for your specific project requirements.
PIGMENTATION OF HYPERFLOOR-2K NEUTRAL	HYPERFLOOR-2K is either pre-pigmented from the factory in grey colour or it comes in NEUTRAL version that must be pigmented with ALCHIMICA's PIGMENT PASTES only (10% max). At a maximum ratio of 10% by weight, the PIGMENTS PASTES are designed to be compatible with ALCHIMICA's products, offering high hiding power to the neutral version of HYPERFLOOR-2K. Pour the PIGMENT PASTE content of the pail into the product at a maximum ratio of 10% by weight. Mix thoroughly using a low-speed electric mixer until the product homogenizes. Apply the product as per standard application instructions.

EPOXY RESIN-51 FLOORING

EPOXY RESIN 51-FLOORING is a high-performance, two-component, self-leveling, and solvent-free epoxy-based floor coating designed to provide exceptional durability and chemical resistance across a variety of demanding environments. This 100% solids system is specifically formulated to create a shrinkage-free, smooth surface. It can be tailored for different thicknesses by adding dry silica sand up to a 1:1 weight ratio.

The product is solvent-free, significantly reducing VOC emissions and ensuring that indoor applications are possible. EPOXY RESIN 51-FLOORING offers superior durability with high impact and abrasion resistance, making it capable of withstanding heavy foot traffic and industrial operations. It's excellent chemical resistance not only ensures durability but also inhibits fungal and bacterial growth, making it an ideal choice for laboratories, hospitals, and industrial facilities where hygiene is paramount. The product also exhibits high tensile and tear strength, contributing to its long-lasting durability. EPOXY RESIN 51-FLOORING is ideal for industrial floors, hospitals, food, chemical and pharmaceutical industries, indoor car parks, retail shopping areas, and hotels. It can be applied as paint using rollers or as a self-leveling compound with added silica sand. Additionally, it is CE certified according to EN 13813, ensuring compliance with European standards for construction products. This product ensures a reliable and maintenance-free flooring solution tailored for scenarios that demand high durability and resistance.

Mixing: Use a low speed (300 rpm) mixer.

Application: The product should be applied using a roller, trowel, or squeegee and followed by a spiked roller to eliminate any trapped air bubbles, ensuring a flawless finish.

Thickness: In order to calculate dry film thickness, note that 2kg/m2 of EPOXY RESIN-51 FLOORING will give you around 1.1mm. After application and levelling of EPOXY-RESIN-51-FLOORING, the surface is treated with a spike roller to remove air bubbles and to give a final smooth film finish. Consumption determination depends primarily on final intended use of the floor. Traffic resistance is improved with higher consumption.

Note: After the full cure of EPOXY RESIN-51 FLOORING, dilatation joints need to be carved on the floor. Joints frequency, width and depth should be deemed by the contractors and engineers, depending on the room's geometry. New dilatation joints should be treated with HYPERSEAL-EXPERT-150, following a width/depth ratio of 2/1.

SINGLE COAT APPLICATION	To apply EPOXY RESIN 51FLOORING and achieve the desired thickness, it is crucial to use the calculated material consumption rate accurately. Ensure that the application rate is precisely followed to obtain the desired thickness for your specific project requirements.
APPLICATION AS SELF-LEVELING FLOOR + SILICA SAND :	To the mixture of EPOXY RESIN 51-FLOORING A+B, add 1:1 by weight dry silica sand 0.1-0.3 diameter. Pour the material on the floor and apply with a 5mm notched trowel. Use a spiked roller to subsequently remove entrapped air.
APPLICATION AS PAINT:	Apply EPOXY RESIN 51-FLOORING A+B without addition of quartz sand with a roller or spatula in two coats with 0.250-0.350 Kg/m2 per coat (minimum total consumption 0.5 Kg/m2). To make an anti-slip finish the final layer is broadcasted with silica sand or corundum.
PIGMENTATION OF EPOXY RESIN 51 FLOORING NEUTRAL	EPOXY RESIN 51FLOORIING is either pre-pigmented from the factory in grey colour or it comes in NEUTRAL version that must be pigmented with ALCHIMICA's PIGMENT PASTES only (10% max). At a maximum ratio of 10% by weight, the PIGMENTS PASTES are designed to be compatible with ALCHIMICA's products, offering high hiding power to the neutral version of EPOXY RESIN 51 FLOORING. Pour the PIGMENT PASTE content of the pail into the product at a maximum ratio of 10% by weight. Mix thoroughly using a low-speed electric mixer until the product homogenizes. Apply the product as per standard application instructions.

COLORED TOP COAT WITH FLAKES

For UV and color protection, you should finally apply a colored topcoat of HYPERDESMO-ADY-E pigmented at the desired color over the well-cured HYPERDESMO SYSTEM surface. Additionally, apply HYPERDESMO-ADY-610. Flakes should be broadcast at a usual rate of 1 kg/m² (consumption depends on the result that the client wants) while the colored top coat is still wet.

APPLICATION WITH BROADCASTING FLAKES:

For decorative colour chips finish, apply the first coat of HYPERDESMO®-ADY-E (PIGMENTED) /HYPERDESMO-ADY-610 over the well-cured HYPERDESMO® SYSTEM surface. Over the fresh first top coat you broadcast the color flake chips. Flakes broadcast at usually 1kg/m2 (consumption depends on the result that the client wants) while the product is still wet.

The next day you remove the excess non-bonded flakes. Most applicators use a leaf blower in order to remove, but also recover any non-used flakes, instead of using a vacuum cleaner which would destroy the flakes.

Then, you apply on top a second thin coat of HYPERDESMO®-ADY-E TRANSPARENT or HYPERDESMO®-T at 200gr/m2 in order to encapsulate the flakes. Most applicators usually use a squeegee to spread the product and follow with a roller to smoothen it out. For traffic requirements, after this coat has cured, you can apply another coat of HYPERDESMO®-ADY-E TRANSPARENT or HYPERDESMO®-T at 400gr/m2.

HYPERDESMO-ADY-E (COLORED)

For abrasion resistance and colour protection, you should finally apply a topcoat of HYPERDESMO®-ADY-E pigmented at the desired colour. It is fully aliphatic and provides excellent color and UV protection with no yellowing effects. It increases traffic resistance, forming the highest level of protection. It can be part of both flooring and waterproofing systems. HYPERDESMO®-ADY-E is ideal for color and traffic protection of HYPERDESMO® system products, maximizing the system's working life.

HYPERDESMO®-ADY-E	
CONSUMPTION	0.2 -0.3kg/m² per coat In Total: 0.2-0.6 kg/m² in one or more coats, depending on traffic conditions
APPLICATIONS METHODS	brush, roller, airless spraying
TACK FREE TIME, @ 77 °F (25°C) & 55% RH	6-8 Hours
APPLICATION OVER PREVIOUS COAT	It must be applied WITHIN 24-72 hours of HYPERDESMO® depending on weather conditions.
RECOAT TIME OF THE PRODUCT	24 Hours
ADDITIVES	X
COLORS	WHITE, GREY, NEUTRAL, TRANSPARENT
COMPONENTS	SINGLE COMPONENT

HYPERDESMO®-ADY-E is a semi-glossy, fully aliphatic, high traffic polyurethane topcoat with excellent hiding power and high traffic resistance. It is suitable for anti-slip systems and has excellent UV, mechanical, and chemical properties. It is hydrophobic, strong, and durable, maintaining elasticity even at -40°C. It also offers

excellent heat and ultraviolet/UV resistance, and outstanding resistance to chemicals and mechanical stresses.

Mixing: Use a low speed (300 rpm) mixer.

Application: Total consumption of HYPERDESMO®-ADY-E should be 0.2 -0.4 kg/m² in 1- 2 successive coats over the well cured HYPERDESMO® SYSTEM surface. Total consumption depends on traffic conditions and requirements.

TYPES OF APPLICATIONS	
APPLICATION BY COATS	Per coat: 0.2-0.3 kg/m². Apply more coats depending on traffic requirements and system build-up.
PIGMENTATION OF HYPERDESMO®-ADY-E NEUTRAL	HYPERDESMO®-ADY-E when used as a topcoat, for colour and UV protection of HYPERDESMO® products, it is either pre-pigmented from the factory in white/grey colour or it comes in NEUTRAL version that must be pigmented with ALCHIMICA's PIGMENT PASTES only (10% max). At a maximum ratio of 10% by weight, the PIGMENTS PASTES are designed to be compatible with ALCHIMICA's products, offering high hiding power to the transparent or neutral versions of HYPERDESMO®-ADY-E. Pour the PIGMENT PASTE content of the pail into the product at a maximum ratio of 10% by weight. Mix thoroughly using a low-speed electric mixer until the product homogenizes. Apply the product as per standard application instructions.
APPLICATION WITH AIRLESS (200- 250 bar) SPRAY MACHINE.	1. Open the pail and stir it up to homogenize. Stirring can either be done manually or with a low speed (300 rpm) mixer. 2. If necessary, add up to 5% SOLVENT-01 into the pail and mix it with low-speed mechanical equipment. 3. Apply thin layers using an airless spray machine. 4. Wait for the recoat time. 5. Repeat this process until the desired or recommended thickness.

HYPERDESMO®-ADY 610

WATERPROOFING	HYPERDESMO®-ADY-610
CONSUMPTION	- 0.6-1 kg/m² - >1 kg/m² Subject to traffic needs
APPLICATIONS METHODS	brush, roller, airless spraying
TACK FREE TIME, @ 77 °F (25°C) & 55% RH	6-12 Hours
APPLICATION OVER PREVIOUS COAT (PRIMER)	Depending on the primer curing time
RECOAT TIME OF PRODUCT	24 Hours

ADDITIVES	• THIXO-TOOL • CHECK THE TDS FOR COMPATIBILITY
COLORS	WHITE, GREY
COMPONENTS	SINGLE COMPONENT

HYPERDESMO®-ADY 610 is a fully aliphatic, one-component polyurethane liquid membrane designed for waterproofing and color protection. It is based on ALCHIMICA's HAA - Humidity Activated Accelerator Technology (H.A.A) and is self-levelling, with a good viscosity profile over a large temperature range. It is recommended to be applied in one coat, saving labor costs and minimizing errors due to inter-adhesion failures. The product retains color stability even when applied in dark colors, and especially when applied in white, it provides excellent solar reflectance for many years. It is self-levelling, with excellent mechanical, chemical, thermal, UV, and natural element resistance properties. It is suitable for exposed waterproofing applications such as concrete roofs and metal roofs, and can be applied using brush, roller, or airless spraying.

The membrane's excellent weather and UV resistance, low viscosity, high elasticity, tensile and tear strength, and high hydrophobic properties make it an excellent choice for applications such as concrete roofs and metal roofs. It is highly hydrophobic and offers excellent chemical and hydrolysis resistance. Overall, HYPERDESMO®-ADY 610 is a cost-effective and efficient solution for waterproofing and color protection.

Mixing: Use a low speed (300 rpm) mixer.

TYPES OF APPLICATIONS	
APPLICATION BY COATS	- First coat: 0.6-0.9 kg/m^2. - Second coat: 0.8-0.9 kg/m^2. Apply more coats depending on traffic requirements and system build-up. - Minimum total consumption: 0.6 kg/m^2.
SINGLE COAT APPLICATION	HYPERDESMO®-ADY 610 can be applied in only 1 single coat, with a maximum consumption of up to 2kg/m^2.
APPLICATION WITH REINFORCEMENT ✓ GEOTEXTILE ✓ FIBER TEXTILE	You apply the 1st coat of HYPERDESMO®-ADY 610 with a minimum consumption of 0.8-1 kg/m^2. When HYPERDESMO®-ADY 610 is still wet, you apply the reinforcement (GEOTEXTILE-50 PRESSED (non-woven geotextile of 50gr/m^2)). Immediately, wet on wet, application of the 2nd coat of HYPERDESMO®-ADY-610 with a minimum consumption of 0.8-1 kg/m^2 takes place.
APPLICATION WITH AIRLESS (200- 250 bar) SPRAY MACHINE.	1. Open the pail and stir it up to homogenize. 2. If necessary, add 5~10% SOLVENT-01 into the pail and mix it with medium-speed mechanical equipment. 3. Apply thin layers using an airless spray machine.

4. Wait for the recoat time.
5. Repeat this process until the desired or recommended thickness.

PIGMENTATION OF HYPERDESMO®-ADY 610 NEUTRAL

HYPERDESMO®-ADY 610 is either pre-pigmented from the factory in white/grey colour or it comes in NEUTRAL version that must be pigmented with ALCHIMICA's PIGMENT PASTES only (10% max).

At a maximum ratio of 10% by weight, the PIGMENTS PASTES are designed to be compatible with ALCHIMICA's products, offering high hiding power to the neutral version of HYPERDESMO®-ADY 610. Pour the PIGMENT PASTE content of the pail into the product at a maximum ratio of 10% by weight. Mix thoroughly using a low-speed electric mixer until the product homogenizes. Apply the product as per standard application instructions.

ENCAPSULATION OF FLAKES

After broadcasting the decorative color chips finish on the fresh coat of HYPERDESMO®-ADY-E (pigmented) / HYPERDESMO-ADY-610, let it cure.

The next day, remove the excess non-bonded flakes. Most applicators use a leaf blower to remove and recover any unused flakes, instead of using a vacuum cleaner which would destroy the flakes.

Then, apply a second thin Transparent coat to encapsulate the flakes. Choose HYPERDESMO®-ADY-E TRANSPARENT or HYPERDESMO®-T at 200 g/m² to encapsulate the flakes. Most applicators usually use a squeegee to spread the product and follow with a roller to smooth it out. For traffic requirements, after this coat has cured, you can apply another coat of HYPERDESMO®-ADY-E TRANSPARENT or HYPERDESMO®-T at 400 g/m².

Both HYPERDESMO-T and HYPERDESMO-ADY-E Transparent are aliphatic polyurethane materials, offering excellent UV resistance and non-yellowing properties. However, their applications differ significantly. HYPERDESMO-T is a waterproofing membrane designed **for use in thick coats**, making it suitable for protecting and waterproofing surfaces such as tiles, natural stone, wood, concrete and binder for stone carpet applications. On the other hand, HYPERDESMO-ADY-E Transparent is primarily used as a top coat for protection and can also serve as a transparent varnish. While it excels in providing a durable, UV-resistant finish, it is not practical for applications requiring significant membrane thickness due to the need for **multiple layers** to achieve 1 mm thickness.

HYPERDESMO-ADY-E TRANSPARENT

HYPERDESMO®-ADY-E TRANSPARENT	
CONSUMPTION	0.1-0.2kg/m² per coat In Total: 0.2-0.5 kg/m² in one or more coats, depending on traffic conditions
APPLICATIONS METHODS	brush, roller, airless spraying
TACK FREE TIME, @ 77 °F (25°C) & 55% RH	6-8 Hours
RECOAT TIME OF THE PRODUCT	24 Hours

ADDITIVES	X
COLORS	TRANSPARENT
COMPONENTS	SINGLE COMPONENT

HYPERDESMO®-ADY-E (Transparent) is the transparent version of HYPERDESMO®-ADY-E. It is a one-component, aliphatic, elastic polyurethane liquid top coat designed for superior performance in various applications. This product cures with atmospheric humidity to form a durable, elastic membrane with excellent adhesion to a wide range of surfaces. Notably, it is aliphatic, meaning it resists yellowing from direct sunlight exposure, making it ideal for encapsulation projects and as a transparent top coat and varnish over ALCHIMICA's Systems. The formulation is based on pure elastomeric hydrophobic polyurethane resin, providing exceptional mechanical, chemical, thermal, UV, and natural element resistance. Application is straightforward using a brush, roller, or airless spraying, typically in one or two coats with a minimum consumption of 0.1 kg/m² per coat.

HYPERDESMO®-ADY-E (Transparent) is recommended for top-coating various applications like flooring applications and protecting concrete or synthetic coatings. It maintains elasticity even in extreme temperatures down to -40°C and withstands heat up to 90°C without yellowing, peeling, or softening. This product ensures strong, uniform adhesion, high durability, and excellent resistance to chemicals and mechanical stresses, making it a versatile and reliable choice for protective coatings. Because it is transparent, it is crucial for the layer underneath to be aliphatic and UV resistant to avoid cracking of the product underneath.

Mixing: Use a low speed (300 rpm) mixer.

TYPES OF APPLICATIONS

APPLICATION BY COATS	Per coat: 0.1-0.2 kg/m². Apply more coats depending on traffic requirements and system build-up.
PIGMENTATION OF HYPERDESMO®-ADY-E NEUTRAL	HYPERDESMO®-ADY-E when used as a topcoat, for colour and UV protection of HYPERDESMO® products, it is either pre-pigmented from the factory in white/grey colour or it comes in NEUTRAL version that must be pigmented with ALCHIMICA's PIGMENT PASTES only (10% max). At a maximum ratio of 10% by weight, the PIGMENTS PASTES are designed to be compatible with ALCHIMICA's products, offering high hiding power to the transparent or neutral versions of HYPERDESMO®-ADY-E. Pour the PIGMENT PASTE content of the pail into the product at a maximum ratio of 10% by weight. Mix thoroughly using a low-speed electric mixer until the product homogenizes. Apply the product as per standard application instructions.

APPLICATION WITH AIRLESS (200- 250 bar) SPRAY MACHINE.

1. Open the pail and stir it up to homogenize. Stirring can either be done manually or with a low speed (300 rpm) mixer.
2. If necessary, add up to 5% SOLVENT-01 into the pail and mix it with low-speed mechanical equipment.
3. Apply thin layers using an airless spray machine.
4. Wait for the recoat time.
5. Repeat this process until the desired or recommended thickness.

HYPERDESMO-T

HYPERDESMO®-T is a one-component, high solids, polyurethane fluid that cures with the humidity in the atmosphere, creating an elastic, highly durable, and highly hydrophobic membrane with excellent UV resistance. Being aliphatic, it does not yellow or discolor when exposed to sunlight. The product is based on pure elastomeric, hydrophobic, aliphatic polyurethane resin, providing outstanding mechanical, chemical, thermal, UV, and natural element resistance properties.

HYPERDESMO®-T	
CONSUMPTION	0.2-1 kg/m² per coat according to application type
APPLICATIONS METHODS	brush, roller, airless spraying
TACK FREE TIME, @ 77 ºF (25ºC) & 55% RH	6 Hours
RECOAT TIME OF THE PRODUCT	24 Hours
ADDITIVES	X
COLORS	TRANSPARENT
COMPONENTS	SINGLE COMPONENT

HYPERDESMO®-T features and benefits include excellent weather and UV resistance, no need for thinning (though SOLVENT-01 can be used), and exceptional thermal resistance, remaining elastic even at temperatures as low as -40°C and never softening up to a maximum service temperature of 80°C and a shock temperature of 200°C. It exhibits excellent mechanical properties, good chemical resistance, and effective water vapor transmission, and can be applied in thick, bubble-free coats. This product is recommended for waterproofing and protecting tiles, natural stone,

wood, verandas, balconies, terraces, and as a concrete sealer. It can also be used for encapsulation and as a binder for stone carpets. HYPERDESMO®-T, while appearing colored in large containers, results in a transparent finish when applied. Because it is transparent, it is crucial for the layer underneath to be aliphatic and UV resistant to avoid cracking of the product underneath.

Mixing: Use a low speed (300 rpm) mixer.

TYPES OF APPLICATIONS	
APPLICATION BY COATS	Per coat: 0.2-1 kg/m². Apply more coats depending on traffic requirements and system build-up.
APPLICATION WITH AIRLESS (200- 250 bar) SPRAY MACHINE.	1. Open the pail and stir it up to homogenize. Stirring can either be done manually or with a low speed (300 rpm) mixer. 2. If necessary, add up to 5% SOLVENT-01 into the pail and mix it with low-speed mechanical equipment. 3. Apply thin layers using an airless spray machine. 4. Wait for the recoat time. 5. Repeat this process until the desired or recommended thickness.

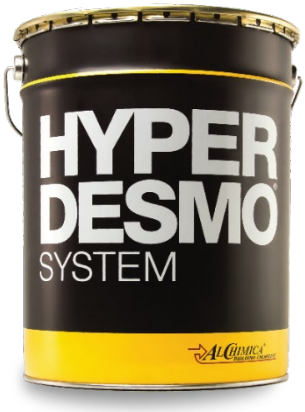
C. COMBINED FLAKE SYSTEM

	COMBINED FLAKE SYSTEM	CONSUMPTION
1. PRIMER	SELECT A SUITABLE PRIMER FOR YOUR SUBSTATE TYPE AND AREA OF APPLICATION	150-200 gr/m2 Subject to porosity
2. SEALANT	HYPERSEAL-EXPERT-150,	Subject to project needs
3. ALIPHATIC WATERPROOFING MEMBRANE / FLOORING COAT OVER WHICH ONE YOU BROADCAST THE FLAKES WHILE IT'S WET.	HYPERDESMO-ADY-610	1.5-2 Kg/m2 depending on traffic requirements
	HYPERDESMO-ADY-810	
4. FLAKES	FULL FLAKES SYSTEM OR FLAKE SYSTEM WITH SPACING IN BETWEEN THE FLAKES	Subject to project needs and aesthetic result
5. FLAKES ENCAPSULATION	The next day, after everything is dry, you vacuum any loose flakes that are not adhered to the system. Then apply the transparent layer of HYPERDESMO-ADY-E TRANSPARENT or HYPERDESMO-T, on top of flakes.	

6.	TRANSPARENT TOP COAT	HYPERDESMO-ADY-E (TRANSPARENT) HYPERDESMO-T	0.2 -0.3kg/m2 per coat, depending on traffic requirements
7.	ADDITIONAL TOPCOAT	AQUASMART TC FLOOR PROTECT	150-200 gr/m2

MAIN WATERPROOFING MEMBRANE

HYPERDESMO®-ADY 610/810 can be applied in a single coat, on a single day. As a 2-in-1 solution, they combine the functionalities of both a waterproofing membrane and a top coat, eliminating the need for an additional protective layer. The key differences between HYPERDESMO®-ADY 610 and HYPERDESMO®-ADY 810 lie in their intended use cases and performance characteristics:



- HYPERDESMO®-ADY 610 is designed for applications requiring color stability, UV resistance, and can be applied in one coat. It's recommended for roofs, verandas, balconies, and light roofing made of metal or fibrous cement, among others. It offers excellent weather, UV resistance, and hydrophobic properties, making it suitable for a wide range of substrates.

- HYPERDESMO®-ADY 810, on the other hand, is tailored for heavy-duty high traffic areas, offering exceptional abrasion, scratch resistance, and UV resistance. It's suitable as a top coat for exposed car parking decks and can be used in both single-layer applications or as a top coat over HYPERDESMO® systems. This product is recommended for areas subjected to vehicular traffic and where high durability and heavy-duty resistance are critical.

Choose HYPERDESMO®-ADY 610 for projects where color stability and a single-coat application are priorities, and HYPERDESMO®-ADY 810 for areas requiring high abrasion resistance and durability under vehicular traffic.

HYPERDESMO®-ADY 610

HYPERDESMO®-ADY 610 is a fully aliphatic, one-component polyurethane liquid membrane designed for waterproofing and color protection. It is based on ALCHIMICA's HAA - Humidity Activated Accelerator Technology (H.A.A) and is self-levelling, with a good viscosity profile over a large temperature range. It is recommended to be applied in one coat, saving labor costs and minimizing errors due to inter-adhesion failures. The product retains color stability even when applied in dark colors, and especially when applied in white, it provides excellent solar reflectance for many years. It is self-levelling, with excellent mechanical, chemical, thermal, UV, and natural element resistance properties. It is suitable for exposed waterproofing applications such as concrete roofs and metal roofs, and can be applied using brush, roller, or airless spraying.

WATERPROOFING	HYPERDESMO®-ADY-610
CONSUMPTION	- 1.6-2 kg/m² - >2 kg/m² Subject to traffic needs
APPLICATIONS METHODS	brush, roller, airless spraying
TACK FREE TIME, @ 77 °F (25°C) & 55% RH	6-12 Hours
APPLICATION OVER PREVIOUS COAT (PRIMER)	Depending on the primer curing time
RECOAT TIME OF PRODUCT	24 Hours
ADDITIVES	• THIXO-TOOL • CHECK THE TDS FOR COMPATIBILITY
COLORS	WHITE, GREY
COMPONENTS	SINGLE COMPONENT

The membrane's excellent weather and UV resistance, low viscosity, high elasticity, tensile and tear strength, and high hydrophobic properties make it an excellent choice for applications such as concrete roofs and metal roofs. It is highly hydrophobic and offers excellent chemical and hydrolysis resistance. Overall, HYPERDESMO®-ADY 610 is a cost-effective and efficient solution for waterproofing and color protection.

TYPES OF APPLICATIONS	
APPLICATION BY COATS	- First coat: 0.7-0.9 kg/m². - Second coat: 0.8-0.9 kg/m². Apply more coats depending on traffic requirements and system build-up. - Minimum total consumption: 1.5-1.8 kg/m².
SINGLE COAT APPLICATION	HYPERDESMO®-ADY 610 can be applied in only 1 single coat, with a maximum consumption of up to 2kg/m².

APPLICATION WITH REINFORCEMENT ✓ GEOTEXTILE ✓ FIBER TEXTILE	You apply the 1st coat of HYPERDESMO®-ADY 610 with a minimum consumption of 0.8-1 kg/m². When HYPERDESMO®-ADY 610 is still wet, you apply the reinforcement (GEOTEXTILE-50 PRESSED (non-woven geotextile of 50gr/m²)). Immediately, wet on wet, application of the 2nd coat of HYPERDESMO®-ADY-610 with a minimum consumption of 0.8-1 kg/m² takes place.
APPLICATION WITH AIRLESS (200- 250 bar) SPRAY MACHINE.	1. Open the pail and stir it up to homogenize. 2. If necessary, add 5~10% SOLVENT-01 into the pail and mix it with medium-speed mechanical equipment. 3. Apply thin layers using an airless spray machine. 4. Wait for the recoat time. 5. Repeat this process until the desired or recommended thickness.
PIGMENTATION OF HYPERDESMO®-ADY 610 NEUTRAL	HYPERDESMO®-ADY 610 is either pre-pigmented from the factory in white/grey colour or it comes in NEUTRAL version that must be pigmented with ALCHIMICA's PIGMENT PASTES only (10% max). At a maximum ratio of 10% by weight, the PIGMENTS PASTES are designed to be compatible with ALCHIMICA's products, offering high hiding power to the transparent or neutral versions of HYPERDESMO®-ADY 610. Pour the PIGMENT PASTE content of the pail into the product at a maximum ratio of 10% by weight. Mix thoroughly using a low-speed electric mixer until the product homogenizes. Apply the product as per standard application instructions.

HYPERDESMO®-ADY 810

HYPERDESMO®-ADY 810 is a fully aliphatic, one-component polyurethane liquid membrane designed for use as a waterproofing membrane or as a top coat for heavy duty and high traffic deck coating systems and roofs. It is based on ALCHIMICA's HAA - Humidity Activated Accelerator Technology (H.A.A) and it is self-levelling, with a good viscosity profile over a large temperature range that will cure to form a bubble-free membrane that is recommended to be applied in only one coat.

WATERPROOFING	HYPERDESMO®-ADY-810
CONSUMPTION	1.6-2 kg/m² >2 kg/m² Subject to traffic needs
APPLICATIONS METHODS	brush, roller, airless spraying
TACK FREE TIME, @ 77 °F (25°C) & 55% RH	6-12 Hours
APPLICATION OVER PREVIOUS COAT (PRIMER)	Depending on the primer curing time
RECOAT TIME OF PRODUCT	24 Hours
ADDITIVES	• THIXO-TOOL • CHECK THE TDS FOR COMPATIBILITY
COLORS	WHITE, GREY
COMPONENTS	SINGLE COMPONENT

It is heavy-duty, fully aliphatic, with excellent mechanical, chemical, thermal, UV and natural element resistance properties, excellent abrasion, impact, and UV resistance, excellent mechanical properties, high elasticity, tensile and tear strength, and excellent chemical and hydrolysis resistance.

Usage for heavy-duty exposed waterproofing applications such as car parking decks and heavy-duty concrete roofs is recommended. The HYPERDESMO®-ADY 810 system is a must-have for top-coating HYPERDESMO® systems when traffic resistance is required, as well as for main membrane and top coat application in one layer in typical heavy-duty waterproofing applications. This 2-in-1 solution eliminates the need for an additional protective layer and saves on labor costs.

TYPES OF APPLICATIONS	
APPLICATION BY COATS	- First coat: 0.7-0.9 kg/m^2. - Second coat: 0.8-0.9 kg/m^2. Apply more coats depending on traffic requirements and system build-up. - Minimum total consumption: 1.5-1.8 kg/m^2.
SINGLE COAT APPLICATION	HYPERDESMO®-ADY 810 can be applied in only 1 single coat, with a maximum consumption of up to 2kg/m^2.
APPLICATION WITH REINFORCEMENT ✓ GEOTEXTILE ✓ FIBER TEXTILE	You apply the 1st coat of HYPERDESMO®-ADY 810 with a minimum consumption of 0.8-1 kg/m^2. When HYPERDESMO®-ADY 810 is still wet, you apply the reinforcement (GEOTEXTILE-50 PRESSED (non-woven geotextile of 50gr/m^2)). Immediately, wet on wet, application of the 2nd coat of HYPERDESMO®-ADY-810 with a minimum consumption of 0.8-1 kg/m^2 takes place.
APPLICATION WITH AIRLESS (200- 250 bar) SPRAY MACHINE.	1. Open the pail and stir it up to homogenize. 2. If necessary, add 5~10% SOLVENT-01 into the pail and mix it with medium-speed mechanical equipment. 3. Apply thin layers using an airless spray machine. 4. Wait for the recoat time. 5. Repeat this process until the desired or recommended thickness.
PIGMENTATION OF HYPERDESMO®-ADY 810 NEUTRAL	HYPERDESMO®-ADY 810 is either pre-pigmented from the factory in white/grey colour or it comes in NEUTRAL version that must be pigmented with ALCHIMICA's PIGMENT PASTES only (10% max). At a maximum ratio of 10% by weight, the PIGMENTS PASTES are designed to be compatible with ALCHIMICA's products, offering high hiding power to the transparent or neutral versions of HYPERDESMO®-ADY 810. Pour the PIGMENT PASTE content of the pail into the product at a maximum ratio of 10% by weight. Mix thoroughly using a low-speed electric mixer until the product homogenizes. Apply the product as per standard application instructions.

BROADCASTING FLAKES

For decorative colour chips finish, over the fresh final coat you broadcast the color flake chips. Flakes broadcast at usually 1kg/m2 (consumption depends on the result that the client wants) while the product is still wet.

The next day you remove the excess non-bonded flakes. Most applicators use a leaf blower in order to remove, but also recover any non-used flakes, instead of using a vacuum cleaner which would destroy the flakes.

Then, you apply on top a second thin coat of HYPERDESMO®-ADY-E TRANSPARENT or HYPERDESMO®-T at 200gr/m2 in order to encapsulate the flakes. Most applicators usually use a squeegee to spread the product and follow with a roller to smoothen it out. For traffic requirements, after this coat has cured, you can apply another coat of HYPERDESMO®-ADY-E TRANSPARENT or HYPERDESMO®-T at 400gr/m2.

ENCAPSULATION OF FLAKES

After broadcasting the decorative color chips finish on the fresh coat of HYPERDESMO®-ADY-E (pigmented) / HYPERDESMO-ADY-610, let it cure.

The next day, remove the excess non-bonded flakes. Most applicators use a leaf blower to remove and recover any unused flakes, instead of using a vacuum cleaner which would destroy the flakes.

Then, apply a second thin Transparent coat to encapsulate the flakes. Choose HYPERDESMO®-ADY-E TRANSPARENT or HYPERDESMO®-T at 200 g/m² to encapsulate the flakes. Most applicators usually use a squeegee to spread the product and follow with a roller to smooth it out. For traffic requirements, after this coat has cured, you can apply another coat of HYPERDESMO®-ADY-E TRANSPARENT or HYPERDESMO®-T at 400 g/m².

Both HYPERDESMO-T and HYPERDESMO-ADY-E Transparent are aliphatic polyurethane materials, offering excellent UV resistance and non-yellowing

properties. However, their applications differ significantly. HYPERDESMO-T is a waterproofing membrane designed **for use in thick coats**, making it suitable for protecting and waterproofing surfaces such as tiles, natural stone, wood, concrete and binder for stone carpet applications. On the other hand, HYPERDESMO-ADY-E Transparent is primarily used as a top coat for protection and can also serve as a transparent varnish. While it excels in providing a durable, UV-resistant finish, it is not practical for applications requiring significant membrane thickness due to the need for **multiple layers** to achieve 1 mm thickness.

HYPERDESMO-ADY-E TRANSPARENT

HYPERDESMO®-ADY-E (Transparent) is the transparent version of HYPERDESMO®-ADY-E. It is a one-component, aliphatic, elastic polyurethane liquid top coat designed for superior performance in various applications. This product cures with atmospheric humidity to form a durable, elastic membrane with excellent adhesion to a wide range of surfaces. Notably, it is aliphatic, meaning it resists yellowing from direct sunlight exposure, making it ideal for encapsulation projects and as a transparent top coat and varnish over ALCHIMICA's Systems. The formulation is based on pure elastomeric hydrophobic polyurethane resin, providing exceptional mechanical, chemical, thermal, UV, and natural element resistance. Application is straightforward using a brush, roller, or airless spraying, typically in one or two coats with a minimum consumption of 0.1 kg/m² per coat.

HYPERDESMO®-ADY-E TRANSPARENT	
CONSUMPTION	0.1-0.2kg/m² per coat In Total: 0.2-0.5 kg/m² in one or more coats, depending on traffic conditions
APPLICATIONS METHODS	brush, roller, airless spraying
TACK FREE TIME, @ 77 °F (25°C) & 55% RH	6-8 Hours
RECOAT TIME OF THE PRODUCT	24 Hours
ADDITIVES	X
COLORS	TRANSPARENT
COMPONENTS	SINGLE COMPONENT

HYPERDESMO®-ADY-E (Transparent) is recommended for top-coating various applications like flooring applications and protecting concrete or synthetic coatings. It maintains elasticity even in extreme temperatures down to -40°C and withstands heat up to 90°C without yellowing, peeling, or softening. This product ensures strong, uniform adhesion, high durability, and excellent resistance to chemicals and mechanical stresses, making it a versatile and reliable choice for protective coatings.

Because it is transparent, it is crucial for the layer underneath to be aliphatic and UV resistant to avoid cracking of the product underneath.

TYPES OF APPLICATIONS	
APPLICATION BY COATS	Per coat: 0.1-0.2 kg/m^2. Apply more coats depending on traffic requirements and system build-up.
PIGMENTATION OF HYPERDESMO®-ADY-E NEUTRAL	HYPERDESMO®-ADY-E when used as a topcoat, for colour and UV protection of HYPERDESMO® products, it is either pre-pigmented from the factory in white/grey colour or it comes in NEUTRAL version that must be pigmented with ALCHIMICA's PIGMENT PASTES only (10% max). At a maximum ratio of 10% by weight, the PIGMENTS PASTES are designed to be compatible with ALCHIMICA's products, offering high hiding power to the transparent or neutral versions of HYPERDESMO®-ADY-E. Pour the PIGMENT PASTE content of the pail into the product at a maximum ratio of 10% by weight. Mix thoroughly using a low-speed electric mixer until the product homogenizes. Apply the product as per standard application instructions.
APPLICATION WITH AIRLESS (200- 250 bar) SPRAY MACHINE.	6. Open the pail and stir it up to homogenize. Stirring can either be done manually or with a low speed (300 rpm) mixer. 7. If necessary, add up to 5% SOLVENT-01 into the pail and mix it with low-speed mechanical equipment. 8. Apply thin layers using an airless spray machine. 9. Wait for the recoat time. 10. Repeat this process until the desired or recommended thickness.

HYPERDESMO-T

HYPERDESMO®-T is a one-component, high solids, polyurethane fluid that cures with the humidity in the atmosphere, creating an elastic, highly durable, and highly hydrophobic membrane with excellent UV resistance. Being aliphatic, it does not yellow or discolor when exposed to sunlight. The product is based on pure elastomeric, hydrophobic, aliphatic polyurethane resin, providing outstanding mechanical, chemical, thermal, UV, and natural element resistance properties.

HYPERDESMO®-T	
CONSUMPTION	0.2-1 kg/m^2 per coat according to application type
APPLICATIONS METHODS	brush, roller, airless spraying
TACK FREE TIME, @ 77 °F (25°C) & 55% RH	6 Hours
RECOAT TIME OF THE PRODUCT	24 Hours
ADDITIVES	X
COLORS	TRANSPARENT
COMPONENTS	SINGLE COMPONENT

HYPERDESMO®-T features and benefits include excellent weather and UV resistance, no need for thinning (though SOLVENT-01 can be used), and exceptional

thermal resistance, remaining elastic even at temperatures as low as -40°C and never softening up to a maximum service temperature of 80°C and a shock temperature of 200°C. It exhibits excellent mechanical properties, good chemical resistance, and effective water vapor transmission, and can be applied in thick, bubble-free coats. This product is recommended for waterproofing and protecting tiles, natural stone, wood, verandas, balconies, terraces, and as a concrete sealer. It can also be used for encapsulation and as a binder for stone carpets. HYPERDESMO®-T, while appearing colored in large containers, results in a transparent finish when applied. Because it is transparent, it is crucial for the layer underneath to be aliphatic and UV resistant to avoid cracking of the product underneath.

TYPES OF APPLICATIONS	
APPLICATION BY COATS	Per coat: 0.2-1 kg/m^2. Apply more coats depending on traffic requirements and system build-up.
APPLICATION WITH AIRLESS (200- 250 bar) SPRAY MACHINE.	1. Open the pail and stir it up to homogenize. Stirring can either be done manually or with a low speed (300 rpm) mixer. 2. If necessary, add up to 5% SOLVENT-01 into the pail and mix it with low-speed mechanical equipment. 3. Apply thin layers using an airless spray machine. 4. Wait for the recoat time. 5. Repeat this process until the desired or recommended thickness.

ADDITIONAL TOP COAT

In projects where additional stain protection is required, AQUASMART®-TC FLOOR PROTECT can be applied as an additional top coat over the final transparent coat of a flake system. This extra layer provides robust defense against tire marks and other potential contaminants, ensuring the longevity and aesthetic integrity of the flooring system. Its easy application and quick curing properties make it a practical solution for both new installations and refurbishments, offering long-lasting protection and a pristine finish.

AQUASMART®-TC FLOOR PROTECT	
CONSUMPTION	0.150 kg/m^2 per coat Total: 0,150-0,3 kg/m2 according to application type
APPLICATIONS METHODS	brush, roller, airless spraying
TACK FREE TIME, @ 77 °F (25°C) & 55% RH	The material is relatively fast drying
RECOAT TIME OF THE PRODUCT	Make sure first coat is completely dry before second coat is applied.
ADDITIVES	shelf water-based pigment pastes
COLORS	TRANSPARENT
COMPONENTS	TWO COMPONENT

AQUASMART®-TC FLOOR PROTECT is a high-performance, water-based, two-component aliphatic polyurethane topcoat designed for superior protection of epoxy

and polyurethane self-levelling floors and ALCHIMICA's waterproofing systems. Its unique formulation offers exceptional UV, chemical, water, and abrasion resistance, making it an ideal choice for a variety of applications, including industrial floors and car park surfaces. This product is particularly beneficial for enhancing stain resistance in areas exposed to oils and chemicals, such as from vehicle tires.

Incorporating AQUASMART®-TC FLOOR PROTECT into projects not only enhances durability but also simplifies maintenance. This top-coat's ability to resist stains from various substances, means that treated substate floors retain their appearance and functionality over time. Additionally, the product's excellent interlayer adhesion ensures a seamless integration with existing coatings, providing a uniform and resilient surface. Its ease of pigmentation allows for customization, enabling designers to match specific aesthetic requirements without compromising on performance. For areas subject to heavy use and potential staining, the application of AQUASMART®-TC FLOOR PROTECT as an additional top layer over a flake system is a proactive measure to maintain the floor's pristine condition, ultimately extending the lifespan of the flooring system and reducing long-term maintenance costs.

Mixing: Use a low speed (300 rpm) mixer. Add second component and continue mixing for a few minutes.
Application: Apply with roller or spray. Make sure not to disturb applied material with excessive rolling as roll marks may appear. The material is relatively fast drying and therefore any additional rolling after first application will cause surface defects to appear. Make sure first coat is completely dry before second coat is applied.

CLEANING

Clean tools and equipment first with paper towels. Tools and equipment should be cleaned immediately using SOLVENT-01 (or water for water-based materials). Rollers will not be re-usable.

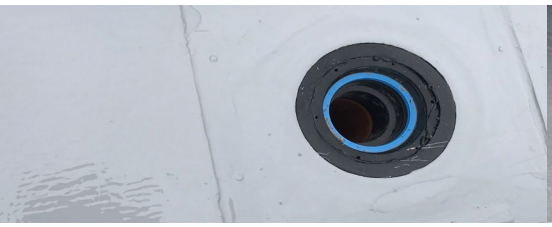
REPAIR AND OVERLAPS PROCESSES

LOCAL REPAIRS

One of the benefits of ALCHIMICA's liquid applied waterproofing systems is the ease of reparations to be carried out when spot problems occur. Nevertheless, it is always recommended to protect the membrane by ensuring that there are no foreign objects, sharp and heavy ones mostly, that they could fall and damage the membrane, to the best possible extent.

In cases where the membrane repair is caused by an accident or assembly procedures that are not covered by the installation, the following procedures must be followed:

- Grind the affected areas or remove the affected area and/or damaged surface by cutting.
- Sanding this area for overlapping, extending it about 20-30 cm around the perimeter.
- Clean the surface around the slit at a perimeter of 20-30cm depending on the repair length. Clean up thoroughly and remove all contaminants from the elements, such as dust or chippings, by mopping and/or vacuuming.
- If necessary, solvent wipe the area with a SOLVENT-01. Allow it to dry completely. The surface must be completely dry before the next steps.
- Apply a thin layer of primer at a consumption of 50-60gr/m² by overlapping the membrane at the prementioned perimeter.
- Fill the area by using HYPERSEAL®-EXPERT- 150, tool it to form a smooth patch, and the next day apply the same coat and topcoat that was applied to the rest of the membrane waterproofing system (if one was used) in order to ensure long term UV protection of the patch.
- In severe situations, the coating may have to be totally removed prior to system re-application.



OVERLAPS

In cases where the recoat time (24-48 hours) has been exceeded, the waiting time between jobs has been extended, or unexpected weather conditions (rain) have stopped the application, proceed as follows:

The HYPERDESMO® SURFACE should be clean and free of loose particles and dust. If it rains after the first main coat application, you may need to solvent wipe the area and apply one thin coat of primer again.

- OPTION 1: clean the area and apply primer MICROSEALER-50 at the consumption of 50-80gr/m^2 in order to secure adhesion. After 6-12h you can apply the next coat of HYPERDESMO®.
- OPTION 2: solvent wipe the whole area with SOLVENT-01, let it dry, and then apply AQUASMART-DUR primer at 50-80gr/m^2 in order to secure adhesion. After 3-6h you can apply the next coat of HYPERDESMO®.

REFERENCES

ALCHIMICA throughout the years, has a collection of completed projects from around the world. On our website, you can find where we have provided a variety of solutions and expert know-how, in case studies ranging from the smallest roof to the largest project. www.alchimica.com

ALL OVER THE WORLD

HEALTH AND SAFETY

The system proposal contains volatile flammable solvents. Apply in well-ventilated, no-smoking areas, away from naked flames. In closed spaces use ventilators and carbon-active masks. Keep in mind that solvents are heavier than air, so they float near the floor. The MSDS (Material Safety Data Sheet) of the products are available on request.

This handling safety advice is required for the implementation procedure as well as in the pre- and post-exposure to the loading machinery.

- Protect your lungs by using an air-purifying respirator when handling or spraying.
- Use rubber gloves to protect your skin and remove them promptly after contamination. Wear clean undergarments. After work and before eating, drinking, or smoking, thoroughly wash your hands with soap and water.
- Wear safety goggles to protect your eyes and face from splashes and airborne particles.
- Waste generation should be avoided or reduced.
- Incinerate under well-controlled conditions in line with local and national rules and regulations.
- Re-occupancy of the work site without respiratory equipment is limited to 24 hours if proper ventilation for the sprayed area is provided.
- Contractors and applicators must follow all applicable and necessary storage and safety regulations.
- In any case, review the system's material and safety data sheets.

PRECAUTIONS AND VARIATIONS.

The purchaser must determine the suitability of the products for the intended use and assume all related liabilities and risks. This information, recommendations, and any additional technical advice are given in good faith and are based on ALCHIMICA's present knowledge and experience of the products when properly stored, handled, and applied under normal conditions according to ALCHIMICA's recommendations.

However, ALCHIMICA assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third-party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. ALCHIMICA reserves the right to change at any time the properties of its products. The purchaser of the product(s) must test the product(s) suitability for the intended application and purpose before proceeding with a full application of the product(s).

The performance of the products build up described herein should be verified by testing and carried out by qualified experts.

NOTE: This method statement is offered by ALCHIMICA as a 'summary proposal' for **DECORATIVE FLAKE SYSTEMS.** For projects' particularities and more precise technical support, please contact ALCHIMICA at: alchimica@alchimica.com

Please consult the above-referred products' technical data sheets (TDS) and safety data sheets (SDS). Under any circumstances, ALCHIMICA does not assume any responsibility for the performance of the waterproofing system given the conceptual flaws of the existing build-up. Imperative for the performance of the system is the correct cleaning, inspection, and maintenance of the waterproofing system. For projects' particularities and more precise technical support, please contact ALCHIMICA at: alchimica@alchimica.com

Where alternative systems are to be used, these must be submitted to ALCHIMICA for approval. ALCHIMICA will not accept responsibility or liability for variations to the above under any other condition.

LEGAL NOTES AND CITATION

- This is a technical document, without legal value.

- No liability or warranty of product performance is created by this document.
- All the information included is collected from materials TDS, DoP, and certificates available at the moment of publishing.
- ALCHIMICA S.A. does not guarantee the accuracy of its instructions or specifications, nor do we assume any responsibility for damages resulting from the use or reference of the information provided. The company reserves the right to change the properties of its products at any time, and the current version of the technical data sheet is available on the website www.alchimica.com/en
- Appropriate Technical Documentation and/or Specific Technical Documentation: The performance of the products identified in the DoP files conform with the set of declared performances. This declaration of performance is issued in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer.
- It is recommended to check the TDS and MSDS of all the materials before use and application.

- The use of these materials and products is beyond the scope and control of ALCHIMICA.
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