

Single Component 100% Acrylic Elastomeric Waterproofing

The **Guardian ELASTOSHIELD** system comprises a single component water based, high solids, 100% acrylic copolymer waterproof membrane coating applied over a range of primers dependent on the substrate type. **Guardian ELASTOSHIELD** is a crack accommodating coating containing additives to inhibit the growth of mould and resist bacterial growth and resists aggressive elements.

Complies to EN1504 Part 9 and EN1504 Part 2.

Principle 1 : Protection against Ingress (PI).

Method 1.3 – Surface coating.

Method 1.8 – Application of membranes.

Principle 2 : Moisture Control (MC).

Method 2.3 – Surface coating.

Principle 8 – Increasing Resistivity (IR).

Method 8.3 – Overlays or coatings.

USES & ADVANTAGES

Use as a decorative, waterproofing membrane to most types of building facades, walls, roofs and gutters after the recommended primer/sealer application. **Guardian ELASTOSHIELD** has approval for the safe encapsulation of asbestos and for use in “wet areas” such as bathrooms. It provides a protective waterproofing skin over polyurethane foam, protecting the PU foam from UV and weather attack. On roofs and balconies, **Guardian ELASTOSHIELD** provides a durable, non skid, waterproof finish which will accept regular foot traffic. When applied as a multi-layer system incorporating reinforcement fabric, **Guardian ELASTOSHIELD** is also suitable for waterproofing concrete decks subject to light vehicular traffic.

Guardian ELASTOSHIELD is suitable for application to many common substrates including concrete, fibrous cement products, metals, timber and bituminous membranes. Some special priming may be required.

Advantages include:-

- Proven track record over 30 years.
- Safe to use, water based acrylic formulation.
- Easy water cleanup.
- One component - readily applied direct from pail.
- Excellent resistance to UV, weathering and CO₂.
- Excellent build properties enable application to both horizontal and vertical surfaces. Lightweight no topping required.
- Can be applied to a wide range of substrates.
- Various colours available. Colour fast.
- Highly flexible - accommodates movement and minor cracking of substrates.
- No solvents or fire hazard. No pungent smell.
- Acoustic dampening properties.
- Excellent long term durability.
- Fast application.
- High solids & resin content.
- Remains flexible through use of high grade 100% elastomer acrylic polymers.
- Low maintenance costs.
- Reduced energy cost due to heat reflectivity.
- Resistant to foot traffic.
- Excellent dirt releasing ability.
- No need to remove existing system in maintenance situation e.g. existing sheet membrane, therefore reduces programme time, noise, dirt, debris etc.

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PROPERTIES

Colour:	4 standard colours plus special colours made to order.	
Volume solids:	45%	ASTM D2697
Specific Gravity:	Approx. 1.26 Physical or Chemical	
Change:	Dries through loss of water.	
Drying Tack free:	40 minutes (30°C, 50% RH)	
Recoat:	2 hours	
Fully dried:	7 days	
Application temp:	5 - 40°C	
Hardness:	55-65 shore A	ASTM D2240
Elongation:	>500 %	ASTM D412
Permeance:	1.95 metric perm @ 500 microns	ASTM E96
Bond Strength:	Exceeds cohesive strength of coating	
UV Resistance:	No effect after 5,000 hours	
Tear Resistance:	>21 kN/mm	ASTM D624
Accelerated Weathering:	No cracking.	
Carbon dioxide diffusion resistance:	(Klopfer criterion R >50 m) – R = 266 m	
Water vapour diffusion resistance:	(Klopfer criterion SD <4 m) - SD = 1.65 m	
Water permeability:	Highest resistance to water penetration (Class E ASTM E514-7A)	
Chemical resistance:	Unaffected by a range of mild acids, alkalis, and is resistant to bio deterioration. Guardian should be consulted in respect of other chemicals.	

HEAT REFLECTANCE

White **Guardian ELASTOSHIELD** offers 80% reflection of solar energy providing the following advantages:-

- Minimises surface temperature gain.
- Prevents roof degradation of existing substrate.
- Minimises expansion/contraction experienced with temperature changes extending the life of the roofing system.
- Decreases energy consumption.

APPLICATION INSTRUCTIONS

Due to the wide range of applications for which **Guardian ELASTOSHIELD** is suitable, several system brochures have been produced to explain specific surface preparation and application details for each type of application. These system brochures are available from Guardian.

- **System 1:** General facade waterproofing including: walls, brick, masonry render, block work and concrete.
- **System 2:** Waterproofing and refurbishment of corrugated roof materials including: fibrous cement, steel and aluminum.
- **System 3:** Waterproofing of concrete roofs, masonry tiles and concrete decks.
- **System 4:** Waterproofing of wet areas including: showers, laundries and bathroom floors.

Guardian will provide application advice for maintenance when applying **Guardian ELASTOSHIELD** over existing systems such as sheet membranes, or built up roofs

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SURFACE PREPARATION & PRIMING

Surfaces shall be sound, clean, dry and free from oil or grease. Moisture shall not be escaping from the substrate.

If moisture is escaping seal with 2 coats of **Floorgard Moisture Barrier**.

- **Concrete & masonry surfaces**
Floorgard Moisture Barrier, Guardian ELASTOSHIELD Clear Sealer.
- **Steel, aluminum, galvanised steel & zinc**
Guardian ELASTOSHIELD Primer 2
- **Bituminous or asphalt surfaces**
Consult Guardian
- **Timber**
Guardian ELASTOSHIELD Acrylic Sealer.
- **Previously coated substrates**
Guardian ELASTOSHIELD Clear Sealer
- **Sound, previously coated or primed surfaces**
The old surface should be thoroughly scrubbed with detergent and water, then sanded or wire brushed to ensure mechanical adhesion. Seal with **Elasto Coat Clear Sealer**.
- **Crumbling walls**
The application of **Guardian ELASTOSHIELD** will prevent the erosion of weak, crumbling walls and will readily bridge hairline cracks.
- **Overcoating old Guardian ELASTOSHIELD**
Clean the surface, then apply a single coat of **Elasto Coat Clear Sealer** and allow to dry for one to two hours.
- **Expanded plastics, polystyrene and polyurethane foam etc.**
Apply 2 coats of **Guardian ELASTOSHIELD** directly over clean surfaces.
- **The treatment of joints liable to movement**
These must be bridged with **Elastoclothe** reinforcement.

The reinforcement should be laid and stippled flat on the 1st coat of wet **Guardian ELASTOSHIELD** and allowed to dry. **Elastoclothe** consumes upto 30% more material and the 1st coat shall be applied at coverage of 2.13 m²/litre/coat. It should then be covered with a thin layer of **Guardian ELASTOSHIELD** with a generous overlay on each side of the mesh and allowed to dry.

This followed by a minimum of 2 coats of **Guardian ELASTOSHIELD** over the entire surface, at coverage of 2.13 m²/litre/coat.

Mould infested surfaces

Scrape or clean thoroughly; all finishes lifting or badly infested should be removed. Wash down with a water soluble fungicide or one part of domestic bleach to eight parts of water and then rinse off residues. Make good any defects and allow walls and repairs to completely dry.

Notes : All sealer/primer applications to be allowed to dry prior to the application of the first coat of **Guardian ELASTOSHIELD**.

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APPLICATION

Prior to applying **Guardian ELASTOSHIELD** to the roof surface all detailing work must be completed on seams, splits, protrusions, fixings, drains, flashings, fasteners etc.

The detailing shall be completed using **Guardian PS** or **Elastocloth** reinforcement embedded in **Guardian ELASTOSHIELD**. Primers shall have been applied and dried. **Guardian ELASTOSHIELD** shall be extended up & over pipes, parapets, vents & fixings to finish at least 10 cm. above the substrate. The coating should be extended under flashings.

Coats of **Guardian ELASTOSHIELD** shall be installed in a direction perpendicular to the last one except if coating metal roof panels.

Surfaces shall be uniformly coated & free from voids, blisters or pin holes. Before recoating previous coats must have adequately cured. Several hours are required to achieve resistance to rain or dew. Long term resistance will take longer depending on weather conditions, resistance to ponding shall require 24-48 hours.

All dirt, dust or pollution that falls on the coating between coats shall be removed before applying the next coat. Film thickness may be checked with a wet film gauge.

In high temperatures **Guardian ELASTOSHIELD** in opened containers may skin over, remove the skin before mixing. To prevent skinning cover the container with plastic.

Diluting **Guardian ELASTOSHIELD** with water is not recommended as its properties will be effected. Do not leave **Guardian ELASTOSHIELD** in equipment, purge with water. Spraying material with temperatures below 15°C will become more difficult due to its cohesive nature.

Spraying by airless spray is preferred over flat surfaces, a heavy to medium nap roller can be used and brush or roller for touch up or detail work.

The application using brush or roller requires laying the material onto the surface, @2.8 m²/litre/coat, to achieve the 150 microns dry film thickness per coat. A minimum of two coats are required on vertical surfaces to achieve a total dry film thickness of approximately 300 microns. On horizontal surfaces a minimum of three coats are required to achieve a total d.f.t. of approximately 450 microns.

REINFORCEMENT & ROOF DECKS

Polyester fabric or mesh can be incorporated into the **Guardian ELASTOSHIELD** film to reinforce the membrane.

Reinforcement is recommended for various applications, cracked concrete decks, old sheeted and bitumen membranes and trafficable areas. Apply 1st coat of **Guardian ELASTOSHIELD** @2.13 m²/litr/coat. Once the reinforcement is embedded into the **Guardian ELASTOSHIELD** 1st coat and dry, apply a minimum of 500 microns D.F.T. of **Guardian ELASTOSHIELD** over these areas in additional 2 coats.

On roof decks, balconies etc., **Guardian ELASTOSHIELD** is reinforced with polyester fabric or mesh embedded into the first coat of **Guardian ELASTOSHIELD** @2.13 m²/litre/coat whilst wet. Apply a further coat ensuring there are no bubbles or wrinkles in the reinforcement to completely saturate the reinforcement. Apply an additional 2 coats of **Guardian ELASTOSHIELD** to achieve a total d.f.t. of approximately 1000 microns (1 mm).

The product will be touch dry in approximately 40 minutes and may be overcoated after 2 hours drying under normal conditions. This can be assessed at the time of application and is influenced by ambient temperature, humidity, airflow and type of surface treated.

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GENERAL INFORMATION

Fabric Reinforcement

Fabric reinforcement is required on roofs that have a large amount of cracks, splits, seams, joints etc. These may be individually addressed using **Guardian PS** and **Elastoclothe** if the numbers are limited.

Ponding

Ponding should be avoided on roofs, and good slopes to drains provided, however, **Guardian ELASTOSHIELD** withstands minor ponding found on many roofs.

Product Life

The life of **Guardian ELASTOSHIELD** depends on initial applied thickness, UV levels, temperatures, abrasion, foot traffic, rain, ponding & wind. **Guardian ELASTOSHIELD** will typically wear at a low rate of 10-15 microns per year.

The thickness of **Guardian ELASTOSHIELD** is related to the required life and anticipated crack widths. The thicker the coating the longer the life and greater the crack bridging capacity.

Typically the coating is installed to last 5-10 years before recoating. It is recommended that the base coat shall be light grey before applying the white top coat as the top coat wears the base coat will eventually show through.

Recoating

Before recoating **Guardian ELASTOSHIELD** shall be cleaned with water & detergent, high pressure washed off & all necessary repairs made.

Old Systems

Guardian ELASTOSHIELD can be applied over built up & modified bitumen roofs, cracked and deteriorated concrete roofs, steel roofs and single ply membranes such as EPDM, Hypalon, PVC, Neoprene etc. Ensure moisture movement is sealed off.

CLEANING

Tools and equipment should be cleaned with water immediately after use.

APPROXIMATE COVERAGE RATES

Guardian ELASTOSHIELD:	2.8 m ² /litre per coat*
Guardian ELASTOSHIELD: (with Elastoclothe reinforcement)	2.13 m ² /litre per coat
Elasto Coat Clear Sealer:	7 m ² /litre per coat
Floorgard Moisture Barrier:	3 m ² /litre per coat
Guardian ELASTOSHIELD Acrylic Sealer:	12 m ² /litre per coat

The coverage figures are theoretical - due to wastage factors and the variety and nature of possible substrates, practical coverage figures may be substantially reduced.

For profiled steel roofs multiplication factors of 1.2-1.3 are normally required.

* 150 microns dry film thickness.

MAINTENANCE

There are no special requirements for maintenance, any damage identified during normal inspections should be repaired or material replaced as appropriate. Regular maintenance should be carried out & the roof cleaned at least once a year to prevent buildup of dirt, leaves, chemicals, bird dropping & other contaminations that may adversely effect the coating.

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SPECIFICATION CLAUSES

Waterproofing membrane for concrete roof slabs and deckings.

Prior to applying **Guardian ELASTOSHIELD** on flat concrete roof slabs and decking areas initially prepare and prime the substrate in accordance with manufacturer's surface preparation details.

Over the prepared area, apply one coat of **Guardian ELASTOSHIELD** @2.13 m²/litre/coat and while still wet embed polyester reinforced fabric or mesh overlapping edges and ends by a minimum of 50 mm. Ensure that all bubbles and wrinkles in the reinforcement are removed prior to further over-coating.

Apply additional coats of **Guardian ELASTOSHIELD** (min. 2 coats) to provide an additional dry film thickness of approximately 500 microns over the reinforced area. Allow between 2 and 4 hours between coats.

Application shall be by airless spray or roller.

*Note : the total thickness of the system should be approx. 1 mm. requiring at least 1.4 litre of **Guardian ELASTOSHIELD**/m² over the reinforced completed system.*

Decorative waterproofing facade coating.

The decorative waterproofing coating shall comprise a suitable primer system overcoated with **Guardian ELASTOSHIELD**, a single component elastomeric coating suitable for application by brush, roller or spray. The total dry film thickness of the coating shall be not less than 350 microns and shall be capable of providing carbon dioxide diffusion resistance equivalent to not less than 50 metres of air. It must exhibit a water vapour transmission resistance S D not more than 1.65 metres (Klopfer criterion) and achieve a Class E water permeability when tested to ASTM E514-74.

Waterproofing membrane system for bathroom and wet areas.

Prior to applying **Guardian ELASTOSHIELD** in wet areas prepare and prime the substrate in accordance with manufacturer's surface preparation details.

Once this has been completed, a fillet of **Guardian PS** polyurethane joint sealant should be applied at the junction of the wall and floor (perimeter seal).

A base coat of **Guardian ELASTOSHIELD** should be layer and a layer of polyester reinforcing fabric or mesh placed over all joints and where the walls and floor meet. Where subject to flooding reinforcement should be used over the entire area. Apply multiple coats of **Guardian ELASTOSHIELD** to achieve a dry film thickness of at least 500 microns.

LIMITATIONS

Guardian ELASTOSHIELD should be applied to sound substrates either new or old. Unsound surfaces must be repaired or removed. Cracks must be detailed.

Guardian ELASTOSHIELD should not be applied over surfaces containing moisture, insulation that is saturated should be replaced. Existing waterproofing systems left in place must be sealed to avoid moisture movement. To avoid potential bubbling of the system concrete containing moisture should be treated with 2 coats of **Floorgard Moisture Barrier** to a minimum d.f.t. of 300 microns. The concrete's moisture content should be < 4%. All detailing must be attended to prior to the application of **Guardian ELASTOSHIELD**, it is not designed to bridge expansion joints, and will only crack bridge if applied at the correct coverage rates to accommodate the crack size. **Guardian ELASTOSHIELD** is not manufactured to seal structural cracks.

Reinforce when subject to light traffic.

Extreme ambient or surface heat temperatures will have a detrimental effect on **Guardian ELASTOSHIELD** during installation.

Under high temperatures work should be performed early in the morning, late in the day or in shaded sections.

Application under direct sunlight during the heat of the day should be avoided.

Do not use as a vapour barrier coating or over cold storage tanks. Do not apply to uncured concrete or while rain threatens, or at temperatures below or which may fall below 10°C during the drying period.

Guardian ELASTOSHIELD is not recommended for surfaces subjected to hydrostatic pressure. Protect from rainfall whilst curing.

Guardian ELASTOSHIELD should only be tiled over after drying for 7 days. For applications where faster turnaround is required, consult Guardian.

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WARRANTIES

Guardian ELASTOSHIELD warranties are available for five, ten or fifteen year periods. The warranties guarantee the performance of the material against leaks caused by normal weathering. Refer to the individual warranty documents for additional information.

PACKAGING

Guardian ELASTOSHIELD Acrylic Sealer: 20 litre pails
Elasto Coat Clear Sealer: 20 litre pails
Guardian ELASTOSHIELD Primer 2: 20 litre pails
Floorgard Moisture Barrier: 20 litre set

STORAGE & SHELF LIFE

All products have a shelf life of 12 months if kept in a dry store.

Storage conditions:

Store in dry conditions at temperatures between 5°C and 30°C in the original, unopened containers. If stored at high temperatures, the shelf life may be reduced.

Fire:

Guardian ELASTOSHIELD Clear Sealer is flammable. Keep away from sources of ignition. No smoking. In the event of fire, extinguish with CO₂ or foam. Do not use a water jet.

HEALTH & SAFETY

Guardian ELASTOSHIELD Primer 2 is acidic and appropriate eye and skin protection must be taken to avoid contact.

Guardian ELASTOSHIELD is non-flammable and is classified as nonhazardous, however, all manufactured products should be handled with care. If swallowed, do NOT induce vomiting, give a glass of water. If in eyes, hold eyes open, flush with water for at least 15 minutes. If skin contact occurs, remove contaminated clothing and wash skin thoroughly. Do not use solvents on skin. If poisoning occurs, contact a doctor or Poisons Information Centre.

TECHNICAL SERVICE

Guardian offers a comprehensive range of high performance, high quality products suitable for use within all aspects of the concrete repair and protection industry. In addition, the company offers a technical support package to specifiers, end users and contractors, as well as on-site assistance. The Guardian Coating Service Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

QUALITY ASSURANCE

ISO 9001: 2015 verified by TUV Nord.

DISCLAIMER

Performance data is achieved testing in accordance with International Standards. Testing by others may result in different results from those published as a result of external factors such as poor sampling, incorrect mixing, varying temperatures, curing, crushing procedures etc.

Guardian does not take responsibility nor need to defend others testing that does not achieve the published data.

The user must test the products suitability for the intended application and purpose. Guardian reserves the right to change the properties of the product.

Site conditions and differences in materials are such that no warranty or fitness for a particular purpose, nor liability can be inferred from the published data sheet, written recommendations or from other advice offered.

All statements and data presented herein are given in good faith and believed to be appropriate and reliable. It is given without express or implied warrant or guarantee. Potential users of Guardian's materials are urged to conduct confirmatory trials to satisfy themselves as to the suitability of the selected product for their particular end use prior to purchase.