ELASTOLIQUID PUR
ELASTOLIQUID PUR AUTOESTINGUENTE

ELASTOMERIC WATERPROOFING WATER-BASED COATINGS FOR RENDERING ASBESTOS CEMENT SHEETS HARMLESS AND FOR PROTECTING POLYURETHANE FOAM AND CONCRETE

GRANTS *LEED* CREDITS

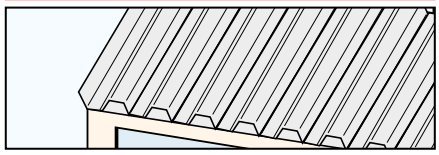
CHARACTERISTICS			ENVIRONMENTAL	METHOD OF USE				PRECAUTIONS
A	H_2O							
ONE-COMPONENT	WATER BASED	WATERPROOFING	ECO GREEN	MIX MECHANICALLY	SPRAY APPLICATION	APPLY BY BRUSH	APPLY BY ROLLER	

PROBLEM

COVERING ASBESTOS CEMENT SHEETS FOR ENCAPSULATION AND OVER-ROOFING

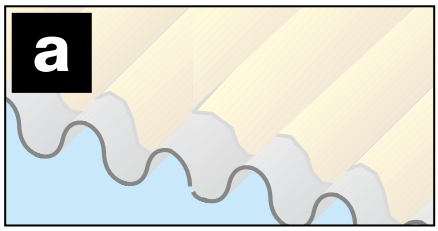
That of rendering asbestos cement roof sheeting harmless is becoming an increasingly important matter, with regard to safeguarding the environment, in view of the hazards caused by the continuous dispersion of the asbestos fibres in the air. One of the reclamation methods approved by the Ministerial Decree dated 6th September 1994, Law no. 257/92, is that of encapsulating the sheets. To bring asbestos fibre emission levels on roofing down to legal limits, the brittle surface has to be encapsulated, in compliance with the applicable laws, by applying suitable penetrating and covering products and without resorting, in certain cases, to actually cleaning the soiled surface beforehand using high-pressure water cleaners.

WATERPROOFING ROOFING IN DETERIORATED CORRUGATED SHEETS OR IN ALUMINUM IN GENERAL



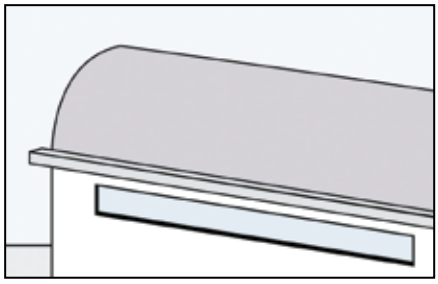
Waterproofing deteriorated, corrugated sheet metal roofing with the aim of restoring its water tight properties as demolition would not be economically advantageous.

PROTECTING POLYURETHANE FOAMS FROM THE DEGRADING EFFECTS OF UV RAYS



In work performed on roofs using sprayed polyurethane, it is necessary to apply an elastomeric coating, to protect the foam from the degrading action of UV rays and weathering.

WATERPROOFING COMPLEX-SHAPED CONCRETE SURFACES



Waterproofing and decorating complex-shaped concrete structures where the use of rolls of prefabricated polymer-bitumen membrane is difficult and where the presence of heat and naked flames increases the risk of fire.

SOLUTION

ELASTOLIQUID PUR is a ready-to-use, elastomeric waterproofing liquid coating, with an acrylic-polymer base. **ELASTOLIQUID PUR AUTOESTINGUENTE** is formulated with fire retardant components that reduce fire hazards in the event of burning embers falling on the roof. Operating temperature down to -25°C.

ACCORDING TO EUROPEAN NORMS
EN 1504-2
CONCRETE SURFACES PROTECTION

C
PI-MC-IR
PROTECTIVE COATING

APPLICATION FIELDS

ing poorly-bonded asbestos fibres, on asbestos cement sheets on the exterior and interior roof surfaces and for preliminary encapsulation work in over-roofing jobs with ISOLONDULA.
ELASTOLIQUID PUR is an ideal product for protecting polyurethane foams from the degrading effects of UV rays.
ELASTOLIQUID PUR is used to protect and waterproof concrete structures with complex-

(See following)

ADVANTAGES

- **It protects concrete from carbonation and aggressive air components.**
- **Excellent resistance to ultraviolet rays.**
- **In liquid form the product is non-flammable and non-toxic.**
- **It eliminates the problems of micro-cracking.**
- **It maintains elasticity at low temperatures.**
- **It effectively encapsulates poorly-bonded asbestos fibres on asbestos cement sheets.**

ELASTOLIQUID PUR

Certificate of conformity "Istituto Giordano"
Technical and scientific suitability for rendering items in "A", "B" and "C" type asbestos cement, harmless in the cycle with PREFIX.

Certificate of conformity "GFC Chimica"
Technical and scientific suitability for rendering items in "A" type asbestos cement, harmless in the cycle with PREFIX ECO.

ELASTOLIQUID PUR AUTOESTINGUENTE

Certificate of conformity "Istituto Giordano"
Technical and scientific suitability as an encapsulating product for the treatment of asbestos cement sheets in combination with the sprayed polyurethane foams, in type "A".

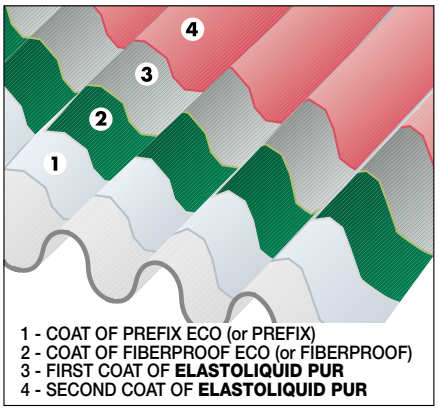
NO COST OF DISPOSAL

METHOD OF USE

RENDERING ASBESTOS CEMENT ROOFING HARMLESS

SOLUTION ENCAPSULATING THE UPPER FACE (EXTRADOS)

RENDERING TYPE "A" ASBESTOS-CEMENT SHEETS HARMLESS THROUGH ENCAPSULATION



1 - COAT OF PREFIX ECO (or PREFIX)
2 - COAT OF FIBERPROOF ECO (or FIBERPROOF)
3 - FIRST COAT OF **ELASTOLIQUID PUR**
4 - SECOND COAT OF **ELASTOLIQUID PUR**

Preparing the asbestos cement sheets
Any dirt, moss and loose asbestos fibres should be removed completely using suitable cleaning equipment with special technical solutions to avoid the dispersion of the water mist containing the loose asbestos fibres in the air. In some cases, after testing the consistency of the surface and carrying out sample tests on site, you can apply the encapsulating material without having to totally clean the sheets. The asbestos cement sheet surface must be perfectly dry before applying subsequent coats of penetrating or coating encapsulating products.

Applying the encapsulating system
To make a roof harmless and to reduce the emission of asbestos fibre to within lawful limits, the brittle surface of the asbestos cement sheets has to be encapsulated with suitable penetrating and coating products, in compliance with the regulation approved by the Decree of the Ministry of Health dated 20th August 1999, related to the legal extension of Law no. 257 dated 27th March 1992, with the following methods of application.

Application of a first penetrating and consolidating coat of water-based primer PREFIX ECO (or solvent-based PREFIX) with a yield of approximately 200-250 g/m^2.

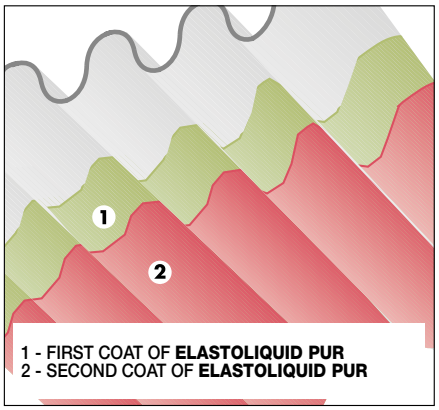
Application of a second penetrating and consolidating coat of water-based primer FIBERPROOF ECO (or solvent-based FIBERPROOF) with a yield of approximately 250 g/m^2.

Application of two coats of the water-based waterproof elastomeric coating ELASTOLIQUID PUR in two different and contrasting colours with a yield of approximately 450 g/m^2 per coat in order to obtain a minimum total thickness of 300 µm. The encapsulating product must pass the performance requirements established by standard UNI 10686 for **type "A".**

ADVANTAGES OF THE SYSTEM
- Simple and economic application.
- It does not require roofing replacement.
- It does not make the roofing heavier.
- No waste containing asbestos is produced

SOLUTION ENCAPSULATING THE LOWER FACE (INTRADOS)

RENDERING TYPE "B" ASBESTOS-CEMENT SHEETS HARMLESS THROUGH ENCAPSULATION



1 - FIRST COAT OF **ELASTOLIQUID PUR**
2 - SECOND COAT OF **ELASTOLIQUID PUR**

Preparing the asbestos cement sheets
Any dirt, moss and loose asbestos fibres should be removed completely using suitable cleaning equipment with special technical solutions to avoid dispersions of fibre in the air in indoor environments.
The asbestos cement sheet surface must be perfectly dry before applying subsequent coats of penetrating or coating encapsulating products.

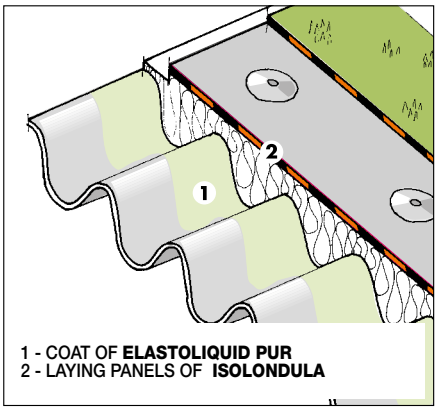
Applying the encapsulating system
To waterproof and to reduce the emission of asbestos fibres on the intrados of the roofing to within lawful limits, the brittle surface of the asbestos cement sheets has to be encapsulated with suitable coating products, in compliance with the regulation approved by the Decree dated 20th August 1999, with the following methods of application.

Application of two coats of the water-based waterproof elastomeric coating ELASTOLIQUID PUR in two different and contrasting colours with a yield of approximately 750 g/m^2 in order to obtain a minimum thickness of 250 µm. The encapsulating product must pass the performance requirements established by standard UNI10686 for **type "B".**

ADVANTAGES OF THE SYSTEM
- Simple and economic application.
- It does not require roofing replacement.
- It does not make the roofing heavier.
- No waste containing asbestos is produced

SOLUTION OVER-ROOFING

RENDERING TYPE "C" ASBESTOS-CEMENT SHEETS HARMLESS THROUGH OVER-ROOFING



1 - COAT OF **ELASTOLIQUID PUR**
2 - LAYING PANELS OF **ISOLONDULA**

Preparing the asbestos cement sheets
If there are any loose asbestos fibres on the surface of the asbestos cement sheets, they should be removed before applying the encapsulating treatment, using a specific vacuum cleaning device that prevents dispersions of fibres in the air.

Applying the encapsulating system
To waterproof and to reduce the emission of asbestos fibres on the intrados of the roofing to within lawful limits, the brittle surface of the asbestos cement sheets has to be encapsulated with suitable coating products, in compliance with the regulation approved by the Decree dated 20th August 1999, with the following methods of application.

Application of a coat of the water-based waterproof elastomeric coloured coating ELASTOLIQUID PUR with a yield of approximately 500 g/m^2 in order to obtain a minimum thickness of 200 µm.

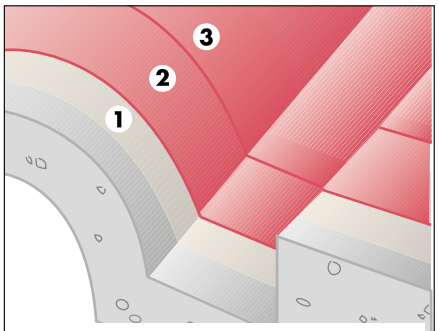
The encapsulating product shall pass the performance requirements established by standard UNI 10686 for **type "C".**

ADVANTAGES OF THE SYSTEM
- It does not require roofing replacement.
- No waste containing asbestos is produced
- The roofing is insulated and waterproofed

METHOD OF USE

PROTECTION FOR CONCRETE

PROTECTING EXTERNAL CONCRETE SURFACES WITH EXPOSED FACE AND/OR COMPLEX CONFORMATION THROUGH WATERPROOFING WITH ELASTOLIQUID PUR



1 - COAT **OF BETON PRIMER S**
2 - FIRST COAT OF **ELASTOLIQUID PUR**
3 - SECOND COAT OF **ELASTOLIQUID PUR**

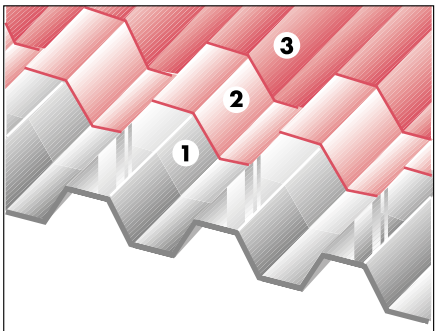
Surfaces subject to absorbing damp and problems of carbonation

Preparing the concrete surfaces
Clean the concrete surfaces, removing scale, grout, oil, release agents, brittle parts and dust, using a chisel, brush or high-pressure water cleaner. Remove nails and dowels, if there are any, and cut the spacing irons deep into the surface and chisel around them. Open and grout the different levels in the casts, the gravel nests and all the chiselled zones, using the RESISTO UNIFIX shrink-resistant mortar.
Any holes, cracks or other cavities shall be evened off with RESISTO UNIFIX mortar, likewise for any artificial slopes to drain rainfall water.

Applying the waterproof coating ELASTOLIQUID PUR
Apply a coat of diluted solvent-based primer BETON PRIMER S over the whole concrete surface to be waterproofed.
After 12 hours, apply one or more coats of the decorative water-based elastomeric coating ELASTOLIQUID PUR, using a roller or airless spray system; allow for a 24 hour drying time between subsequent coats so that the film underneath is completely dry before applying the next coat. It is important to apply the second coat crossed over the opposite direction of the first one.
The yield of waterproofing ELASTOLIQUID PUR will depend on the state of the surface and on how thick the waterproofing has to be. On average, for upright concrete surfaces, the yield will be approximately 1 kg/m^2. If reinforcement is required, using the polyester fabric RINFOTEX of 60 g/m^2, the yield will be greater and approximately 600-700 g/m^2.

PROTECTION FOR GALVANIZED STEEL SHEETING

PROTECTING RIBBED OR CORRUGATED METAL SHEET ROOFING, GUTTERS, VALLEY GUTTERS MADE OF GALVANISED STEEL OR ALUMINIUM, THROUGH WATERPROOFING WITH ELASTOLIQUID PUR



1 - COAT OF **PROTIFER**
2 - FIRST COAT OF **ELASTOLIQUID PUR**
3 - SECOND COAT OF **ELASTOLIQUID PUR**

Preparing the metal surfaces
The surfaces have to be perfectly clean, dry and free from oil and grease. Metal elements, such as ribbed or corrugated sheets, providing they are in an efficient state of preservation (very little rust), shall be degreased with solvent before painting them. Excessively corroded metal structures (widespread rusting) shall be cleaned thoroughly in advance by brushing them mechanically or manually to remove scale, rust and leftover paint from previous treatments. The whole rusted surface shall then be passivated using a rust converter PROTIFER.

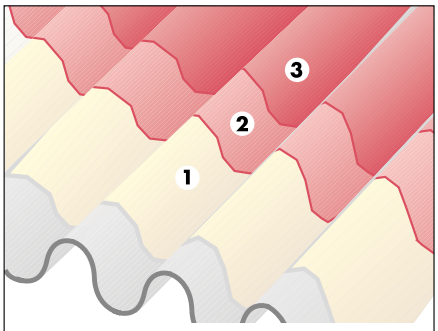
Applying the waterproof coating ELASTOLIQUID PUR
Apply two coats of elastic waterproof coating ELASTOLIQUID PUR, as is, using a brush, roller or spray gun, after mixing it with a mechanical mixing drill. The product will be applied in two coats. It is important to apply the second coat crossed over the opposite direction of the first one.
- The second finishing coat will be applied 24 hours after applying the first coat. To waterproof the metal structure, it takes a minimum yield of two coats of approximately 0.6÷0.8 kg/m^2 for a thickness of the dry film of roughly 230-250 µm. The mechanical strength of the points subject to greater strain or cracked surfaces will be improved by applying, (between one coat and the other of ELASTOLIQUID PUR), a special polyester fabric reinforcement, RINFOTEX of 60 g/m^2, in which case it takes a higher yield of approximately 600-700 g/m^2.

METHOD OF USE

PROTECTION FOR SPRAYED POLYURETHANE

SOLUTION ENCAPSULATING THE UPPER FACE (EXTRADOS)

RENDERING TYPE "A" ASBESTOS-CEMENT SHEETS HARMLESS THROUGH ENCAPSULATION



1 - SURFACE OF SPRAYED POLYURETHANE
2 - FIRST COAT OF **ELASTOLIQUID PUR AUTOEST.**
3 - SEC. COAT OF **ELASTOLIQUID PUR AUTOEST.**

Preparing the surface in polyurethane foam.
The surface to be painted must be dry, clean, solid and dust-free.

The polyurethane foam can be painted using an airless pump, in the interval between one hour and thirty-six hours from spraying the insulation layer; this interval will depend on the reaction time and type of polyurethane foam used.
- If the protective layer protects the**polyurethane foam (with thickness greater than 600 µm M.D. dated 26-06-1984)**, a waterproofing layer will be created on the sprayed polyurethane foam, applying two coats of liquid waterproofing ELASTOLIQUID PUR AUTOESTINGUENTE (FIRE RETARDANT) with a total yield of approximately 1.2 kg/m^2.
- If the protective layer protects the**polyurethane foam (with thickness lower than 600 µm M.D. dated 26-06-1984)**, a waterproofing layer will be created on the sprayed polyurethane foam, applying two coats of liquid waterproofing ELASTOLIQUID PUR with a total yield of approximately 1.2 kg/m^2.

The ELASTOLIQUID PUR AUTOESTINGUENTE, or ELASTOLIQUID PUR coating shall be applied without the presence of rain for at least 12 hours. Once the liquid waterproofing sheath has dried, it will form a strong and elastic film, thus creating a seamless coating, without pores and perfectly adherent to the polyurethane layer. The protective waterproof coating will be resistant to ultraviolet rays and industrial atmospheres and will protect the underlying polyurethane foam against environmental degradation.

ADVANTAGES OF THE SYSTEM
- It does not require roofing replacement.
- It does not make the roofing heavier.
- No waste containing asbestos is produced
- The roofing is thermally insulated.

TECHNICAL CHARACTERISTICS

	Standard	ELASTOLIQUID PUR	ELASTOLIQUID PUR AUTOESTINGUENTE
Appearance		Pasty liquid	Pasty liquid
Colour		White RAL 9010 Light grey RAL 7035 Dark grey RAL 7004 Red RAL 3009 Brown RAL 8016 Green RAL 6025	White RAL 9010 Dark grey RAL 7004
Density	**EN 2811-1**	1.43 ± 0.05 kg/L	1.45 ± 0.05 kg/L
Viscosità Brookfield		10 000 ÷ 20 000 cps	10 000 ÷ 20 000 cps
Dry residue - at 130°C		68 ± 2%	68 ± 2%
Storage in original packaging in a dry place, away from frost		12 months	12 months
Mix characteristics and workability			
Application thickness		0.6 mm (two coats)	0.6 mm (two coats)
Waiting time - for dust-free drying (*)		4 ÷ 6 hours	4 ÷ 6 hours
Waiting time - for applying each coat over the previous one (*)		24 hours	24 hours
Waiting time - for total dry (*)		2 ÷ 4 days	2 ÷ 4 days
Application temperature		+5°C to +35°C	+5°C to +35°C
Application		manual or spray	manual or spray
Performance characteristics	**Standard**	**Product performance**	**Product performace**
Class and type	**EN 1504-2**	**C PI-MC-IR**	**C PI-MC-IR**
Cold flexibility	**UNI 1109**	-25°C	-25°C
Permeability to acqueous vapour	**EN 7783**	Sd <5 m - class I	Sd <5 m - class I
Adherence test	**EN 1542**	≥0.8 MPa	≥0.8 MPa
Capillary water absorption	**EN 1062-3**	w < 0.01 $kg/m^2 \cdot h^{0.5}$	w < 0.01 $kg/m^2 \cdot h^{0.5}$
Permeability to CO_2	**EN 1062-6**	Sd >50 m	Sd >50 m
Ultimate elongation	**NFT 46002**	180 ÷ 270%	150 ÷ 250%
Ultimate tensile strength	**NFT 46002**	1.0 ÷ 2.0 MPa	1.0 ÷ 2.0 MPa
Thermal resistance - Operating temperature		-30°C to +90°C	-30°C to +90°C
Reaction to fire		–	Class 1 (¹)
Hazardous substances	**EN 1504-2**	According note in ZA.1	According note in ZA.1

Test conditions: temperature 23±2°C, 50±5% R.H. and air velocity in test area <0.2 m/s. **These data may change depending on specific site conditions: temperature, ventilation, moisture and substrate absorbency.**
(*) The times indicated will be longer or shorter as the temperature drops or rises.
Pursuant to European standard **EN 1504-2** - General principles for the use of products and systems.
(¹) Certification CSI.

(See previous)

shaped surfaces where it is not possible to use prefabricated membranes. It can also be used to protect corrugated sheet metal roofing, gutters and aluminium in general.

• PRECAUTIONS

- Keep the containers sealed before use.
- Apply at temperatures between +5°C and +35°C.
- The product is subject to freezing; store at temperatures above +5°C.
- Do not apply in very damp conditions or if there is the risk of rain while the film is still drying.
- Not suitable for foot traffic. The coating can be walked for periodic maintenance purposes only.
- New, just applied bituminous surfaces usually have superficial 'outcrops' of hydrocarbons, which make perfect adhesion of film a problem. We recommend you to paint the coverings only 6 months after laying - this period is usually sufficient to eliminate surface 'outcrops'. However, just waiting is not always enough. Therefore, we advise making an estimate, by empirical tests with adhesive tape, in order to evaluate the quantity of dirt and, if necessary, the adhesion of the paints (the tests are described in the booklet entitled "The waterproofing guide"). If the surface is dirty, clean by brushing and wash with water. Should it be laid on a new covering, the surface of the last layer must be slated.
- After use clean the tools with water and, if the product has dried, it is recommended to remove it with white spirit or hot water.

PACKAGING

ELASTOLIQUID PUR
1,000-kg tank
140-kg Drums
20-kg Pail
ELASTOLIQUID PUR AUTOESTINGUENTE
20-kg Pail

index Construction Systems and Products
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