

DESCRIPTION

Single-component liquid waterproofing composition, after polymerization gives an elastomeric, cold-applied polyurethane membrane. The membrane cures in a continuous and elastic form, as a totally adhered layer. This waterproofing layer guarantees total water tightness and withstands building movements.

RANGE OF APPLICATION

It can be applied over many different types of surfaces (made of concrete, mortar, brick, fibre cement, ceramic tiles, bitumen, steel, zing, aluminum...) such as:

- Balconies, terraces...
- Baths (showers), kitchens and difficult access spots.
- Flooring with light pedestrian traffic.
- Stairs, stadiums, stands...

ADVANTAGES OF THE SYSTEM

Elastic and seamless coating, weather resistant and excellent bonding. Usually no reinforcements are required except for critical points (e.g. sharp edges...).

TECHNICAL DATA

	INFORMATION ON THE PRODUCT BEFORE APPLICATION	
Chemical description	Solvent based single-component aromatic polyurethane	
Physical state	Liquid	
Packaging	Metalic cans: 5/10/25 kg	
Non volatile content	85 %	
Flash point	45 °C (ASTM D 93)	
Colours available	Request available colours	
Density	1,3 g/cm ³ (20 °C)	
Viscosity (Brookfield)	Temperature (°C)	Viscosity (mPa.s)
	10	20.000 – 30.000
	20	6.000 – 10.000
	30	1.000 – 1.500
VOC (g/L i %) VOC class as per 2004/42/EC	VOC content: 184 g/l Product subclass: II Solvent based single-component performance products Limit from 01/01/2010: 500 g/l	
Pot life	4 to 6 hours (1 kg, 20 °C, 50% hr)	
Storage	Store at a temperature below 30 °C, away from ignition sources and moisture Product may be used up to 12 months after being manufactured, in its sealed, original container. (Note: this time is reduced to 9 months if pigmented white or black)	

SUPPORT REQUIREMENTS

INFORMATION ON THE FINAL PRODUCT			
Final state	Solid elastomeric membrane		
Colour	Depends on the chosen pigmentation		
Hardness (Shore)	65-70 A (ISO 868)		
Densidad of film	1,35 g/cm ³		
Mechanical properties	Elongation (%)	Stress (MPa)	
	100	2,0	
	200	2,8	
	300	3,0	
	400	3,4	
	Maximum elongation: 421% Tensile stress: 3,4 MPa (EN-ISO 527-3)		
Tear strength	14 N/mm (ISO 34-1, Method B)		
Water vapour permeability	m>1000 (EN 1931) 20 g/m ² day		
Chemical resistance	Permanent contact (0=worst, 5=best)		
	Chemical	Test conditions	Result
	Water	24 h, 25 °C	5
	Salt 24 h, 90 °C	24 h, 90 °C	5
	Hydrochloridric acid solutions	200 g/l, 24 h, 25 °C	4
		200 g/l, 2 h, 80 °C	4
		3 g/l, 24 h, 25 °C	5
		3 g/l, 24 h, 80 °C 0 °C	4
	Sodium hydroxide	40 g/l, 24 h, 25 °C	5
	Ammonia 3%	24 h, 25°	5
	Acetone	24 h, 25°	1
	Ethyl acetate	24 h, 25°	3
	Xylene	24 h, 25°	5
	Motor oil	24 h, 25°	5
	Break fluid	24 h, 25°	2
Abrasion	14,3 mg (Taber, 1000 cycles, CS-10, UNE 48250)		
Adhesion	Surface	Force (MPa)	
	Concrete	2	
	Ceramics	2,6	
	Polyurethane foam	1,4	
UV resistance	This product includes anti UV additives. A colour change is expected due to its aromatic polyurethane composition. This decolouration does not affect its properties.		
Thermal resistance	Stable up to 140 °C		
Fire resistente	B roof=t1 (External fire exposure test according to BS 476: Part 3, 2004): Category EXT.F.AC)		

In order to achieve good penetration and bonding, the support must be:

1. Flat and levelled
2. Compact and cohesive (pull off test must show a minimum resistance of 1,4 N/mm²).
3. Even and regular surface
4. Free from cracks and fissures. If any, they must be previously repaired.
5. Clean and dry, free of dust, loose particles, oils, organic residues or laitance.

SUPPORT PREPARATION

It is essential to treat in advance all the critical points such as:

- Half pipes
- Meeting point with vertical surfaces
- Roof aprons
- Skylights
- Expansion joints and cracks
- Sumps

Refer to the application manual for further information.

SUGGESTED ENVIRONMENTAL CONDITIONS

Support temperature should be between 0°C and 40°. At higher temperatures, specific precautionary measures must be taken. Please follow manufacturer advice. Air temperature must be between 0°C and 30°C. High moisture conditions can lead to bubble formation under the membrane surface. In cold weather, or when curing time has to be shorter, accelerators can be used. More information under request.

APPLICATION GUIDELINES

If needed, the product may be thinned with up to 10% of solvent, as a viscosity adjustment. Never use universal or unknown solvents (e.g. white spirit or alcohols).

Apply by roller, brush, spreader or airless equipment. It is useful to apply in 2 differently coloured layers, at 1 kg/m² each. Although not strictly necessary, it is strongly recommended to use entirely the product of the container. If there is some product left, ensure it is completely sealed after use. Use a spiked roller immediately after spreading in order to reduce bubbling.

CURING TIME

Curing time is dependent on the environmental conditions. Curing rate increases as temperature and humidity rise. The following table gives a rough estimation of the curing time under diverse conditions for a 1 mm coat.

TEMPERATURE (°C)	RELATIVE HUMIDITY	DRY TO TOUCH (H)
4	60	30-35
24	52	8-9
35	12	12-14
35	50	3-4

RETURN TO SERVICE

Under normal conditions (25°C and 50% RH) the membrane achieves up to 90% of its final properties in 3 days. Usually walking time is 1 or 2 days. Final hardness is not achieved until 10 or 15 days. It is preferable to wait this time before contact with water is allowed.

TOOL CLEANING

Liquid MONOPUR can be cleaned with solvents, acetone and alcohols. Once hardened, it cannot be dissolved.

CLEANING AND MAINTENANCE

A maintenance work be carried out regularly on the treated roofs according to the intended use. This work includes the following tasks:

- Leaf removal
- Grass, dirt, moss and other vegetation removal
- Keeping storm water system in good working order.
- Ensure gratings are in place, in order to prevent gutter obstructions.
- Check proper condition of several structures (flashing, seams, retaining walls...)
- Verification of possible damages due to improper use.

If aesthetic appearance of the roof is an important issue, it is essential to regularly clean the surface with water (some mild detergent may be added according to the use).

It may be necessary to reapply decorative layers (ALIFLEX or AR-373) if they are worn out due to traffic, weather, corrosion, etc.

For stain removal, a surface treatment with solvent or isopropyl alcohol may be attempted. Strong acids are totally inadequate. Some solvents may damage the membrane. If this happens, the affected area has to be cut and repaired with a new MONOPUR application.

FAQ

PROBLEM	QUESTION	CAUSE	SOLUTION
Does not cure	Suitable solvent?	Some thinning solvents are not suitable	Apply a second layer of coating using only one of our solvents as a diluant.
	Too diluted	An excess of solvents slows the curing time	Use less diluted products.
	Temperature?	Normal at low temperatures	Below 15°C it is advised the use of accelerators.
Bubbles	Porous substrate?	High temperatures	Wait until temperature drops and apply a first layer of coating, diluted at less than 500 g/m ² .
	Non-porous substrate?	Too energetic shacking/application	Let is rest after stirring. Use spiked roller after application.
Blisters		Moisture	Cut the blister + Clear the support + Apply EPOPRIMER BV primer + MONOPUR.
Poor covering power	Horizontal support?	Too little product	Apply at least 1 kg/m ² in each layer of coating.
	Vertical suport?	Normal in a self-leveling product	Use one of our thixotropic of thickening additives.
Gray turns green	Important?	Aromatic-type isocyanates turn yellowish/brownish under sunlight	In order to stabilize the colour apply AR-373 aliphatic in the last layer of coating.
In case of rain	Water droplets will create craters if the membrane has not developed a surface skin yet. Apply a second coat to correct these defects. Overall membrane properties are not affected by slight surface cratering.		
High viscosity	Normal. Viscosity rises during shelf life. It can be adjusted using one of our solvents.		

SAFETY

MONOPUR contains isocyanates and flammable solvents. Always follow the instructions provided in the material safety data sheet and take the precaution described there. As a general rule, a suitable ventilation must be ensured and all ignition sources must be avoided. This product is used in the way here described. This product is to be used only by industrial or professional users. It is not suitable for do-it-yourself users.

ENVIRONMENTAL PRECAUTIONS

Empty containers must be handled taking the same precautions as if they were full. Containers must be considered as hazardous waste, to be transferred to an authorized waste manager. If there is some residual product in the containers, do not mix it with other substances without checking for possible dangerous reactions.

OTHER INFORMATION

The information contained in this DATA SHEET, as well as our advice, both written as verbal or provided through testing, are based on our experience, and they do not constitute any product guarantee for the installer, as we consider them as simple information. We recommend to study deeply all information provided before proceeding to the use or application of any of our products, and strongly advise to conduct tests "on-site" in order to determine their convenience for a specific project. Our recommendations do not exempt of the obligation of installers to deeply study the right application method for these systems before use, as well as to conduct as many preliminary tests as possible should any doubt arise. The application, use and processing of our products are beyond our control, and therefore under the exclusive responsibility of the installer. In consequence, the installer will be the only one held responsible of any damage derived from the partial or total in-observation of our indications, and in general, of the inappropriate use or application of these materials.

ARTLUX EUROPA S.L.

C/ CAMPO SAGRADO 11 GIJON 33205 ASTURIAS, ESPAÑA

www.artluxeuropa.com info@artluxeuropa.com Tel. +34 985 32 33 28