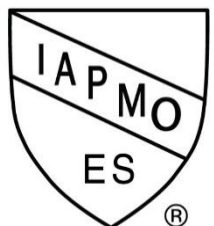


Compliant with guideline

EAD

030350-00-0402

Liquid applied waterproofing
products for roofs;



IAPMO ES UEL-5041



NATURE OF THE PRODUCT

Water-based elastomeric white-coloured liquid protective membrane, based on special charges and additives which give to the product high solar reflectivity and emissivity to infrared, resistant to water stagnation. Ideal also for large surfaces.

APPLICABLE REGULATIONS

WINGUM PLUS H₂O REFLEX meets the following requirements:

- Compliant with **EAD 030350-00-0402** guideline: liquid applied waterproofing products for roofs;
- **ICC-ES** in compliance with **ASTM D6083**: Certification of performance for waterproofing liquid applied on roofs and coverings;
- **MIAMI DADE COUNTY** recognition;
- Compliance with **CRRC Cool (Roof Rating Council)** dictates;
INITIAL SRI: **107**
SRI AFTER 3 YEARS: **79**

USES

Product used to protect bituminous membranes and roofing, also flat as: cement, fiber-cement, expanded glass panels, concrete, XPS, EPS, polyurethane insulating panels, bitumen-polymer membranes (oxidized for a minimum of 180 days) and metal roofs. Where you need to improve thermal insulation and lower the heat irradiated by the sun with a consequent energy-saving for conditioning of buildings and a considerable energy increase of solar and photovoltaic panels.

SURFACES PREPARATION

Accurately clean the support to eliminate: dust, crumbly parts, foreign or bonding-proof matters. Check for possible humidity contained in the support to avoid onset of air bubbles due to vapour pressure.

The best way to find out if there is any hidden humidity contained in the support is the application of a polyethylene sheet over the surface of the support and sealed with painter's tape. Leave this exposed to the sun and check for water condensation after 24 hours. If there is no condensation water, apply WINGUM PLUS H₂O REFLEX, on the contrary, wait for full drying.

RECOMMENDATIONS

In case WINGUM PLUS H₂O REFLEX should be applied on bituminous membranes, the modified membrane must have undergone at least 180 days of oxidization before to applying the product. Apply WINGUM PLUS H₂O REFLEX at temperatures between +5°C and +35°C.

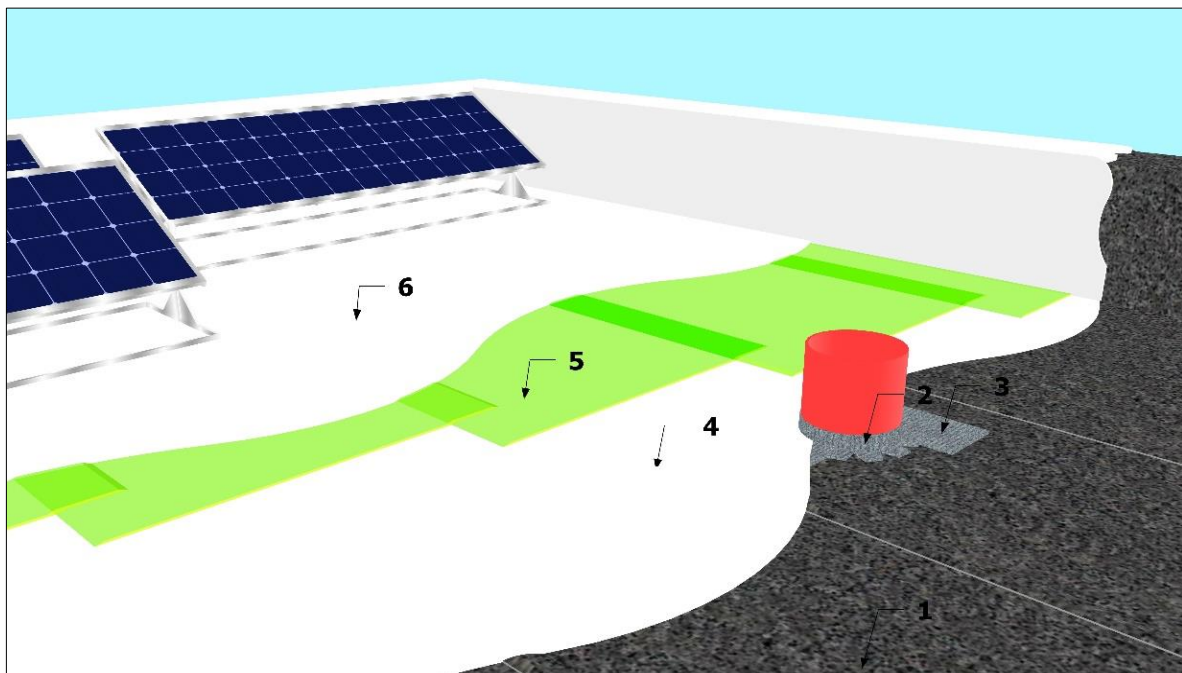
Do not add any additive.

Do not use the packaging if damaged.

Do not add water or solvents.

APPLICATION

The product is ready to use and can be applied by roller, brush, large paintbrush, steel plastering trowel and spraying airless gun. Apply the product in 2 coats at least (wait 24 hours from the first application to the second) in order to get an homogeneous thickness, ideal for waterproofing.



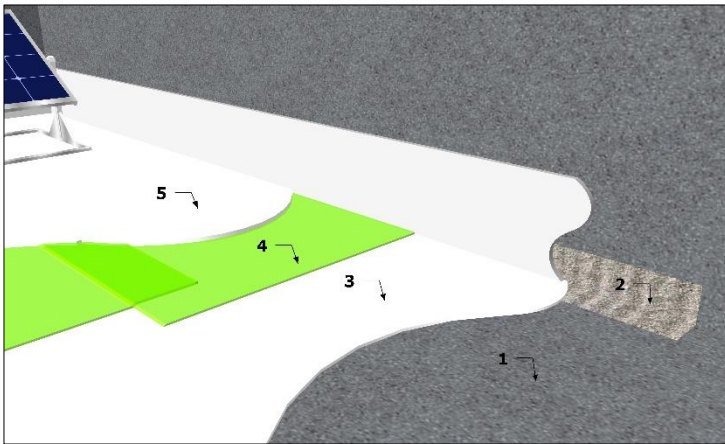
KEYS:

1. Bituminous membrane;
2. **BC SEAL BAND;**
3. **BC SEAL PAD;**
4. First coat of **WINGUM PLUS H₂O REFLEX;**
5. **WINTECHNO MAT;**
6. Second coat of **WINGUM PLUS H₂O REFLEX;**

In order to assure waterproofing function, on perimeter edges of the surface, apply the waterproofing adhesive band **BC SEAL BAND**. For waterproofing and sealing around roof penetrations such as drain, ventilation pipes, other roof penetrations or around plumbing pipes and drains, use **BC SEAL PAD**, self-adhesive butyl square pad, together with **BC SEAL BAND**.

To extend the reflectance of **WINGUM PLUS H₂O REFLEX**, it is advisable to apply, once dry (at least 24 hours after the last coat), **WINCLEAN**, transparent protective membrane with a low dirt hold (consumption about 80g/m²), paired with a periodical cleaning.

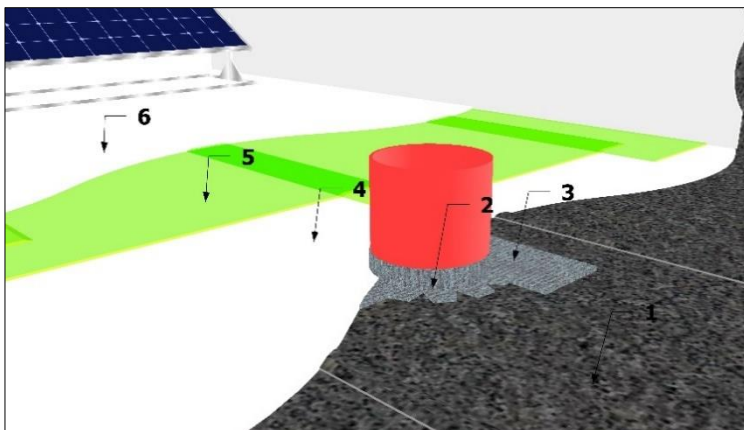
Perimeter angle treated with BC SEAL BAND



KEYS:

1. Structural substrate/screed
2. **BC SEAL BAND**
3. First coat of **WINGUM PLUS H₂O REFLEX RAPID**
4. **WINTECHNO MAT**
5. Second coat of **WINGUM PLUS H₂O REFLEX RAPID**

Roof vent treated with BC SEAL BAND e BC SEAL PAD



KEYS:

1. Bituminous membrane
2. **BC SEAL BAND**
3. **BC SEAL PAD**
4. First coat of **WINGUM PLUS H₂O REFLEX RAPID**
5. **WINTECHNO MAT**
6. Second coat of **WINGUM PLUS H₂O REFLEX RAPID**

APPLICATION WITH REINFORCEMENT

On supports particularly subject to deformation, also considerable, therefore presenting a high risk for cracking, please reinforce WINGUM PLUS H₂O REFLEX with WINTECHNO MAT. Application must be carried out as follows:

Apply WINGUM PLUS H₂O REFLEX in a uniform coat on the support, lay over the WINTECHNO MAT using the steel plastering trowel to ensure the adherence of the mat to the liquid membrane. Let the product to fully dry (18-24 hours) and then resume the application of the second coat of WINGUM PLUS H₂O REFLEX until getting the consumption indicated in the technical data sheet.

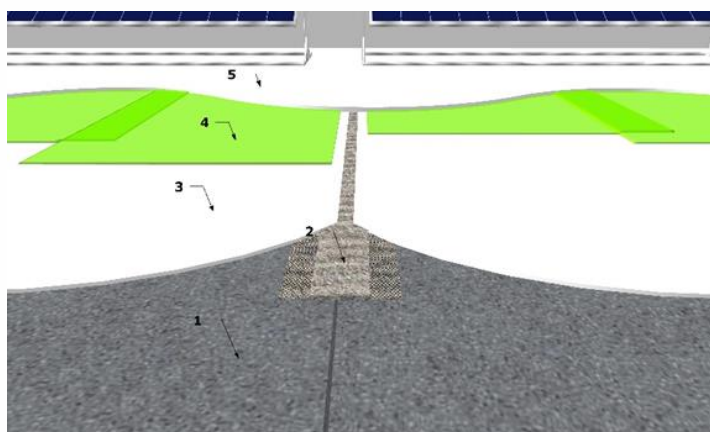
SURFACES WITH JOINTS

Seal the joints **up to 1cm** wide, with the joint cover strip **WINJOINT BAND** (waterproof elastic band, made of rubber and polyester fabric, suitable for waterproofing joints), as described below:

After creating the new joints or restoring the existing ones, apply **WINGUM PLUS H₂O REFLEX**, laterally to the joint and for a width that is larger than the joint cover.

While the product is still wet, lay the joint cover and stick the perforated side band to the area already treated with **WINGUM PLUS H₂O REFLEX**. Once dried, completely cover it with the second coat of **WINGUM PLUS H₂O REFLEX**.

Sealing of joints up to 1cm wide



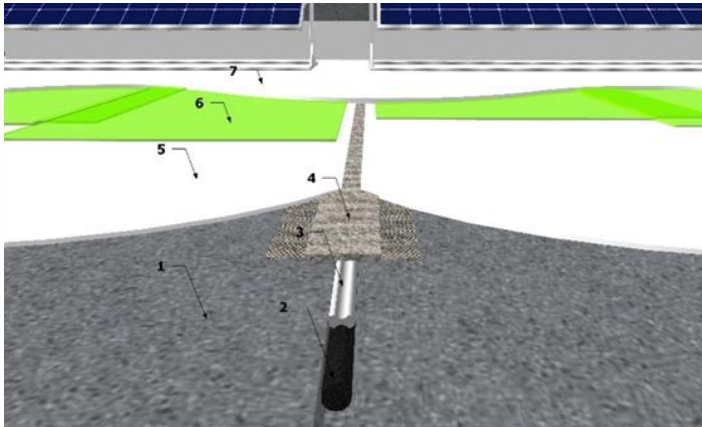
KEYS:

1. Structural substrate/screed
2. **WINJOINT BAND**
3. First coat of **WINGUM PLUS H₂O REFLEX**
4. **WINTECHNO MAT**
5. Second coat of **WINGUM PLUS H₂O REFLEX**

To seal **joints more than 1cm** wide use the system composed by **WINJOINT FOAM** (compressible polyethylene foam backer rod), **WINJOINT SEAL** (polyurethane sealant) and **WINJOINT BAND**, as described below:

After creating the new joints or restoring the existing ones, enter **WINJOINT FOAM** inside the joint to the desired depth and then extrude **WINJOINT SEAL** for the entire length of the joint. Once the sealant has dried, apply **WINJOINT BAND** as previously described.

Sealing of joints more than 1cm wide



KEYS:

1. Structural substrate
2. WINJOINT FOAM
3. WINJOINT SEAL
4. WINJOINT BAND
5. First coat of WINGUM PLUS H₂O REFLEX
6. WINTECHNO MAT
7. Second coat of WINGUM PLUS H₂O REFLEX

DRYING TIMES (at 20 ° C)

The product is dry to the touch 12 hours after application. After 24 hours from the application of the last coat, it is waterproofing and resistant to stagnation.

48 hours after the last coat, it acquires the mechanical strength necessary to be walkable. The above times may vary based on temperature and humidity.

CONSUMPTION

1.4 – 1.6 kg/m².

1.6 -1.8 kg/m² on bituminous membranes in two coats with reinforcement interposed.

1.8 – 2.0 kg/m² on concrete in two coats with reinforcement interposed.

PACKAGING

5-10-20kgs pails. (1.25 – 2.5 – 5 gallon buckets.)

STORAGE

The product in its undamaged packaging can be stored for 12 months. Please store it at temperatures between +5°C and +35°C. No frost-proof.

SAFETY NORMS

PRECAUTIONS

For information about safety norms, the user must consult the most recent Safety Sheet, edited in conformity with the Norms in force, containing physical, toxicological and other data about the product in use.

ECOLOGY

Do not throw the product and /or empty packs out in the environment. Consult the most recent Safety Sheet for further information about eventual disposals.

TECHNICAL DATA (average values)

Look:	Fluid paste
Colour:	White
Density at 20°C (g/cm ³):	1.40 + 0.05
Solid content (%):	73 ± 3
PH:	9 ± 1
cPs brookfield viscosity at 20°C:	18000 ± 2000

OPERATIONAL PRODUCT PERFORMANCES

Operational temperature:	30°C + 80°C
Resistance to atmospheric agents:	Good
Resistance to U.V. rays:	Good
Resistance to water stagnation:	Excellent

Tensile and elongation strenght at break before accelerated ageing (ASTM D 2370)

Resistance at break (N/mm ²)	Elongation (%)
1.41	188

Tensile and elongation strength at break after 1000h of accelerated ageing (ASTM D 2370)

Resistance at break (N/mm ²)	Elongation (%)
1.66	178

Perms ASTM D 1653 Method B Condition A

Value	Required
10	≤ 50

Mold resistance (evaluation) ASTM G 21

Value	Required
0	0

Strength at break (lbf/in) ASTM D 624

Value	Required
102	≥60

Water absorption (ASTM D 471) before accelerated ageing

Days into water	Absorption (% on weight)
7 ± 4h	< 17 (required) ≤20

Water absorption (ASTM D 471) after 1000h of accelerated ageing

Days into water	Absorption (% on weight)
7 ± 4h	< 13 (required) ≤20

Flexibility at low temperatures (ASTM D 522) before accelerated ageing

Temperature (°C)	Break (Y/N)
-26	N

Flexibility at low temperatures (ASTM D 522) after 1000 h of accelerated ageing

Temperature (°C)	Break (Y/N)
-26	N

Resistance to accelerated ageing cycles (ASTM D 4798)

QUV Machine: Accelerated Weathering Tester. Model QUV/Spray

Hours	Cracks shown
1,000	N

Resistance to abrasion ETAG 008

Number of passages	Weight loss (%)
10,000	0

Adhesion after sun-rain cycles, 25 cycles
Dynamometer in compliance with UNI EN 1348-2000

Support	Before sun-rain cycles	After sun-rain cycles	Required
Concrete	1.35 N/mm ²	1.16 N/mm ²	≥ 1.0 N/mm ²
Ceramics	1.55 N/mm ²	1.38 N/mm ²	≥ 1.0 N/mm ²

Results according to
ASTM E903-96
ASTM C1371
ASTM E 1980

Solar reflection index "SRI"	> 107%
Solar reflection factor "ρ _e "	0.85
Solar absorption factor "α"	0.151
Emissivity "ε"	0.919

Volatile Organic Compounds Emission

Parameter	Max. allowed concentration (μ/m ³)
TVOC after 3 days	≤ 750
TVOC after 28 days	≤ 60

Test performed by the EUROFINS institute according to EN 16516, ISO 16000-3-6-9-11 and ASTM D5116-10, Test report n. 392-2017-00404102_G_EN

PRODUCT FOR PROFESSIONAL ONLY

The information contained in this technical data sheet is to the best of our knowledge correct. However, by no means can it be considered a guarantee, as usage, working area and application of the product in accordance with the instructions given and their success in application is beyond our control and is dependent on a number of factors. We decline any responsibility for the improper use of the product as the application recommendations contained herein are to be considered as a general guideline. If at all in doubt, preliminary tests should be carried out. WINKLER S.r.l. reserves the right to modify and up-date said data sheets without prior notice. Clients are kindly requested to verify that they are in possession of the current edition.