

FEATURES IN ACCORDANCE WITH

**EAD**  
**030350-00-0402**

LIQUID APPLIED ROOF  
WATERPROOFING KITS.

## NATURE OF THE PRODUCT

Water-based, elastomeric, white-coloured, fast-curing, liquid protective membrane, based on special charges and additives which give to the product high solar reflectivity and emissivity to infrared light. WINGUM PLUS H<sub>2</sub>O REFLEX RAPID, resistant to water stagnation, has very low emissions of volatile organic compounds (VOCs) and semi-volatile compounds, has been formulated by WINKLER R&D labs.

## APPLICABLE REGULATIONS

WINGUM PLUS H<sub>2</sub>O REFLEX RAPID meets the following requirements:

- Complies with **EAD** guideline **030350-00-0402 (formerly ETAG 005)**: liquid applied roof waterproofing.
- Solar reflectance index (SRI) according to **ASTM E1980-11**  
INITIAL SRI: **106**

## USES

Its fast-curing feature, makes it rain-proof after just a few hours after the first coat, allowing start and end of work within the same day (see rain-proof times table). Its formulation allows high flexibility and the product's stability at very low temperatures. It is also resistant to normal foot traffic. WINGUM PLUS H<sub>2</sub>O REFLEX RAPID is suitable where waterproofing is required, particularly on flat surfaces subject to stagnation. It has an excellent resistance to ageing and UV rays. Suitable for waterproofing of concrete supports, fibre-cement slabs, metal sheds (also oxidizable), wood, ceramic tiles or natural stone floorings, brickworks, bitumen polymer membranes (oxidized for a minimum of 180 days), XPS, EPS and polyurethane insulating panels.

## SURFACES PREPARATION

Accurately clean the support to eliminate dust, crumbly parts, foreign or non-stick substances. On irregular supports, it is advisable making a previous application of WINFIX CONCRETE, to allow adhesion. For smoothing floors use WINLIVEL, self-leveling for irregularities from 1 to 15mm or WINLIVEL RAPID, quick-drying self-leveling for irregularities from 1 to 20 mm. To make a new screed, use WINPLAN 370, a quick-drying screed or WINPLAN PRO, a fast-drying and low water absorption screed. 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 H<sub>2</sub>O REFLEX RAPID, otherwise, wait for full drying.

## RECOMMENDATIONS

- Do not add any additive.
- Do not use if the packaging is damaged.
- Do not add water or solvents.

## WARNING

In case **WINGUM PLUS H<sub>2</sub>O REFLEX RAPID** 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 H<sub>2</sub>O REFLEX RAPID** at temperatures between +5°C and +35°C. Protect it from water, rain and snow during the first 4 hours from its application. Before applying the second coat, check that the surface is completely dry.

## APPLICATION

In conditions in which there is a need for a faster rain out, the product will be applied in two coats, spaced by the times shown in TABLE 1.

The product is ready to use and can be applied by roller, brush, steel plastering trowel and spraying airless gun. Carry out a short mixing (manual or with a low-speed drill) before spreading.

Apply first layer of **WINGUM PLUS H<sub>2</sub>O RAPID** (about 1 - 1,1 kg/m<sup>2</sup>) in a uniform coat on the substrate to be treated. Lay over WINTECHNO MAT and completely soak it, applying a slight pressure using the roller. Let the product to fully dry (see TABLE 1). Apply the second coat of **WINGUM PLUS H<sub>2</sub>O RAPID** until getting the consumption indicated in the current technical data sheet (about 0,8-0,9 kg/m<sup>2</sup>)

**TABLE 1**

Weather conditions	Rain proof	Second coat	Walkability (after the second coat)
22°C up to 65% U.R.	4 hours	4 hours	48 hours
15°C up to 65% U.R.	5 hours	5 hours	48 hours
10°C up to 65% U.R.	6 hours	6/7 hours	48 hours
5°C up to 65% U.R.	7 hours	7/8 hours	48 hours

Different temperatures and humidity can vary drying times. Before applying the second coat, check that the surface is completely dry. Protect from water, rain and snow in the first hours of its application.

For laying on substrates with irregular geometry (for example corrugated sheet metal) it is possible to apply the product in two coats without the interposition of WINTECHNO MAT reinforcement.

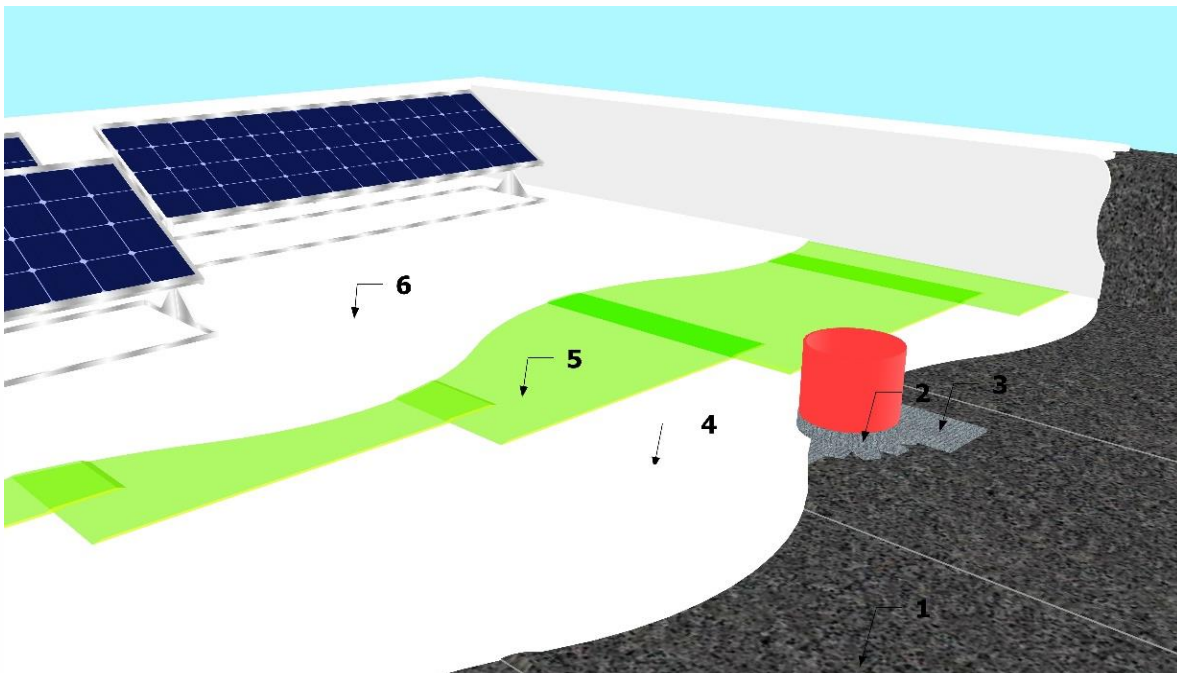
### APPLICATION “WET ON WET”

Apply the first coat of WINGUM PLUS H<sub>2</sub>O RAPID with a consumption of about 1-1.1kg/m<sup>2</sup> and immediately lay over WINTECHNO MAT, (70 g/m<sup>2</sup> polyester non-woven reinforcement mat). Press lightly on the roller until the reinforcement gets the same colour as WINGUM PLUS H<sub>2</sub>O RAPID, to optimize adhesion (if necessary, take other product from the package). Then, while the product is still wet, complete the application with the remaining 0.8-0.9kg/m<sup>2</sup>. Rain-proof and walkability times are shown in the DRYING TIMES TABLE

**TABLE 2**

Weather conditions	Rain proof	Walkability
20°C up to 55% U.R.	18 hours	48 hours
15°C up to 55% U.R.	18 hours	48 hours
10°C up to 55% U.R.	24 hours	72 hours
5°C up to 55% U.R.	36 hours	72 hours

Different temperatures and humidity can vary drying times.  
Protect from water, rain and snow in the first hours of its application.



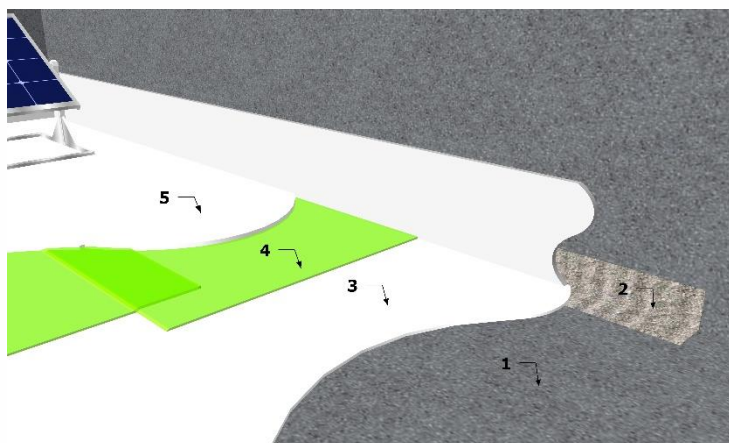
**KEYS:**

1. Bituminous membrane
2. BC SEAL BAND
3. BC SEAL PAD
4. First coat of WINGUM PLUS H<sub>2</sub>O REFLEX RAPID
5. WINTECHNO MAT
6. Second coat of WINGUM PLUS H<sub>2</sub>O REFLEX RAPID

To extend the reflectance of WINGUM PLUS H<sub>2</sub>O REFLEX RAPID, 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/m<sup>2</sup>), paired with a periodical cleaning.

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.

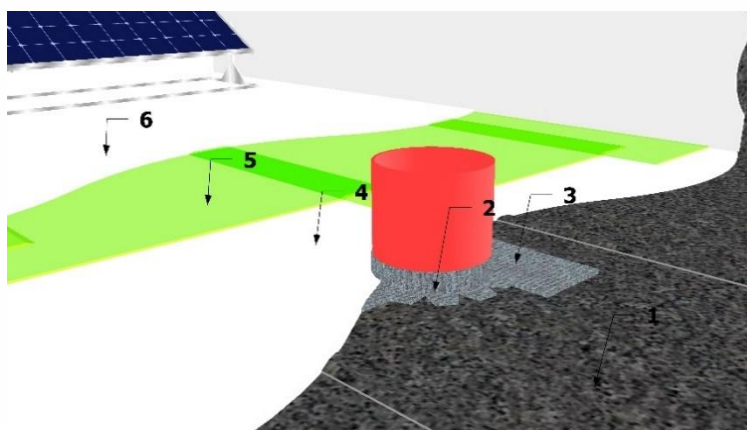
### Perimeter angle treated with BC SEAL BAND



#### KEYS:

1. Structural substrate/screed
2. BC SEAL BAND
3. First coat of WINGUM PLUS H<sub>2</sub>O REFLEX RAPID
4. WINTechno MAT
5. Second coat of WINGUM PLUS H<sub>2</sub>O 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 H<sub>2</sub>O REFLEX RAPID
5. WINTechno MAT
6. Second coat of WINGUM PLUS H<sub>2</sub>O REFLEX RAPID

## APPLICATION WITH REINFORCEMENT

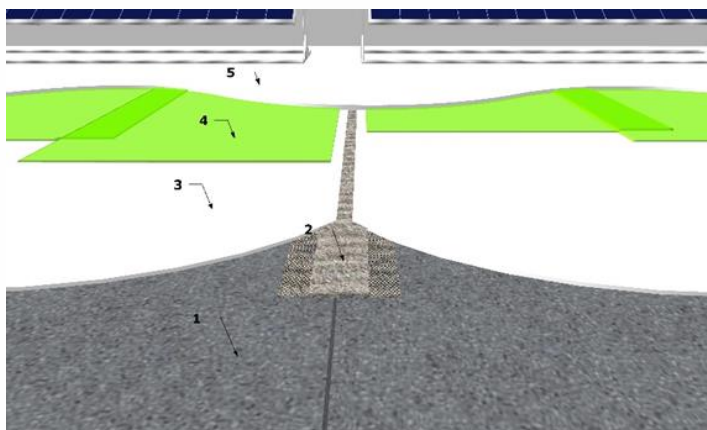
Apply WINGUM PLUS H<sub>2</sub>O REFLEX RAPID with WINTECHNO MAT as described below:  
Apply WINGUM PLUS H<sub>2</sub>O REFLEX RAPID (about 2/3 of total amount to be used) in a uniform coat on the substrate to be treated. Lay over WINTECHNO MAT and completely soak it, applying a slight pressure using the roller. Let the product to fully dry (see table). Apply the second coat of WINGUM PLUS H<sub>2</sub>O REFLEX RAPID until getting the consumption indicated in the current 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 H<sub>2</sub>O REFLEX RAPID**, 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 H<sub>2</sub>O REFLEX RAPID**. Once dried, completely cover it with the second coat of **WINGUM PLUS H<sub>2</sub>O REFLEX RAPID**.

### Sealing of joints up to 1cm wide



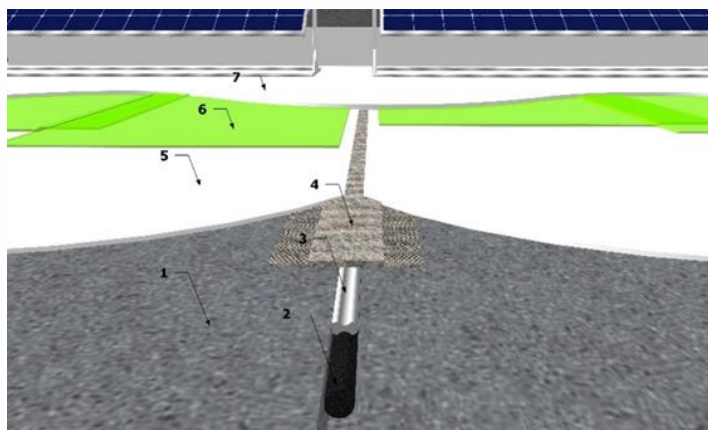
#### KEYS:

1. Structural substrate/screed
2. WINJOINT BAND
3. First coat of WINGUM PLUS H<sub>2</sub>O REFLEX RAPID
4. WINTECHNO MAT
5. Second coat of WINGUM PLUS H<sub>2</sub>O REFLEX RAPID

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 H<sub>2</sub>O REFLEX RAPID**
6. **WINTECHNO MAT**
7. Second coat of **WINGUM PLUS H<sub>2</sub>O REFLEX RAPID**

## DRYING TIMES (at +20°C)

The product is rain-proof and suitable to superposition already after 4 hours from first coat (at +22°C and 55% of R.H.). Before laying the second coat, check that the previous one is completely dry.

48 hours after the last coat, the product achieves the mechanical strength necessary to be walkable.

Weather conditions	Rain_proof	Second coat
+22°C up to 65% R.H.	4 hours	4 hours
+10°C up to 65% R.H.	6 hours	6/7 hours

Different temperatures values and humidity percentages can vary drying times.

## CONSUMPTION

1.1 – 1.3 kg/m<sup>2</sup> in two coats.

1.7 -1.9 kg/m<sup>2</sup> in two coats with reinforcement mat inserted in-between.

## PACKAGING

5-10-20kgs pails.

## STORAGE

The product in its undamaged packaging can be stored for 24 months. Please store it at temperatures between +5°C and +35°C. Not 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:	Reflecting White
Density at 20°C (g/cm <sup>3</sup> ):	1.40 + 0.05
Solid content (%):	73 ± 3
PH:	9 ± 1
cPs brookfield viscosity at 20°C:	18,000 ± 2000

## OPERATIONAL PRODUCT PERFORMANCES

Operational temperature:	-30°C + 80°C
Resistance to atmospheric agents:	Good
Resistance to UV rays:	Excellent
Impermeability (UNI EN 1928)	≥ 1.0 bar
Stress at break (UNI EN ISO 527-1)	≥ 1.50 N/mm <sup>2</sup>
Elongation % (UNI EN ISO 527-1)	≥ 150
Accelerated ageing (UNI EN 1062-11)	No break nor delamination
Stress at break after accelerated ageing (UNI EN ISO 527-1)	≥ 2.0 N/mm <sup>2</sup>
Elongation % after accelerated ageing (UNI EN ISO 527-1)	≥ 100
Adhesion strength on concrete (UNI EN 15412)	≥ 1.0 N/mm <sup>2</sup>
Water absorption (ASTM D 471)	≤14% on weight

**Test results with reference to ASTM E903-96, ASTM C1371, ASTM E 1980**

Solar reflection index "SRI"	106
Solar reflection factor " $\rho_e$ "	0,84
Solar absorption factor "a"	0,16
Emissivity " $\epsilon$ "	0,92

**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.