LIQUIGUM REFLEX

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, LIQUIGUM REFLEX meets the CRRC certification criteria (Cool Roof Rating Council) and also ETAG 005 guide lines, for liquid products, applied as waterproofing ones.

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 LIQUIGUM REFLEX, on the contrary, wait for full drying.

RECOMMENDATIONS
In case LIQUIGUM 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 LIQUIGUM 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. In order to assure waterproofing function, on perimeter edges of the surface, apply the waterproofing adhesive band VZ SEAL BAND. To extend the reflectance of LIQUIGUM REFLEX, it is advisable to apply, once dry (at least 24 hours after the last coat), IDROVAL REFLEX PROTECT, transparent protective membrane with a low dirt hold (consumption about 80g/m²), paired with a periodical cleaning.

APPLICATION WITH REINFORCEMENT
On supports particularly subject to deformation, also considerable, therefore presenting a high risk for cracking, please reinforce LIQUIGUM REFLEX with VZ TECHNO MAT. Application must be carried out as follows:
Apply LIQUIGUM REFLEX in a uniform coat on the support, lay over the VZ TECHNO 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 LIQUIGUM REFLEX until getting the consumption indicated in the technical data sheet.

SURFACES WITH JOINTS
Seal joints up to 1 cm wide, using VZ JOINT BAND (waterproof elastic band, made of rubber and polyester fabric, suitable for waterproofing joints), as described below:
- Apply LIQUIGUM REFLEX laterally to the joint and for a width that is larger than the joint cover.
- Lay the joint cover by adhering the perforated side band to the area pre- treated with LIQUIGUM REFLEX (still wet).
- Once dried, the product can be completely covered with the last coat of LIQUIGUM REFLEX.

Valli Zabban S.p.A. • Società Unipersonale • Capitale Sociale € 5.000.000 i.v.
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LIQUIGUM 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/m^2.
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.

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/cm3):	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/mm²)	Elongation (%)
1.41	188

TENSILE AND ELONGATION STRENGTH AT BREAK AFTER 1000H OF ACCELERATED AGEING (ASTM D 2370)

Resistance at break (N/mm²)	Elongation (%)
1.66	178

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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/mm²	1.16 N/mm²	≥ 1.0 N/mm²
Ceramics	1.55 N/mm²	1.38 N/mm²	≥ 1.0 N/mm²

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

Solar reflection index “SRI”	> 107%
Solar reflection factor “ρe”	0.85
Solar absorption factor “a”	0.151
Emissivity “ε”	0.919

VOLATILE ORGANIC COMPOUNDS EMISSION

Parameter	Max. allowed concentration (µ/m3)
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

Product complies with the requirements of 2003/53 / EC regulation

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