

# SUN'X<sup>®</sup>

## Flexible radiant barrier and roofing under layer

### DEFINITION & USES

The flexible radiant underroof barrier and roofing underlayer **Sun'X<sup>®</sup>** contribute to:

- **Hot conditions (summer season):** reduce of the thermal transfers from roof coverings to towards the subjacent areas by reduction of the roof **solar factor** related to the high reflectivity of his external facing and the improvement of the natural convection in the under tiles air layer ("chimney effect " optimized),



It also supply the functions of a **roofing under layer** for:

- the protection of the roofs covered with small discontinuous elements (tiles, slates...) against the risks of penetration of snow, soot and dust, wet salted sea wind,
- allows infiltrated water going back to the gutter,
- the reduction of the roof air permeability.

Specifics installation rules are to be provided for optimizing the solar protection performances particularly by increasing the ventilation under the coverings.

**Sun'X<sup>®</sup>** can be applied tended onto rafters or fully supported on continuous decking (timber boarding, plywood, wooden panels with under-face ventilated).

The use of **Sun'X<sup>®</sup>** is limited to the buildings with a low or medium hygrometry

### COMPOSITION

**Sun'X<sup>®</sup>** comprises a polyester reinforcement with only one face coated with a SBS bitumen protected by a composite polyethylene / aluminium foil, the fibrous under face allows an easy application on timber boarding.

### OPTICAL PROPERTIES

- emissivity :

hemispheric average emissivity $\epsilon^*$ in spectral wave length 5 $\mu$ m up to 23 $\mu$ m		
	emissivity $\epsilon$ : (%)	Reflectivity : (%)
<b>External facing</b>	<b>0,014</b>	<b>98,6%</b>

L.N.E testing lab.

## REACTION TO FIRE

**Sun'X<sup>®</sup>** is classified euroclass **E** according to EN 13501-1 (test report n° G040790 – CEMATE/3 from L.N.E Notify Body 0071)

## PACKAGING

Sun'x <sup>®</sup>	Width ( m)	Length (m)	Surface / roll m <sup>2</sup>	Weight /roll kg	Rolls / pallet	Weight /pallet kg
	<b>1,25</b>	<b>40</b>	<b>50</b>	<b>20</b>	<b>36</b>	<b>≈ 750</b>

## PHYSICAL AND MECHANICAL CHARACTERISTICS

Characteristics	Test method	U	Value	Tolerance		
length	NF EN 1848-1	M	<b>40</b>	- 0 ; + 1,5%		
width	NF EN 1848-1	M	<b>1,25</b>	-0,5% +0,5%		
straightness	NF EN 1848-1	–	Pass	-		
mass	NF EN 1849-1	g/m <sup>2</sup>	<b>375</b>	± 10 %		
Résistance to water penetration						
- new product	EN 1928	–	<b>W1</b>			
- after ageing			<b>W1</b>			
Water vapor transmission properties	EN ISO 12572 / Climate C	<b>W</b> : Kg/m <sup>2</sup> .s.Pa <b>Sd</b> : m	$2.1 \cdot 10^{-13}$ <b>1200</b>	± 0,1 10 <sup>-13</sup>		
Tensile properties						
maximum force	EN 12311-1 Modified by EN 13 859-1	N/50 mm	<b>L</b>	<b>T</b>	<b>L</b>	<b>T</b>
New product			<b>245</b>	<b>225</b>	σ = 10	σ = 18
After ageing			270	235	σ = 9	σ = 7
Elongation at break						
New product	EN 12311-1 Modified by EN 13 859-1	%	<b>17</b>	<b>27</b>	σ = 2	σ = 15
After ageing			15	14	σ = 3	σ = 1
Resistance to tearing (nail tear)	EN 12310-1	N (MD x CD)	<b>295</b>	<b>325</b>	σ =20	σ =40
Dimensional stability	EN 1107-1	% (MD x CD)	<b>- 0, 7</b>			
Flexibility at low temperature	EN 1109	°C	<b>- 25</b>			

## INSTALLATION

The flexible radiant barrier **Sun'X**<sup>®</sup> is installed tightened onto supports :

- minimum longitudinal overlap: **20 cm** (for slope up to 15°) or **10 cm** (for slope above 15°)
- ventilation of the under-face required,
- overlap joints could be closed with **Therm'X**<sup>®</sup> adhesive tape (aluminium ) 75 mm x 50 m
- counter-battens shall have a 38 mm recommended thickness for a better thermal efficiency during the hot conditions (summer season)
- when **Sun'X**<sup>®</sup> is installed over a new or an existing thermal insulation it is recommended to have a minimum of 20 mm ventilated air gap .

## WAREHOUSING & STORAGE

Rolls are stored vertically in warehouse or must be protected from sun and humidity, superposition of pallet is not allowed.

## SECURITY

Product is classified as a non dangerous product and does not contain any dangerous substances

## CE MARKING

**Sun'X**<sup>®</sup> is marked CE according EN 13859-1 Attestation of conformity is available on the Siplast web site

<http://www.siplast.fr/>