



## **DESCRIPTION**

EFIGREEN DUO+ is a rigid polyisocyanurate foam (PIR) thermal insulation panel for the building, coated with a facing on each of its sides.

## **APPLICATION**

Intended for the thermal insulation of waterproofed roofs as non-bearing thermal insulation panel, support for loose-laid waterproofing system under heavy protection.

## **COMPOSITION**

	EFIGREEN DUO+
Rigid polyurethane foam	Beige colour
Facing	Multilayer

## **PACKAGING**

	EFIGREEN DUO+		
Dimensions	Length x Width	600 mm x 600 mm	
	Thickness	Refer to ACERMI* certificate	
	Profile	Straight edge panel	
Packaging		Panels are packed on non-stackable wrapped pallet	
Marking		Each package is CE labelled	
Storage		On flat support, away from weather Any colour changes of the foam does not affect product performances	

<sup>\*</sup> ACERMI: French association for certification of insulation materials

## **INSTALLATION**

EFIGREEN DUO + panels are laid as non-bearing thermal insulation panels, support for loose-laid waterproofing system under heavy protection.

- In 1 or 2 layers up to 280 mm for a bituminous or synthetic waterproofing system in compliance with the requirements of the Technical Approval "EFIGREEN DUO +".
- In 1 layer up to 120 mm associated to an upper layer of EFIGREEN A with maximal thickness of 70 mm when used with asphaltic-base waterproofing system in compliance with the requirements of the Technical Approval "EFIGREEN A".







Ilv 11 2017





**APPLICATIONS** 

**ROOFING** 

# **PROPERTIES**

Properties		Performances		Standards	
Thermal conductivity - λ <sub>D</sub> (W/mK)		0.023	0.022		
Thickness - d (mm)		30-35	40-160		
Thickess tolerance		T2			
Thermal resistance – RD (m².K/W)		1.30 <b>-</b> 1.50	1.80 - 7.25		
Reaction to fire		NPD			
Durability of reaction to fire against heat exposure, weathering, ageing/ degradation		(a)			
	Durability characteristics	NPD		EN 13165 : 2012 + A1:2015	
Thermal resistance durability against heat	Dimensional stability	NPD			
exposition, weather conditions, aging/ and damage	Deformation under specified compressive load and temperature conditions	NPD			
	Determination of thermal resistance and thermal conductivity values after ageing	(b)			
Compressive strength		CS (10\Y) 200		A1.2013	
Tensile strength		NPD			
Durability of reaction to fire against heat exposure, weathering, ageing/ degradation	Compressive creep	NI	PD		
Water permeability	Short term water absorption	WS(	P)0,2		
	Long term water absorption	NPD			
	Flatness after partial immersion	NPD			
Acoustic absorption		NPD (c)			
Release of dangerous substances inside buildings					
Continuous glowing combustion		(	c)		

- (a) No fire reaction properties variation for the polyurethane products with time.
- (b) Any variation in thermal conductivity and thermal resistance is treated and taken into account in the declared values. (Annex C for thermal conductivity and dimensional stability for the thickness).
- (c) European test methods are on-going.











**APPLICATIONS** 

**ROOFING** 

## **ADDITIONAL CHARACTERISTICS**

	EFIGREEN DUO+		Test method	
Useful dimensions	Length	600 ± 3 mm	EN 13165: 2012+A1:2015	
	Width	600 ± 3 mm		
	Thickness	30 to 160 ± 2 mm		
	Squareness	≤ 3 mm / m		
Compressibility classification at 80°C under 40 kPa		С	UEAtc guideline § 4.51	
Curving under thermal gradient		≤ 3 mm	UEAtc guideline § 4.32	
Dimensional variation in the free state of deformation at 23°C after stabilization at 60°C		≤ 0,3 %	UEAtc guideline § 4.31	
Critical strength in service Deformation in service		1 layer     Rcs mini = 100 kPa     ds mini = 1,0%; ds max = 1,8 % 2 layers     Rcs mini = 90 kPa     ds mini = 1,0%; ds max = 1,9 %	CSTB guideline 3230-v2	
ACERMI certificate		n° 12 / 006 / 761		

## **SPECIAL INDICATIONS**

#### Hygiene, health and environment:

**EFIGREEN DUO+** is not classified as dangerous according to French and European regulations.

For further information, please refer to relevant Safety Data Sheet, including precautions to take in case dusts or machining operations.

About product losses or batch remains: non-hazardous waste, not inert - reuse, incineration in Authorized Installation or stockpiled in an installation for Storage of Non-Hazardous Waste (ISDND: Dumps of class II).

The product has an Environmental and Health Declaration Sheet (FDES in french) for some thicknesses.

#### Traceability:

Product traceability is ensured through a manufacturing code present on the packaging :

CCC/YY/HH/MM/N/ACERMI

Calendar day / Year / Hour / Minute / Production site marker/number of ACERMI certificate

#### QSE integrated system:

SOPREMA has always attached the highest importance to the quality of its products, to the respect of environment and men.

For this reason, we apply an integrated management of the Quality (ISO 9001), Environment (ISO14001) and Health-Security (OHSAS 18001) certified.





