

# THE GUARANTEED ULTRA-EFFICIENT SCREED FOR UNDERFLOOR HEATING

**Gyvlon® 'Environmental Screed Solutions'** have developed the THERMIO®+ technology to further improve underfloor heating systems by creating a screed that is specifically designed to complement both water underfloor heating & cooling systems.

Gyvlon THERMIO®+ is the only screed with a guaranteed thermal performance.

#### WHAT DOES THERMIO® + OFFER?

THERMIO®+ technology coupled with an underfloor heating or cooling system **guarantees** a pipe encapsulation and an **emitter** which will give:

- **+ performance:** up to **30**% increase of the thermal value coefficient for maximised performance of the underfloor heating system.
- **+ comfort:** up to **80**% thermal diffusivity for a much faster ramp-up in temperature, greatly improving immediate and long term comfort.
- + savings: up to 8% savings on heating bills

#### **ALL THE NORMAL BENEFITS OF GYVLON® PRODUCTS**

THERMIO®+ has **all the benefits** that you have come to expect from Gyvlon screeds:

- Very high fluidity for fast installation
- Minimum SR2 surface finish
- Greatly reduced cracking and no curling
- Maximum bay size 300m²
- No reinforcement
- No need for a curing membrane
- Typically 36% recycled content

#### OUR TECHNICAL +

- → High and guaranteed thermal performance both in heating or cooling modes
- ➤ Low inertia (Nominal thickness at 20mm only above pipes)
- → **Red colouration** the guarantee of the right product



GYVLON THERMIO®+ IS THE ONLY SCREED WITH A GUARANTEED THERMAL PERFORMANCE.

#### **GYVLON® RANGE**















## THE GUARANTEED ULTRA-EFFICIENT SCREED FOR UNDERFLOOR HEATING





**THERMIO®+, is an accumulation of benefits** for your water underfloor heating systems:

THERMIO®+ screed enables a **much faster rise in temperature** thanks to its high thermal diffusivity (up to +80% compare to a cement screed), providing quicker response to thermostat changes.



Greatly improved comfort, the floor emits the heat in a more efficient and homogeneous way thanks to the exceptional thermal emission value of THERMIO®+ (up to +30%¹). **Maximising your underfloor heating performance.** 



The high efficiency of THERMIO®+ allows your boiler or heat pump to work with a better efficiency, and to make **considerable savings on your heating bill** (up to 8%¹ saving).

	Traditional cement	ECO° (TECHNOLOGY)	THERMIO"+
	INSULATION	INSULATION	INSULATION
	LOW CONDUCTIVITY NOMINAL THICKNESS	GOOD CONDUCTIVITY REDUCED THICKNESS	HIGH CONDUCTIVITY GUARANTEED THIN SCREED SOLUTION
COMFORT	*	***	****
EFFICIENCY	*	***	****
THERMAL GUARANTY	-	-	-CSTB-

Tested extensively in Europe with manufacturers such as: Acome, Comap, Efex, PBtub, Rehau, Roth, Uponor, Velta, Wavin

#### **OUTSTANDING PERFORMANCE**

TECHNICAL CHARACTERISTICS				
Mechanical strength			C30 F8	
Thermal conductivity (nominal value) 2			λ=2,5W/m.K	
Thermal emission coefficient <sup>3</sup>			K <sub>H</sub> ≥7 ,42W/m <sup>2</sup> .K	
Diffusivity			$D=1,0.10^{-6} \text{ m}^2/\text{s}$	
Wet Density			2 200kg/m <sup>3</sup>	
Dry Density			2 000kg/m <sup>3</sup>	
Nominal thickness above the pipe			20mm	
Minimum thickness by substrate	Unbonded		30mm	
	Floating	Residential	35mm	
		Commercial	40mm	

- 1. Independant study by Cardonnel
- 2. According Avis Technique / DTA CSTB N° 13/12-1184, with a minimum of 2.3W/m.K guaranted for thermal calculations in whole UK
- 3. Calculation according to EN1264. Minimum value stated at the present document edition

INSTALLATION BENEFITS			
Flow 250mm (± 20mm)			
Joints	300m²		
Productivity	up to 200m² / hour or 1 500m² / day		

### THERMIO® + is a technology patented by Gyvlon®

**Thermal diffusivity (D):** ability of a material to transmit more or less quickly a temperature change

 $\begin{tabular}{ll} \textbf{Thermal emission value (K}_{\tt H})$: capacity of a water heating system to give back heat circulating through pipes \end{tabular}$ 

**Thermal conductivity (A):** propoerty of a material to conduct heat . Higher conductivity equals quicker reaction



www.gyvlon.co.uk



The information in this document does not dispense with the realisation of a thermal study.

Non-contractual document Thomas Thomas are not dispense with the results of the study.