

THERMAL CERAMICS

ENVIRONMENTAL AND HEALTH DECLARATION
ACCORDING TO THE FRENCH STANDARD
NF P 01 – 010

**EXPANDED PERLITE BOARD (EPB)
NON-COATED
THICKNESSES 20, 25, 30, 35, 40, 40(2x20), 50,
60, 70, 80, 90, 100, 110 and 120 mm
LOOSE-LAID
or
MECHANICALLY FIXED**

N° Sitek: E-FDES 08-003
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This FDES is issued by Thermal Ceramics – Sitek Division

The presentation model used for this declaration is the « Fiche de Déclaration Environnementale et Sanitaire » established by the AIMCC – French Construction Products Industry Association (FDE&S version 2005)

INTRODUCTION

The aim of this declaration is to provide building professionals with the environmental and health characteristics of non-coated Expanded Perlite Board (EPB) of the following thicknesses : 20, 25, 30, 35, 40, 40 (2x20), 50, 60, 70, 80, 90, 100, 110 and 120 mm, whose installation on the building site can be loose-laid or mechanically fixed.

The model used for the presentation of the following declaration is the « Fiche de Déclaration Environnementale et Sanitaire » established by the AIMCC – French Construction Products Industry Association (FDE&S version 2005).

This file is a common framework for all building products. It is adapted to the presentation of environmental and health characteristics of building products in compliance with the requirements of the French standard NF P 01-010 and to the supply of additional comments and information in the spirit of the standard as concerns sincerity as well as transparency (NF P 01-010 § 4.2).

An accompanying report of the declaration was established. It can be consulted under a confidential agreement at the THERMAL CERAMICS head office, SITEK division.

This environmental and health declaration file is registered in the « FDE&S » programme managed by the AFNOR under the reference n° 12-009 : 2008.

Data producer (NF P 01-010 § 4).

The information in this declaration is provided under responsibility of the industrial manufacturer of Expanded Perlite Board (EPB), THERMAL CERAMICS, according to the standard *NF P 01-010 § 4.6*.

The non-coated Expanded Perlite Boards are commercialised under the names: FESCO, FESCO C, FESCO LT, FESCO GA.

This present file is an individual one based on the data supplied by THERMAL CERAMICS. It was checked by an independent third party (AFNOR certified assessors).

Use of the FDES

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Any use, complete or partial, of the information supplied herein must be accompanied by, at least, the complete reference to the original declaration: « Full title, release date, issuer's address », (issuer who may provide an original copy).

Contacts

- **René Da Silva**
THERMAL CERAMICS - Division SITEK
5, boulevard Marcel Pourtout
92563 Rueil-Malmaison Cedex
FRANCE
Tel: +33 (0)1 47 16 22 45

- **Patrick Deghilage**
THERMAL CERAMICS
ZI Les Plantées
42680 Saint-Marcellin en Forez
FRANCE
Tél : +33 (0)4 77 52 73 14

ENVIRONMENTAL AND HEALTH SUMMARY
IN COMPLIANCE WITH NF P 01-010
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Characterisation of the product

▪ **Definition of the Functional Unit (FU) :**

One (1) m² of non-coated Expanded Perlite Board (EPB) 20, 25, 30, 35, 40, 40 (2x20), 50, 60, 70, 80, 90, 100, 110 or 120 mm thick, mechanically fixed or loose-laid, giving the surface to which it is applied the function of a support for waterproofing membrane, an improvement in fire resistance and traffic resistance, as well as an additional thermal resistance from 0.40 to 2.40 m².K/W depending on the thickness, during one annuity.

Included are:

- The packaging
- The following complementary products: *metal fastener (1 fastener is composed of the following elements: screw + metal plate)*
- Off-cut rate during installation: 3 %

▪ **Typical Total Lifetime:** 60 years

▪ **Technical characteristics not included in the FU:** compressibility class, reaction and resistance to fire

▪ **Content** (according to AIMCC n° 3-07) :

Main constituents:

- *Expanded Perlite: 60 %*
- *External recycled waste: 30 %*
- *Miscellaneous additives: 10 % none of which are dangerous substances (Dir. 67/548) class T+, T, N, Xn.*

▪ **Product's contribution to the evaluation of health risks and life quality within the buildings**

Contribution of the product		Expression
To the evaluation of health risks	health quality of indoor spaces	Radioactive emission: Dose excess of gamma radiation < 0.3 mSv/year. COV emission: non relevant Fibres and particles emission: non relevant Micro organisms and mould: non relevant
	health quality of water	Non relevant
To the life quality	Hygrothermal comfort	Thermal conductivity of the materiel EPB = 0.050 W/m.K ; Thermal inertia (summer comfort) : Cp > 900 J/kg and high density = 150 kg/m ³
	Acoustic comfort	Acoustic reduction index of a 30 mm thick board (Rw) = 27 dB
	Visual comfort	Non relevant
	Olfactory comfort	Non relevant

▪ **Environmental indicators (total lifetime)**

N°	Environnemental impact	Values by FU for the Total Lifetime (60 years)														
		20mm	25mm	30mm	35mm	40mm	40mm (2x20)	50mm	60mm	70mm	80mm	90mm	100mm	110mm	120mm	Unit
1	Energy resources consumption:															
	Total primary energy	92	114	136	158	180	189	233	277	321	365	418	462	506	550	MJ
	Renewable energy	4.49	5.58	6.66	7.75	8.83	10.61	12.78	14.96	17.13	19.30	23.25	25.42	27.59	29.76	MJ
	Non-renewable energy	88	109	129	150	171	179	220	262	304	345	395	437	478	520	MJ
2	Natural material consumption	0.0318	0.0393	0.0468	0.0543	0.0618	0.0650	0.0800	0.0949	0.1099	0.1249	0.1430	0.1580	0.1730	0.1879	kg equivalent antimony (Sb)
3	Total water consumption	48	56	63	71	78	82	96	111	126	141	160	174	189	204	litre
4	Solid waste:															
	Recycled waste (total)	0.0855	0.0869	0.0883	0.0897	0.0910	0.0910	0.0938	0.0966	0.0993	0.1021	0.1048	0.1076	0.1104	0.1131	kg
	Eliminated waste:															
	Dangerous waste	0.000613	0.000762	0.000911	0.001060	0.001209	0.001236	0.001535	0.001833	0.002131	0.002430	0.002755	0.003053	0.003352	0.003650	kg
	Non dangerous waste	3.32	4.11	4.91	5.71	6.50	6.70	8.29	9.88	11.48	13.07	14.86	16.45	18.04	19.64	kg
	Inert waste	1.065	1.127	1.189	1.252	1.314	1.415	1.540	1.664	1.788	1.912	2.138	2.262	2.387	2.511	kg
	Radioactive waste	0.000235	0.000291	0.000347	0.000402	0.000458	0.000466	0.000577	0.000689	0.000800	0.000912	0.001031	0.001143	0.001254	0.001365	kg
5	Climate change	4.34	5.36	6.39	7.41	8.44	8.91	10.96	13.01	15.06	17.11	19.63	21.68	23.73	25.78	kg equivalent CO2
6	Atmospheric acidification	0.0115	0.0141	0.0167	0.0193	0.0219	0.0240	0.0292	0.0344	0.0396	0.0448	0.0521	0.0573	0.0624	0.0676	kg equivalent SO2
7	Air pollution	232	268	304	340	377	420	492	565	637	710	825	898	970	1043	m³
8	Water pollution	8.25	10.18	12.10	14.02	15.95	16.38	20.23	24.07	27.92	31.77	36.05	39.90	43.74	47.59	m³
9	Stratospheric ozone layer destruction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	kg CFC equivalent R11
10	Photochemical ozone formation	0.000508	0.000621	0.000734	0.000847	0.000960	0.000995	0.001220	0.001446	0.001672	0.001898	0.002158	0.002384	0.002610	0.002835	kg equivalent ethvlene

▪ **For further enquiries**

- INIES database: www.inies.fr
- FDES issuer: Thermal Ceramics