

THERMAL CERAMICS

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

**EXPANDED PERLITE BOARD (EPB)
BITUMEN 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 08-005
N° AFNOR: 12-011 : 2008
Edition December 2008 – Version n°1

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 bitumen 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. In order to simplify the presentation and the reading, we will use bitumen coated 60 mm thick EPB board as a reference.

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 » program managed by the AFNOR under the reference n° 12-011 : 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, under the standard *NF P 01-010 § 4.6*.

The bitumen coated Expanded Perlite Boards are commercialised under the names: FESCO S, FESCO C-S

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

Use of the FDES

Only THERMAL CERAMICS and its clients, with the company's agreement, may claim authorship of this file.

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
Tel: +33 (0)4 77 52 73 14

ENVIRONMENTAL AND HEALTH SUMMARY
IN COMPLIANCE WITH NF P 01-010
FDES PUBLISHED DECEMBER 2008

Characterisation of the product

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

One (1) m² of bitumen 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 distribution 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 quality of life	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	Energetic resources consumption:															
	Total primary energy	110	132	154	175	197	207	251	295	338	382	436	480	523	567	MJ
	Renewable energy	4.54	5.62	6.71	7.80	8.88	10.66	12.83	15.00	17.17	19.34	23.30	25.47	27.64	29.81	MJ
	Non-renewable energy	105	126	147	168	188	196	238	280	321	363	412	454	496	537	MJ
2	Natural material consumption	0.0401	0.0476	0.0550	0.0625	0.0700	0.0732	0.0882	0.1032	0.1181	0.1331	0.1513	0.1662	0.1812	0.1962	kg equivalent antimony (Sb)
3	Total water consumption	53	60	68	75	83	86	101	116	131	146	164	179	194	209	litre
4	Solid waste:															
	Valued 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	0.000629	0.000778	0.000927	0.001076	0.001225	0.001253	0.001551	0.001849	0.002148	0.002446	0.002771	0.003070	0.003368	0.003666	kg
	Non dangerous waste	3.67	4.47	5.26	6.06	6.86	7.05	8.64	10.24	11.83	13.42	15.21	16.80	18.40	19.99	kg
	Inert waste	1.076	1.138	1.200	1.263	1.325	1.426	1.551	1.675	1.799	1.923	2.149	2.273	2.398	2.522	kg
	Radioactive waste	0.000241	0.000297	0.000353	0.000408	0.000464	0.000472	0.000583	0.000695	0.000806	0.000918	0.001037	0.001148	0.001260	0.001371	kg
5	Climate change	4.51	5.53	6.56	7.58	8.61	9.07	11.12	13.17	15.22	17.27	19.79	21.84	23.89	25.94	kg equivalent CO2
6	Atmospheric acidification	0.0134	0.0160	0.0186	0.0212	0.0238	0.0259	0.0311	0.0363	0.0415	0.0467	0.0540	0.0592	0.0643	0.0695	kg equivalent SO2
7	Air pollution	250	286	323	359	395	438	510	583	656	728	843	916	989	1061	m³
8	Water pollution	8.98	10.90	12.83	14.75	16.67	17.11	20.96	24.80	28.65	32.50	36.78	40.63	44.47	48.32	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	0.000571	0.000684	0.000796	0.000909	0.001022	0.001057	0.001283	0.001509	0.001734	0.001960	0.002221	0.002447	0.002672	0.002898	kg equivalent ethylene

▪ **For further enquiries**

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