

# Environmental Product Declaration

according to ISO 14025



**Microporous Calcium Silicate  
Insulating Material**

**CALSITHERM**  
Silikatbaustoffe GmbH

Declaration Number  
AUB-CSP-10106-E - Summary

ARBEITSGEMEINSCHAFT UMWELTVERTRÄGLICHES BAUPRODUKT E.V.  
[www.bau-umwelt.com](http://www.bau-umwelt.com)



			<p>Summary</p> <p><b>Environmental Product Declaration</b></p>
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<p><b>ARBEITSGEMEINSCHAFT UMWELTVERTRÄGLICHES BAUPRODUKT E.V.</b></p> <p><a href="http://www.bau-umwelt.com">www.bau-umwelt.com</a></p>	 <p>ARBEITSGEMEINSCHAFT UMWELTVERTRÄGLICHES BAUPRODUKT E.V.</p>	<p>Programme holder</p>
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<p>Calsitherm Silikatbaustoffe GmbH An der Eiche 15 D-33175 Bad Lippspringe</p>	<p><b>CALSITHERM</b> Silikatbaustoffe GmbH</p>	<p>Declaration holder</p>
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<p>AUB-CSP-10106-E</p>	<p>Declaration number</p>
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<p><b>Silca, Silcal, Microcal Calcium Silicate Panels; Calsitherm-Klimaplatte</b></p> <p>This declaration is an Environmental Product Declaration according to ISO 14025 and describes the environmental performance of the above mentioned building products.</p> <p>All relevant environmental data are disclosed in this validated declaration.</p>	<p>Declared building products</p>
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<p>This validated declaration authorises the holder to bear the official stamp of the AUB. It is valid for the above mentioned products for three years from the date of issue. The declaration holder is liable for the information and evidence on which the declaration is based.</p>	<p>Validity</p>
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<p>The <b>declaration</b> contains in detail:</p> <ul style="list-style-type: none"> <li>- Product definition and physical data</li> <li>- Information about raw materials and origin</li> <li>- Specifications on manufacturing steps</li> <li>- References for product processing</li> <li>- Information on product use, singular effects and end of life</li> <li>- LCA results</li> <li>- Evidence and verifications</li> </ul>	<p>Content of the declaration</p>
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<p>20th January 2006</p>	<p>Date of issue</p>
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		<p>Signatures</p>
<p>Prof. Dr.-Ing. Horst J. Bossenmayer (Chairman of the AUB)</p>		

<p>This declaration, and the rules which on it is based, have been verified by the independent Advisory Board (SVA) according to ISO 14025.</p>	<p>Verification</p>
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		<p>Signatures</p>
<p>Prof. Dr.-Ing. Hans-Wolf Reinhardt (Chairman of the SVA)</p>	<p>Dr. Eva Schmincke (Verifier appointed by the SVA)</p>	



**Summary**

**Environmental Product Declaration**

Silca, Silcal, Microcal Calcium Silicate Panels and Calsitherm-Klimaplatten (named CSP) are calcium silicate hydrates, containing a marginal fraction (< 0,6 vol -%) of cellulose. Their color is white or light grey. The materials are durable, temperature-resistant up to 1050 °C and are available in thicknesses between 20 and 100 mm with densities from 200 to 390 kg/m³.

**Product description**

Panels for high temperature insulation for heat engineering constructions. Fire protection panels for the building construction sector. Panels for completion of the interior, reconstruction of old buildings, timbered houses and humidors, in particular for insulation and humidity regulation with a mould inhibitory effect. Within the preservation of ancient monuments for indoor insulation installations.

**Applications**

The **Life Cycle Assessment (LCA)** was carried out according to DIN ISO 14040. Specific data from the company CALSITHERM Bad Lippspringe, Germany and the "GaBi 4" database were used. The LCA was carried out for the products' manufacturing phase, taking into account all background data such as the extraction of raw materials and transportation as well as disposal and recycling of boards and other residues (e.g. packaging material).

**Scope of the LCA**

<b>Silca, Silcal, Microcal Calcium silicate panels; Calsitherm-Klimaplatte</b>		
<b>Parameter</b>	<b>Unit per m<sup>3</sup></b>	<b>Production CSH Plate</b>
Primary energy, non-renewable	[MJ]	<b>6457</b>
Primary energy, renewable	[MJ]	<b>264</b>
Global Warming Potential (GWP)	[kg CO <sub>2</sub> -Eqv.]	<b>504.1</b>
Ozone Depletion Potential (ODP)	[kg R11-Eqv.]	<b>28.6 * 10<sup>-6</sup></b>
Acidification Potential (AP)	[kg SO <sub>2</sub> -Eqv.]	<b>0.69</b>
Eutrophication Potential (EP)	[kg PO <sub>4</sub> -Eqv.]	<b>0.094</b>
Photochemical Ozone Creation Potential (POCP)	[kg Ethene-Eqv.]	<b>0.087</b>

**Results of the LCA**

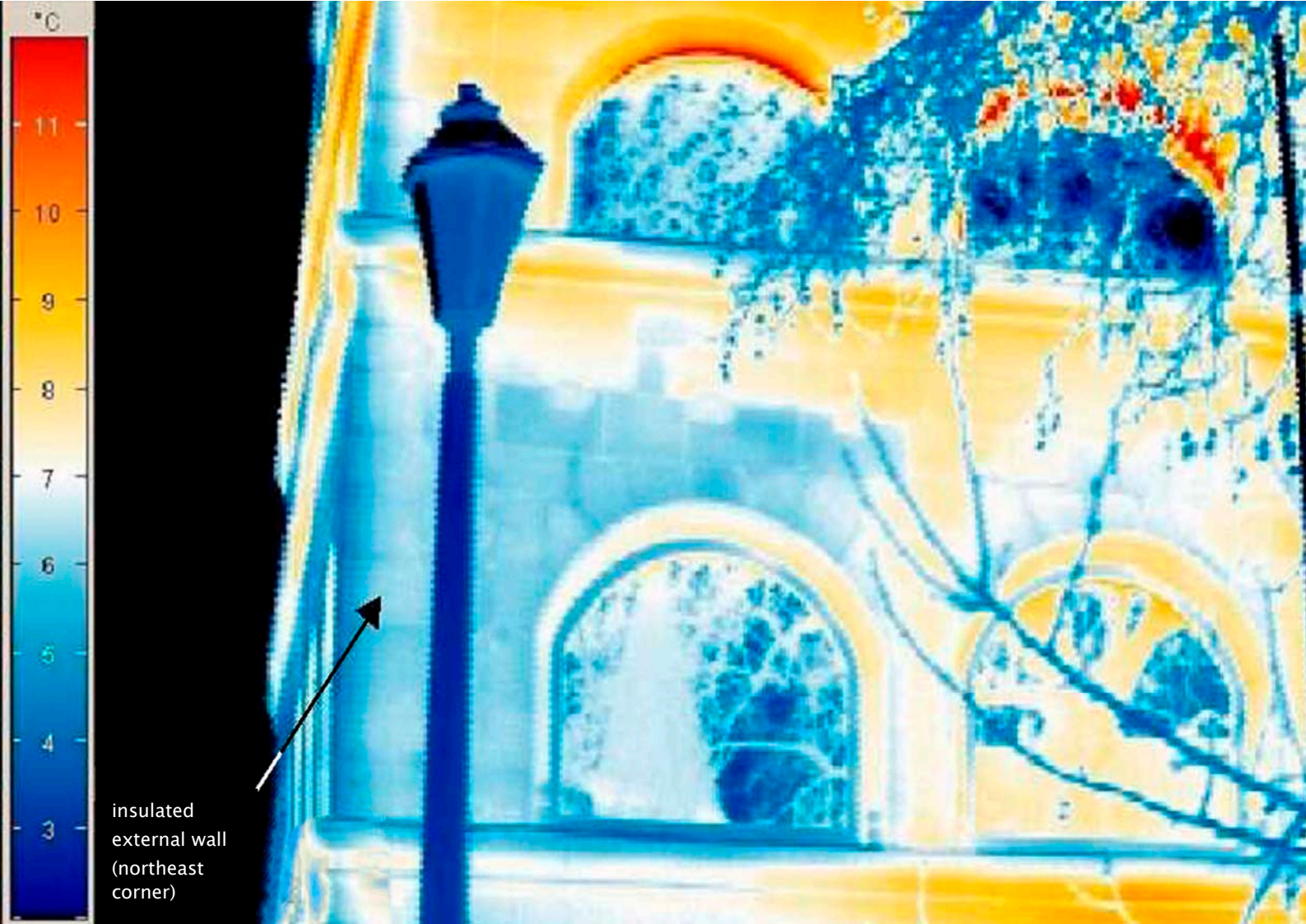
Issued by Calsitherm Silikatbaustoffe GmbH, Bad Lippspringe in cooperation with PE Europe GmbH, Leinfelden-Echterdingen



The following **evidence** and **verifications** are described in the Environmental Product Declaration:

**Evidence and verifications**

<b>Eluate Analysis</b>	Institut für Lebensmittel-, Wasser- und Umwelttechnik, 33098 Paderborn Result: The testing showed no adverse effect on the eluate by heavy metals, PAHs, phenols, hydrocarbons, fluorides and cyanides.
<b>Radioactivity</b>	Universität Gesamthochschule Paderborn, Fachbereich 6 – Physik, 33095 Paderborn, Prof. Dr. J. Mimkes Result: The testing showed no increased values compared to the natural radioactivity.



insulated  
external wall  
(northeast  
corner)



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