SENTINEL HOLDING
INSTITUT

SHI PRODUCT PASSPORT

Find products. Certify buildings.

SHI Product Passport No.:

1174-10-1001

Tonschaum-Dämmung

Product group: Clay - Insulation - Blown-in insulation

Sicher. Stark.
Styrodur®

BASF SE
Carl-Bosch-Str.38
67056 Ludwigshafen

Product qualities:

- SHI Product Assessment 2024
- QNG Qualitätssiegel Nachhaltiges Gebäude
- DGNB NEW CONSTRUCTION 2023
- DGNB NEW CONSTRUCTION 2018
- BNB-BN NEUBAU V2015
- EU taxonomy

CERTIFIED SUSTAINABLE PRODUCT
SHI PRODUCT PASSPORT
SENTINEL HOLDING INSTITUT
www.sentinel-holding.eu

Köttner

Helmut Köttner
Scientific Director
Freiburg, 11 February 2026

SENTINEL HOLDING
INSTITUT

Product:
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Contents

The SHI Database is the first and only database for construction products whose comprehensive processes and data accuracy are regularly verified by the independent auditing company SGS-TÜV Saar

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SHI Product Assessment 2024

Since 2008, Sentinel Holding Institut GmbH (SHI) has been establishing a unique standard for products that support healthy indoor air. Experts carry out independent product assessments based on clear and transparent criteria. In addition, the independent testing company SGS regularly audits the processes and data accuracy.

Criteria	Product category	Harmful substance limit	Assessment
SHI Product Assessment	Insulation materials	TVOC ≤ 300 µg/m^3 Formaldehyd ≤ 24 µg/m^3	Indoor Air Quality Certified

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QNG - Qualitätssiegel Nachhaltiges Gebäude

The Qualitätssiegel Nachhaltiges Gebäude (Quality Seal for Sustainable Buildings), developed by the German Federal Ministry for Housing, Urban Development and Building (BMWSB), defines requirements for the ecological, socio-cultural, and economic quality of buildings. The Sentinel Holding Institut evaluates construction products in accordance with QNG requirements for certification and awards the QNG ready label. Compliance with the QNG standard is a prerequisite for eligibility for the KfW funding programme. For certain product groups, the QNG currently has no specific requirements defined. Although classified as not assessment-relevant, these products remain suitable for QNG-certified projects.

Criteria	Pos. / product group	Considered substances	QNG assessment
3.1.3 Schadstoffvermeidung in Baumaterialien	not applicable	not applicable	QNG ready - Not relevant for assessment

Product:
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DGNB New Construction 2023

The DGNB System (German Sustainable Building Council) assesses the sustainability of various types of buildings. It can be applied to both large-scale private and commercial projects as well as smaller residential buildings. The 2023 version sets high standards for ecological, economic, socio-cultural, and functional aspects throughout the entire life cycle of a building.

Criteria	No. / Relevant building components / construction materials / surfaces	Considered substances / aspects	Quality level
ENV 1.2 Local environmental impact, 03.05.2024 (3rd edition)			Not relevant for assessment

Criteria	No. / Relevant building components / construction materials / surfaces	Considered substances / aspects	Quality level
ENV 1.2 Local environmental impact, 29.05.2025 (4th edition)			Quality level 4

Product:
Tonschaum-Dämmung

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DGNB New Construction 2018

The DGNB System (German Sustainable Building Council) assesses the sustainability of various types of buildings. It can be applied to both large-scale private and commercial projects as well as smaller residential buildings.

Criteria	No. / Relevant building components / construction materials / surfaces	Considered substances / aspects	Quality level
ENV 1.2 Local environmental impact			Not relevant for assessment

Product:
Tonschaum-Dämmung

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BNB-BN Neubau V2015

The Bewertungssystem Nachhaltiges Bauen (Assessment System for Sustainable Building) is a tool for evaluating public office and administrative buildings, educational facilities, laboratory buildings, and outdoor areas in Germany. The BNB was developed by the former Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) and is now overseen by the Federal Ministry for Housing, Urban Development and Building (BMWSB).

Criteria	Pos. / product type	Considered substance group	Quality level
1.1.6 Risiken für die lokale Umwelt	36b Mineral and non-mineral interior insulations	VOC / biocides / hazardous substances / individual hazardous substances (formaldehyde) / halogenated blowing agents	Quality level 4
Verification: Prüfbericht eurofins Nr. 392-2018-00505701_G_DE vom 16.01.2019 in Verbindung mit Konformitätserklärung vom 04.02.2026.			

Product:
Tonschaum-Dämmung

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EU taxonomy

The EU Taxonomy classifies economic activities and products according to their environmental impact. At the product level, the EU regulation defines clear requirements for harmful substances, formaldehyde and volatile organic compounds (VOCs). The Sentinel Holding Institut GmbH labels qualified products that meet this standard.

Criteria	Product type	Considered substances	Assessment
DNSH - Pollution prevention and control	Internal insulation	Substances according to Annex C, formaldehyde, carcinogenic VOCs category 1A/1B	EU taxonomy compliant

Verification: Prüfbericht eurofins Nr. 392-2018-00505701_G_DE vom 16.01.2019 in Verbindung mit Konformitätserklärung vom 04.02.2026. Herstellererkälrung "Absence declaration" vom 23.01.2026

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Product labels

In the construction industry, high-quality materials are crucial for a building's indoor air quality and sustainability. Product labels and certificates offer guidance to meet these requirements. However, the evaluation criteria of these labels vary, and it is important to carefully assess them to ensure products align with the specific needs of a construction project.

Products bearing the Sentinel Holding Institute QNG-ready seal are suitable for projects aiming to achieve the "Qualitätssiegel Nachhaltiges Gebäude" (Quality Seal for Sustainable Buildings). QNG-ready products meet the requirements of QNG Appendix Document 3.1.3, “Avoidance of Harmful Substances in Building Materials.” The KfW loan program Climate-Friendly New Construction with QNG may allow for additional funding.

This product is SHI Indoor Air Quality certified and recommended by Sentinel Holding Institut. Indoor-air-focused construction, renovation, and operation of buildings is made possible by transparent and verifiable criteria thanks to the Sentinel Holding concept.

Product:
Tonschaum-Dämmung

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Legal notices

(*) These criteria apply to the construction project as a whole. While individual products can positively contribute to the overall building score through proper planning, the evaluation is always conducted at the building level. The information was provided entirely by the manufacturer.

Find our criteria here: https://www.sentinel-holding.eu/de/Themenwelten/Pr%C3%BCfkriterien%20f%C3%BCr%20Produkte

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SGS TÜV SAAR

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Clay Foam
Technical Information

The clay foam can be used to increase the thermal insulation properties of double-leafed masonry by filling the cavity. The foam is produced from the aqueous components Cavipor® F0 conc., Cavipor® T0, Cavipor® X0, water, and air as an in-situ foam. It is injected into the cavity in its fresh state in which it is pumpable and flowable. After 15 – 120 seconds the foam sets and the drying starts leading to the final state.

Chemical Characterization

Dry foam comprising

approx. 90%	mineral particles
approx. 8%	binder system
approx. 2%	surfactants

Globally Harmonized System, EU (GHS)

The product does not require a hazard warning label in accordance with GHS criteria.

Properties

Product specifications

appearance	grey
density	28 – 35 g/L
solid content (2 h, 120 °C)	95 – 100%$_{weight}$

We create chemistry

Sicherheitsdatenblatt

BASF Sicherheitsdatenblatt gemäß Verordnung (EG) Nr. 1907/2006 in der jeweils gültigen Fassung.
Datum / überarbeitet am: 29.09.2025 Version: 7.0
Datum / Vorherige Version: 24.04.2024 Vorherige Version: 6.1
Produkt: **Tonschaum trocken**
(ID Nr. 898509/SDS_GEN_DE/DE)
Druckdatum 27.01.2026

ABSCHNITT 1: Bezeichnung des Stoffes bzw. des Gemisches und des Unternehmens

1.1. Produktidentifikator

Tonschaum trocken

1.2. Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird

Geeigneter Verwendungszweck: Chemikalie

1.3. Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt

Firma:
BASF SE
67056 Ludwigshafen
GERMANY

Telefon: +49 621 60-0
E-Mailadresse: global.info@basf.com

1.4. Notrufnummer

International emergency number:
Telefon: +49 180 2273-112

ABSCHNITT 2: Mögliche Gefahren

2.1. Einstufung des Stoffs oder Gemischs

Für die Einstufung des Gemisches wurden die folgenden Methoden angewandt: Extrapolation auf die Konzentrationswerte der gefährlichen Stoffe auf der Grundlage von Testergebnissen und Experteneinschätzung. Die angewandten Methoden sind bei den jeweiligen Testergebnissen angegeben.

Entsprechend der Verordnung (EG) Nr. 1272/2008 [CLP]

Das Produkt ist nach GHS-Kriterien nicht einstufungspflichtig.

2.2. Kennzeichnungselemente

Entsprechend der Verordnung (EG) Nr. 1272/2008 [CLP]

Das Produkt ist nach GHS-Kriterien nicht kennzeichnungspflichtig.

2.3. Sonstige Gefahren

Entsprechend der Verordnung (EG) Nr. 1272/2008 [CLP]

Keine besonderen Gefahren bekannt, wenn die Vorschriften/Hinweise für Lagerung und Umgang beachtet werden. Sofern zutreffend werden in diesem Abschnitt Angaben über sonstige Gefahren gemacht, die keine Einstufung bewirken, aber zu den insgesamt von dem Stoff oder Gemisch ausgehenden Gefahren beitragen können.
Das Produkt enthält keinen Stoff oberhalb rechtlicher Grenzwerte, der die Kriterien für PBT (persistent, bioakkumulativ und toxisch) oder vPvB (sehr persistent und sehr bioakkumulativ) erfüllt.
Das Produkt enthält keinen Stoff über den gesetzlichen Grenzwerten, der in die gemäß Artikel 59(1) der Verordnung (EG) Nr. 1907/2006 erstellte Liste aufgrund endokrinschädlicher Eigenschaften aufgenommen wurde oder der gemäß der Delegierten Verordnung (EU) 2017/2100 der Kommission oder der Verordnung (EU) 2018/605 der Kommission endokrinschädigende bzw. endokrinschädliche Eigenschaften aufweist.

ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

3.1. Stoffe

Nicht anwendbar

3.2. Gemische

Chemische Charakterisierung

Mineralmischung

Regulatorisch relevante Inhaltsstoffe

Reaktionsprodukte von D-Glucose und C10-C16 (geradzahlig) Alkoholen

Gehalt (W/W): >= 0,2 % - < 1 % CAS-Nummer: 110615-47-9 REACH Registriernummer: 01-2119489418-23	Skin Irrit. 2 Eye Dam. 1 H318, H315 Spezifische Konzentrationsgrenzen: Eye Dam. 1: > 12 % Skin Irrit. 2: > 30 %

Für die in diesem Abschnitt nicht vollständig ausgeschriebenen Einstufungen, einschließlich der Gefahrenklassen und der Gefahrenhinweise, ist der volle Wortlaut in Abschnitt 16 aufgeführt.

ABSCHNITT 4: Erste-Hilfe-Maßnahmen

4.1. Beschreibung der Erste-Hilfe-Maßnahmen

Verunreinigte Kleidung entfernen.

Nach Einatmen:
Ruhe, Frischluft.

Nach Hautkontakt:
mit Wasser und Seife gründlich abwaschen

Nach Augenkontakt:
Mindestens 15 Minuten bei gespreizten Lidern unter fließendem Wasser gründlich ausspülen.

Nach Verschlucken:
Mund ausspülen und 200 - 300 ml Wasser nachtrinken.

4.2. Wichtigste akute und verzögerte Symptome und Auswirkungen

Symptome: (Weitere) Symptome und/oder Wirkungen sind bisher nicht bekannt

Gefahren: (Weitere) Symptome und/oder Wirkungen sind bisher nicht bekannt

4.3. Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung

Behandlung: Symptomatische Behandlung (Dekontamination, Vitalfunktionen).

ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

5.1. Löschmittel

Geeignete Löschmittel:
Wassersprühstrahl, Schaum, Löschpulver, Kohlendioxid

Aus Sicherheitsgründen ungeeignete Löschmittel:
Wasservollstrahl

5.2. Besondere, von dem betreffenden Stoff oder Gemisch ausgehende Gefahren

Gefährdende Stoffe: Stickoxide, Kohlenoxide
Hinweis: Die genannten Stoffe/Stoffgruppen können bei einem Brand freigesetzt werden.

5.3. Hinweise für die Brandbekämpfung

Besondere Schutzausrüstung:
Umluftunabhängiges Atemschutzgerät und Chemikalienschutzkleidung tragen.

Weitere Angaben:
Kontaminiertes Löschwasser getrennt sammeln, darf nicht in Kanalisation oder Abwasser gelangen.

ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

6.1. Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren

Berührung mit der Haut, Augen, Kleidung vermeiden.

6.2. Umweltschutzmaßnahmen

Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.

6.3. Methoden und Material für Rückhaltung und Reinigung

Für große Mengen: Produkt abpumpen.
Bei Resten: Mit geeignetem, flüssigkeitsbindendem Material (z.B. Sand, Sägemehl, Universalbindemittel, Kieselgur) aufnehmen. Das aufgenommene Material vorschriftsmäßig entsorgen.

6.4. Verweis auf andere Abschnitte

Angaben zur Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen und zu Hinweisen zur Entsorgung können den Abschnitten 8 und 13 entnommen werden.

ABSCHNITT 7: Handhabung und Lagerung

7.1. Schutzmaßnahmen zur sicheren Handhabung

Die beim Umgang mit Chemikalien üblichen Vorsichtsmaßnahmen sind zu beachten.

7.2. Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten

Lagerklasse gemäß TRGS 510 (ursprünglich VCI, Deutschland): (13) Nicht brennbare Feststoffe

7.3. Spezifische Endanwendungen

Bei den relevanten identifizierten Verwendungen gemäß Abschnitt 1 sind die in diesem Abschnitt 7 genannten Hinweise zu beachten.

ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

8.1. Zu überwachende Parameter

Bestandteile mit Grenzwerten für die Exposition am Arbeitsplatz

Um die Wirksamkeit von Schutzmaßnahmen, z.B. Lüftung oder die Notwendigkeit von Atemschutz zu überprüfen, kann eine messtechnische Überwachung des Arbeitsplatzes notwendig sein. Da dies eine spezielle Fachkunde erfordert, sollten dafür nur akkreditierte Messstellen beauftragt werden. Bezüglich geeigneter Verfahren zur Ermittlung inhalativer Exposition sind die europäischen Normen EN 482, 689 und 14042 anzuwenden. Zusätzlich ist die TRGS 402 in Deutschland zu beachten.

7631-86-9: Siliciumdioxid
AGW 1 mg/m3 (TRGS 900 (DE)), Einatembare Fraktion
Spitzenbegrenzung/Überschreitungsfaktor: 8
Wenn der Arbeitsplatzgrenzwert (AGW) und der Biologische Grenzwert (BGW) eingehalten werden, ist kein Risiko einer Fruchtschädigung zu befürchten (s. TRGS 900, Nummer 2.7).
Einstufung der Kurzzeitexposition: (TRGS 900 (DE)), Einatembare Fraktion
Kategorie II: Resorptiv wirksame Stoffe

7778-18-9: Calciumsulfat
AGW 1,25 mg/m3 (TRGS 900 (DE)), Alveolengängiger Staub
Wenn der Arbeitsplatzgrenzwert (AGW) und der Biologische Grenzwert (BGW) eingehalten werden, ist kein Risiko einer Fruchtschädigung zu befürchten (s. TRGS 900, Nummer 2.7).
AGW 10 mg/m3 (TRGS 900 (DE)), Einatembarer Staub
Spitzenbegrenzung/Überschreitungsfaktor: 2
Wenn der Arbeitsplatzgrenzwert (AGW) und der Biologische Grenzwert (BGW) eingehalten werden, ist kein Risiko einer Fruchtschädigung zu befürchten (s. TRGS 900, Nummer 2.7).
Einstufung der Kurzzeitexposition: (TRGS 900 (DE)), Einatembarer Staub
Kategorie II: Resorptiv wirksame Stoffe

8.2. Begrenzung und Überwachung der Exposition

Persönliche Schutzausrüstung

Handschutz:
Chemikalienbeständige Schutzhandschuhe (EN ISO 374-1)
Wegen großer Typenvielfalt sind die Gebrauchsanweisungen der Hersteller zu beachten.

Augenschutz:
Schutzbrille mit Seitenschutz (Gestellbrille) (z.B. EN 166)

Körperschutz:
Körperschutzmittel in Abhängigkeit von Tätigkeit und möglicher Einwirkung auswählen, z.B. Schürze, Schutzstiefel, Chemikalienschutzanzug (nach EN 14605 bei Spritzern oder EN ISO 13982 bei Staub)

Allgemeine Schutz- und Hygienemaßnahmen

Die beim Umgang mit Chemikalien üblichen Vorsichtsmaßnahmen sind zu beachten. Bei der Verwendung nicht essen, trinken oder rauchen. Augenkontakt und Hautkontakt vermeiden. Verschmutzte, getränkte Kleidung sofort ausziehen. Hautverschmutzung mit viel Wasser und Seife abwaschen, Hautpflege.

ABSCHNITT 9: Physikalische und chemische Eigenschaften

9.1. Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften

Aggregatzustand:	fest
Form:	Schaum
Farbe:	grau bis dunkelgrau
Geruch:	geruchlos
Entzündlichkeit:	nicht entzündbar

Untere Explosionsgrenze:
Für Feststoffe nicht einstufungs- und kennzeichnungsrelevant.

Obere Explosionsgrenze:
Für Feststoffe nicht einstufungs- und kennzeichnungsrelevant.

Flammpunkt:
nicht anwendbar, das Produkt ist ein Feststoff

Zündtemperatur:
nicht anwendbar

Thermische Zersetzung: Es ist kein selbstzersetzungsfähiger Stoff.

pH-Wert: ca. 7,5 - 8,5 (DIN EN ISO 787-9)

Viskosität, kinematisch:
nicht bestimmt

Viskosität, dynamisch:
nicht bestimmt

Wasserlöslichkeit: nicht löslich

Verteilungskoeffizient n-Octanol/Wasser (log Kow):
nicht anwendbar für Mischungen

Dampfdruck:
nicht bestimmt

Dichte: ca. 0,02 - 0,04 g/cm3
(20 °C)

Relative Dampfdichte (Luft):
Das Produkt ist ein nichtflüchtiger Feststoff.

Partikeleigenschaften

Partikelgrößenverteilung: Der Stoff /das Produkt wird in nicht festem oder körnigen Zustand in den Verkehr gebracht oder verwendet. -

9.2. Sonstige Angaben

Angaben über physikalische Gefahrenklassen

Explosive Stoffe /Gemische und Erzeugnisse mit Explosivstoff

Explosionsgefahr: nicht explosionsgefährlich

Brandfördernde Eigenschaften

Brandfördernde Eigenschaften: nicht brandfördernd

Stoffe und Gemische, die in Berührung mit Wasser entzündbare Gase entwickeln

Bildung von entzündlichen Gasen:
Mit Wasser keine Bildung von entzündlichen Gasen.

Sonstige sicherheitstechnische Kenngrößen

Schüttdichte:
nicht anwendbar

Mischbarkeit mit Wasser:
nicht mischbar

ABSCHNITT 10: Stabilität und Reaktivität

10.1. Reaktivität

Keine gefährlichen Reaktionen, wenn die Vorschriften/Hinweise für Lagerung und Umgang beachtet werden.

Bildung von entzündlichen Gasen:	Bemerkungen:	Mit Wasser keine Bildung von entzündlichen Gasen.

10.2. Chemische Stabilität

Das Produkt ist stabil, wenn die Vorschriften/Hinweise für Lagerung und Umgang beachtet werden.

10.3. Möglichkeit gefährlicher Reaktionen

Keine gefährlichen Reaktionen bei vorschriftsmäßiger Lagerung und Handhabung.
Das Produkt ist stabil, wenn die Vorschriften/Hinweise für Lagerung und Umgang beachtet werden.

10.4. Zu vermeidende Bedingungen

Siehe SDB Abschnitt 7 - Handhabung und Lagerung.

10.5. Unverträgliche Materialien

Zu vermeidende Stoffe:
Keine bekannt bei sachgemäßer Anwendung/Lagerung.

10.6. Gefährliche Zersetzungsprodukte

Keine gefährlichen Zersetzungsprodukte, wenn die Vorschriften/Hinweise für Lagerung und Umgang beachtet werden.

ABSCHNITT 11: Toxikologische Angaben

11.1. Angaben zu den Gefahrenklassen im Sinne der Verordnung (EG) Nr. 1272/2008

Akute Toxizität

Beurteilung Akute Toxizität:

Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

Reizwirkung

Beurteilung Reizwirkung:

Wirkt nicht reizend an den Augen. Wirkt nicht reizend an der Haut. Einatmen von Staub führt zu leichter Reizung der Atemwege.

Experimentelle/berechnete Daten:

Hautverätzung/-reizung

Kaninchen: Nicht reizend. (OECD Guideline 404)

Ernsthafte Augenschädigung/-reizung

Kaninchen: Nicht reizend. (OECD Guideline 405)

Angaben zu: Reaktionsprodukte von D-Glucose und C10-C16 (geradzahlig) Alkoholen
Experimentelle/berechnete Daten:
Hautverätzung/-reizung
Kaninchen: Reizend. (OECD Guideline 404)

Angaben zu: Reaktionsprodukte von D-Glucose und C10-C16 (geradzahlig) Alkoholen
Experimentelle/berechnete Daten:
Ernsthafte Augenschädigung/-reizung
Kaninchen: Irreversibler Schaden (OECD Guideline 405)

Atemwegs-/Hautsensibilisierung

Beurteilung Sensibilisierung:

Wirkt nicht hautsensibilisierend in Prüfungen am Tier.

Experimentelle/berechnete Daten:

Mouse Local Lymph Node Assay (LLNA) Maus: nicht sensibilisierend (OECD Guideline 429)

Keimzellenmutagenität

Beurteilung Mutagenität:

Der Stoff zeigte an Bakterien keine erbgutverändernden Eigenschaften. Der Stoff zeigte an Säugerzellkulturen keine erbgutverändernden Eigenschaften.

Kanzerogenität

Beurteilung Kanzerogenität:
Nicht eingestuft, bedingt durch fehlende Daten.

Reproduktionstoxizität

Beurteilung Reproduktionstoxizität:
Nicht eingestuft, bedingt durch fehlende Daten.

Entwicklungstoxizität

Beurteilung Teratogenität:

Nicht eingestuft, bedingt durch fehlende Daten.

Spezifische Zielorgan-Toxizität (einmalige Exposition)

Beurteilung STOT einfach:
Die verfügbaren Informationen reichen nicht für eine Bewertung der spezifischen Zielorgantoxizität aus.

Toxizität bei wiederholter Gabe und spezifische Zielorgan-Toxizität (wiederholte Exposition)

Beurteilung Toxizität bei wiederholter Verabreichung:

Keine Daten vorhanden.

Aspirationsgefahr

nicht anwendbar

Wechselwirkungen

Keine Daten vorhanden.

11.2. Angaben über sonstige Gefahren

Endokrinschädliche Eigenschaften

Das Produkt enthält keinen Stoff über den gesetzlichen Grenzwerten, der in die gemäß Artikel 59(1) der Verordnung (EG) Nr. 1907/2006 erstellte Liste aufgrund endokrinschädlicher Eigenschaften aufgenommen wurde oder der gemäß der Delegierten Verordnung (EU) 2017/2100 der Kommission oder der Verordnung (EU) 2018/605 der Kommission endokrinschädigende bzw. endokrinschädliche Eigenschaften aufweist.

Sonstige Angaben

Sonstige Hinweise zur Toxizität

Das Produkt wurde nicht geprüft. Die Aussagen zur Toxikologie wurden von Produkten ähnlicher Struktur oder Zusammensetzung abgeleitet.

ABSCHNITT 12: Umweltbezogene Angaben

12.1. Toxizität

Beurteilung aquatische Toxizität:
Mit hoher Wahrscheinlichkeit akut nicht schädlich für Wasserorganismen.
Das Produkt wurde nicht geprüft.

12.2. Persistenz und Abbaubarkeit

Beurteilung Bioabbau und Elimination (H2O):
Anorganisches Produkt, ist durch biologische Reinigungsverfahren nicht aus dem Wasser eliminierbar.

12.3. Bioakkumulationspotenzial

Beurteilung Bioakkumulationspotential:
Eine Anreicherung in Organismen ist nicht zu erwarten.

12.4. Mobilität im Boden

Beurteilung Transport zwischen Umweltkompartimenten:
Flüchtigkeit: Keine Daten vorhanden.
Adsorption an Böden: Keine Daten vorhanden.

12.5. Ergebnisse der PBT- und vPvB-Beurteilung

Gemäß Anhang XIII der Verordnung (EG) Nr.1907/2006 zur Registrierung, Bewertung, Zulassung und Beschränkung chemischer Stoffe (REACH): Das Produkt erfüllt nicht die Kriterien für PBT (persistent/bioakkumulativ/toxisch) und vPvB (sehr persistent/sehr bioakkumulativ).

12.6. Endokrinschädliche Eigenschaften

Das Produkt enthält keinen Stoff über den gesetzlichen Grenzwerten, der in die gemäß Artikel 59(1) der Verordnung (EG) Nr. 1907/2006 erstellte Liste aufgrund endokrinschädlicher Eigenschaften aufgenommen wurde oder der gemäß der Delegierten Verordnung (EU) 2017/2100 der Kommission oder der Verordnung (EU) 2018/605 der Kommission endokrinschädigende bzw. endokrinschädliche Eigenschaften aufweist.

12.7. Andere schädliche Wirkungen

Es liegen keine Hinweise auf sonstige Gefahren für die Umwelt vor.

Zusätzliche Hinweise

Sonstige Hinweise Verteilung & Verbleib:
Bei der Behandlung bzw. Einleitung der Abwässer in biologische Kläranlagen sind die örtlichen und behördlichen Vorschriften und Bestimmungen einzuhalten.

Sonstige ökotoxikologische Hinweise:
Das Produkt wurde nicht geprüft. Die Aussagen zur Ökotoxikologie wurden von den Eigenschaften der Einzelkomponenten abgeleitet.

ABSCHNITT 13: Hinweise zur Entsorgung

13.1. Verfahren der Abfallbehandlung

Muss unter Beachtung der örtlichen Vorschriften, z. B. einer geeigneten Deponie oder einer geeigneten Verbrennungsanlage, zugeführt werden.

Ungereinigte Verpackung:
Nicht kontaminierte Verpackungen können wiederverwendet werden.Nicht reinigungsfähige Verpackungen sind wie der Stoff zu entsorgen.

ABSCHNITT 14: Angaben zum Transport

Landtransport

ADR

	Kein Gefahrgut im Sinne der Transportvorschriften
UN-Nummer oder ID-Nummer:	Nicht anwendbar
Ordnungsgemäße UN-Versandbezeichnung:	Nicht anwendbar
Transportgefahrenklassen:	Nicht anwendbar
Verpackungsgruppe:	Nicht anwendbar
Umweltgefahren:	Nicht anwendbar
Besondere Vorsichtshinweise für den Anwender	Keine bekannt

RID

	Kein Gefahrgut im Sinne der Transportvorschriften
UN-Nummer oder ID-Nummer:	Nicht anwendbar
Ordnungsgemäße UN-Versandbezeichnung:	Nicht anwendbar
Transportgefahrenklassen:	Nicht anwendbar
Verpackungsgruppe:	Nicht anwendbar
Umweltgefahren:	Nicht anwendbar
Besondere Vorsichtshinweise für den Anwender	Keine bekannt

Binnenschiffstransport

ADN

	Kein Gefahrgut im Sinne der Transportvorschriften
UN-Nummer oder ID-Nummer:	Nicht anwendbar
Ordnungsgemäße UN-Versandbezeichnung:	Nicht anwendbar
Transportgefahrenklassen:	Nicht anwendbar
Verpackungsgruppe:	Nicht anwendbar
Umweltgefahren:	Nicht anwendbar
Besondere Vorsichtshinweise für den Anwender:	Keine bekannt

Transport im Binnentankschiff / Schiff für Schüttgüter
nicht bewertet

Seeschifftransport

IMDG

Kein Gefahrgut im Sinne der Transportvorschriften	
UN-Nummer oder ID-Nummer:	Nicht anwendbar
Ordnungsgemäße UN-Versandbezeichnung:	Nicht anwendbar
Transportgefahrenklassen:	Nicht anwendbar
Verpackungsgruppe:	Nicht anwendbar
Umweltgefahren:	Nicht anwendbar
Besondere Vorsichtshinweise für den Anwender	Keine bekannt

Sea transport

IMDG

Not classified as a dangerous good under transport regulations	
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Lufttransport

IATA/ICAO

Kein Gefahrgut im Sinne der Transportvorschriften	
UN-Nummer oder ID-Nummer:	Nicht anwendbar
Ordnungsgemäße UN-Versandbezeichnung:	Nicht anwendbar
Transportgefahrenklassen:	Nicht anwendbar
Verpackungsgruppe:	Nicht anwendbar
Umweltgefahren:	Nicht anwendbar
Besondere Vorsichtshinweise für den Anwender	Keine bekannt

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations	
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

14.1. UN-Nummer oder ID-Nummer
Siehe entsprechende Einträge für "UN-Nummer oder ID-Nummer" für die jeweiligen Regelungen in den obigen Tabellen.

14.2. Ordnungsgemäße UN-Versandbezeichnung
Siehe entsprechende Einträge für „Ordnungsgemäße UN-Versandbezeichnung“ der jeweiligen Vorschriften in den Tabellen oben.

14.3. Transportgefahrenklassen
Siehe entsprechende Einträge für „Transportgefahrenklasse(n)“ der jeweiligen Vorschriften in den Tabellen oben.

14.4. Verpackungsgruppe
Siehe entsprechende Einträge für „Verpackungsgruppe“ der jeweiligen Vorschriften in den Tabellen oben.

14.5. Umweltgefahren
Siehe entsprechende Einträge für „Umweltgefahren“ der jeweiligen Vorschriften in den Tabellen oben.

14.6. Besondere Vorsichtshinweise für den Anwender
Siehe entsprechende Einträge für „Besondere Vorsichtsmaßnahmen für den Verwender“ der jeweiligen Vorschriften in den Tabellen oben.

14.7. Massengutbeförderung auf dem Seeweg gemäß IMO-Instrumenten	Maritime transport in bulk according to IMO instruments
Es ist keine Massengutbeförderung auf dem Seeweg beabsichtigt.	Maritime transport in bulk is not intended.

ABSCHNITT 15: Rechtsvorschriften

15.1. Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch

Störfallverordnung (Deutschland):
In o.g. Vorschrift aufgeführt: nein
Die Klassifizierung gilt für Standardbedingungen von Temperatur und Druck.

Richtlinie 2012/18/EU - Beherrschung der Gefahren schwerer Unfälle mit gefährlichen Stoffen (EU):
In o.g. Vorschrift aufgeführt: nein
Die Klassifizierung gilt für Standardbedingungen von Temperatur und Druck.

Einstufung nach TA-Luft (Deutschland):
TA Luft muss berücksichtigt werden.

Wassergefährdungsklasse (§8/§10 AwSV (Selbsteinstufung des Gemisches nach Rechenregel)):
(nwg) Nicht wassergefährdend.

Falls noch andere Rechtsvorschriften anzuwenden sind, die nicht bereits an anderer Stelle in diesem Sicherheitsdatenblatt aufgeführt sind, dann befinden sie sich in diesem Unterabschnitt.

15.2. Stoffsicherheitsbeurteilung
Hinweise zum Umgang mit dem Produkt sind den Abschnitten 7 und 8 dieses Sicherheitsdatenblatts zu entnehmen.

ABSCHNITT 16: Sonstige Angaben

Bewertung der Gefahrenklassen nach Kriterien des UN GHS (in seiner aktuellsten Fassung)

Voller Wortlaut der Einstufungen, einschließlich der Gefahrenklassen und der Gefahrenhinweise, falls in Abschnitt 2 oder 3 genannt:

Skin Irrit.	Hautreizung
Eye Dam.	Schwere Augenschäden
H318	Verursacht schwere Augenschäden.
H315	Verursacht Hautreizungen.

Abkürzungen
ADR = Europäisches Übereinkommen über die internationale Beförderung gefährlicher Güter auf der Straße. ADN = Europäisches Übereinkommen über die Beförderung gefährlicher Güter auf Binnenwasserstraßen. ATE = Schätzwerte für die akute Toxizität. CAO = Cargo Aircraft Only. CAS = Chemical Abstracts Service. CLP = Einstufung, Kennzeichnung und Verpackung von Chemikalien. DIN = Deutsches Institut für Normung. DNEL = Abgeleitete Nicht-Effekt-Konzentration. EC50 = Mittlere effektive Konzentration, die bei einer Versuchspopulation eine andere definierte Wirkung als den Tod auslöst. EG = Europäische Gemeinschaft. EN = Europäische Normen. IARC = Internationale Behörde zur Erforschung von Krebs. IATA = Internationale Luftverkehrsvereinigung. IBC-Code = Internationaler Code für den Bau und die Ausrüstung von Schiffen, die gefährliche Chemikalien in großen Mengen befördern. IMDG = Internationaler Code für gefährliche Güter im Seeschiffsverkehr. ISO = Internationale Organisation für Normung. STEL = Grenzwert für Kurzzeitexposition. LC50 = Letale Konzentration, die sich auf 50% der beobachteten Population bezieht. LD50 = Letale Dosis, die sich auf 50% der beobachteten Population bezieht. MAK = Maximale Arbeitsplatzkonzentration. MARPOL = Internationales Übereinkommen zum Schutz der Meeresumwelt durch schiffsbedingte Abfälle. NEN = Niederländische Norm. NOEC = No Observed Effect Concentration. OEL = Occupational Exposure Limit. OECD = Organisation zur ökonomischen Zusammenarbeit und Entwicklung. PBT = Persistent, bioakkumulativ und toxisch. PNEC = Vorausgesagte Konzentration, bei der keine Wirkung auftritt. PPM = Anteile pro Million. RID = Regelung zur internationalen Beförderung gefährlicher Güter im Schienenverkehr. TWA = Zeitlich gewichteter Mittelwert. UN-Nummer = UN Nummer für den Transport gefährlicher Güter. vPvB = sehr persistent und sehr bioakkumulativ.

Die vorstehenden Angaben in diesem Sicherheitsdatenblatt basieren auf unseren derzeitigen Kenntnissen und Erfahrungen und beschreiben das Produkt im Hinblick auf Sicherheitserfordernisse. Die Angaben sind in keiner Weise als Analysenzertifikat oder technisches Datenblatt bzw. als Beschreibung der Beschaffenheit der Ware (Produktspezifikation) anzusehen. Eine vereinbarte Beschaffenheit oder die Eignung des Produktes für einen konkreten Einsatzzweck können aus den im Sicherheitsdatenblatt angegebenen identifizierten Verwendungen nicht abgeleitet werden. Etwaige Schutzrechte sowie bestehende Gesetze und Bestimmungen sind vom Empfänger unseres Produktes in eigener Verantwortung zu beachten.

Environmental Product Declaration (EPD)
According to ISO 14025 and EN 15804+A2

Cavipor® FTX

Registration number:	EPD-Kiwa-EE-000463-EN
Issue date:	03.11.2025
Valid until:	03.11.2030
Declaration owner:	BASF SE
Publisher:	Kiwa-Ecobility Experts
Program operator:	Kiwa-Ecobility Experts
Status:	verified

1. General information

1.1 PRODUCT

Cavipor® FTX

Cavipor® FTX is an insulating clay foam. Cavipor is an in-situ foam system used for filling hollow spaces for thermal and acoustic insulation. Cavipor® FTX consists of 3 components –Cavipor® F, Cavipor® T and Cavipor® X. These Cavipor components are produced at the BASF SE site in Ludwigshafen, Germany and sold by various BASF subsidiaries globally.

1.2 REGISTRATION NUMBER

EPD-Kiwa-EE-000463-EN

1.3 VALIDITY

Issue date: 03.11.2025

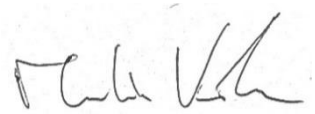
Valid until: 03.11.2030

1.4 PROGRAM OPERATOR

Kiwa-Ecobility Experts
Wattstraße 11-13
13355 Berlin
Germany

Raoul Mancke

(Head of program operations, Kiwa-Ecobility Experts)



Martin Köhrer

(Verification body, Kiwa-Ecobility Experts)

1.5 DETAILS OF THE DECLARATION OWNER

Declaration owner: BASF SE

Address: BASF SE, Carl-Bosch-Strasse 38, 67056 Ludwigshafen, Germany

E-mail: cavipor@basf.com

Website: www.cavipor.com

Production location: Carl-Bosch-Strasse 38, 67056 Ludwigshafen, Germany

Address production location: Carl-Bosch-Strasse 38, 67056 Ludwigshafen, Germany

1.6 VERIFICATION OF THE DECLARATION

The independent verification is in accordance with the ISO 14025:2011. The LCA is in compliance with ISO 14040:2006 and ISO 14044:2006. The EN 15804:2012+A2:2019 serves as the core PCR.

☐ Internal ☒ External

Morteza Nikravan (Dr. -Ing.)

1.7 STATEMENTS

The owner of this EPD shall be liable for the underlying information and evidence. The program operator Kiwa-Ecobility Experts shall not be liable with respect to manufacturer data, life cycle assessment data and evidence.

1.8 PRODUCT CATEGORY RULES

Kiwa-EE GPI R.2.0

Kiwa-Ecobility Experts, General Programme Instructions “Product Level”, Program EE 1201 (27.02.2025)

Kiwa-EE GPI R.2.0 Annex B1

Kiwa-Ecobility Experts, General Programme Instructions “Product Level” – Annex B1 Environmental Information Programme according to EN 15804 / ISO 21930, Program EE

1203 (27.02.2025)]

Product Category Rules for Building-Related Products and Services, IBU PCR part B (Requirements for the EPD for Mineral Insulating Materials, v11, 01.08.2024), in accordance with the requirements of EN 15804:2012+ A2:2019.

1.9 COMPARABILITY

In principle, a comparison or assessment of the environmental impacts of different products is only possible if they have been prepared in accordance with EN 15804. For the evaluation of the comparability, the following aspects have to be considered in particular: PCR used, functional or declared unit, geographical reference, the definition of the system boundary, declared modules, data selection (primary or secondary data, background database, data quality), scenarios used for use and disposal phases, and the life cycle inventory (data collection, calculation methods, allocations, validity period). PCRs and general program instructions of different EPDs programs may differ. Comparability needs to be evaluated. For further guidance, see EN 15804+A2 (5.3 Comparability of EPD for construction products) and ISO 14025 (6.7.2 Requirements for comparability).

1.10 CALCULATION BASIS

LCA method: EN 15804+A2

LCA software: LCA for Experts version 10.9.1.17

Characterization method: EN 15804 +A2 based on EF 3.1

LCA database profiles: Sphera database

Version database: MLC 2025.1

1.11 PROJECT REPORT

This EPD is generated on the basis of the following report: Background report for Cavipor® FTX.

2. Product

2.1 PRODUCT DESCRIPTION

The scope of this EPD exclusively applies to Cavipor® FTX, produced at Ludwigshafen, BASF SE.

Cavipor® FTX is a nonflammable mineral-based clay foam used for cavity-filling for thermal and acoustic insulation. Cavipor® is a hydrophobic open-pore material that is self-sealing, allowing for fast and safe processing. The foam can be disposed of along with construction waste without need for separation and can be reused as foundation material. Cavipor® FTX consists of three components, all produced at the Ludwigshafen site of BASF SE:

Cavipor® F: filler

Cavipor® T: template

Cavipor® X: crosslinker

The components are packed for dispatch to the construction site in IBC containers (typically made of HDPE and steel). At the construction site, with the aid of a dedicated machine, these components are continuously mixed and frothed by adding pressurized air. The fresh foam is injected into hollow spaces of a building, thereby imparting an insulating effect upon hardening.

Product specification

The composition of the product is described in the following table:

Materials	Weight [m-%]
Mineral particles (clay, gypsum)	90%
Organic Binder system	7%
Surfactant system	3%

2.2 APPLICATION (INTENDED USE OF THE PRODUCT)

Cavipor® FTX foam is suitable for energy renovations of buildings with double-wall masonry and retrofitting of cavity walls.

Furthermore, hollow spaces in the roof, floor slabs or dry walls which are covered by diffusive layers can also be filled and thus thermically modernized with Cavipor® FTX.

Cavipor® FTX can be used as construction material according to ETA 19/0240. Regular supervision tests are conducted according to EAD 041561-00-1201.

2.3 REFERENCE SERVICE LIFE (RSL)

RSL PRODUCT

For this EPD, a calculation of reference service life was not necessary since the scope of the study does not consider the entire life cycle of the product, the indication of the reference service life (RSL) is voluntary.

2.4 TECHNICAL DATA

Technical data of Cavipor® FTX (dried):

Description	Test standard	Unit	Value
Bulk density (ISO 758)	EN 1602:2013	kg/m³	28-32
Heat conductivity	EN 12667:2001	W/(mK)	0,033
Heat conductivity, rated value	EN ISO 10456:2010	W/(mK)	0,034
Steam diffusion resistance	EN 12086	-	3

2.5 SUBSTANCES OF VERY HIGH CONCERN

The product does not contain any substance that is listed in the table of substances of very high concern according to ECHA regulations in amounts > 0,1%.

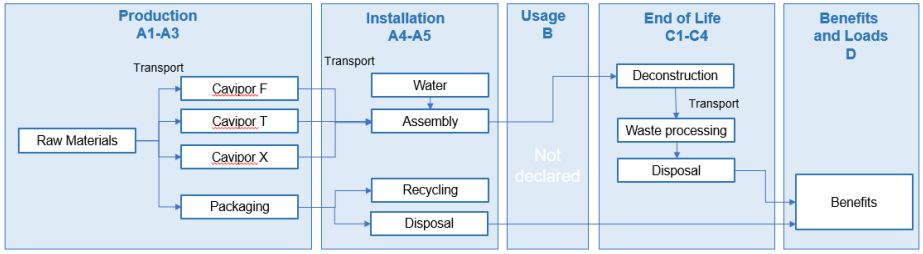
2.6 DESCRIPTION PRODUCTION PROCESS

Cavipor® F contains around 3% organic polymeric binder as well as around 30% mineral components (mainly clay minerals). Cavipor® T contains the surfactant system as a mixture of alkyl-glycoside and ethoxylated alkyl alcohol sulfate salt (1-5%) and the precursor of the silconate-based Hydrophobizing agent (0.3-8%).

Cavipor® X contains the crosslinking agent. Once the water content of about 70% is

evaporated (drying phase), the finished Cavipor® FTX foam is composed of 90% inorganic components (minerals) and 10% organic components from the cured system of binder and crosslinking agent and remaining surfactants.

The three water-based components are produced by combining and stirring the individual ingredients at room temperature, with no increased energy needs such as for heating or cooling. In order to produce the foam from the components and process it, energy is needed to operate three pumps and generate compressed air.



2.7 CONSTRUCTION DESCRIPTION

The fresh Cavipor® FTX foam is produced by mixing the three components in the following mixing ratio:

Cavipor® F: Cavipor® T: Cavipor® X = 1: 0.29: 0.17

For use as cavity wall insulation material, the components and the processing equipment are brought to the construction site in a small van or trailer, for example. Because of the self-sealing property of the foam, there is no need to seal smaller holes and cracks in the building in an additional work step before filling. The components are mixed with the air as described above and injected into the cavity to be filled as fluid foam, for example through drilling holes (~12 mm, 1 m spacing). The foam sets after around 1 minute and the drying phase begins.

For further application cases like in drywall, roof or floor slabs the injection or spray application method depends very much on the given situation and must be adapted, respectively.

3. Calculation rules

3.1 DECLARED UNIT

The declaration refers to the production and application of 1 m³ Cavipor® FTX foam. Volumetric mass density of fresh state as 109 kg/m³.

3.2 CONVERSION FACTORS

Description	Value	Unit
Reference unit	1	m³
Weight per reference unit (fresh)	109	kg
Weight per reference unit (disposal)	30	kg

3.3 SCOPE OF DECLARATION AND SYSTEM BOUNDARIES

The scope of the declaration can be seen in the following figure:

A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	X	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X

This type of EPD is a cradle to gate EPD with declared modules A1-A5, C1-C4 and D.

The modules of the EN 15804+A2 contain the following:

Module A1 = Raw material supply	Module B5 = Refurbishment
Module A2 = Transport	Module B6 = Operational energy use
Module A3 = Manufacturing	Module B7 = Operational water use
Module A4 = Transport	Module C1 = De-construction / Demolition
Module A5 = Construction - Installation process	Module C2 = Transport
Module B1 = Use	Module C3 = Waste Processing
Module B2 = Maintenance	Module C4 = Disposal
Module B3 = Repair	Module D = Benefits and loads beyond the product system boundaries
Module B4 = Replacement	

3.4 REPRESENTATIVENESS

This EPD is representative for Cavipor® FTX, a product of BASF SE. This EPD is a manufacturer specific EPD declaring a specific product.

As the primary production data for this EPD is based on data from Ludwigshafen site in Germany the geographical scope here is Germany. The other modules are representative for German transport and disposal.

3.5 CUT-OFF CRITERIA

Cut-off for all input materials is 0.01 mass%, except for precious metal-containing catalysts with a cut-off of 0.0001 mass% in the background datasets for Cavipor® components. For background system cut-off criteria, refer to the Sphera database documentation. No known flows are deliberately excluded from this EPD.

3.6 ALLOCATION

No allocations were applied to production.

3.7 DATA COLLECTION & REFERENCE TIME PERIOD

Primary data including all raw materials, packaging materials, energy consumption and ancillary materials was comprehensively collected for the reference year 2024.

3.8 ESTIMATES AND ASSUMPTIONS

In modules A1-A3, for packaging, steel, part of IBC containers, is assumed to be 20% from the blast furnace route and 80% electric arc furnace route, the latter considered only processing impacts. Infrastructure is excluded.

In module A4 the distance to construction site was estimated based on BASF expert knowledge and practical data.

In module A5, for HDPE waste, a waste-to-energy treatment is assumed, credit for steam and electricity is given in module D. For waste steel from packaging, a 100% steel scrap recovery is assumed for the 20% material coming from blast furnace.

For module C2 an average transport distance for waste is assumed by a BASF expert. For module C4 the disposal in a landfill is assumed.

3.9 DATA QUALITY

The underlying background data is sourced from the Sphera database MLC 2025.1, with the latest update in 2025. The Primary data quality is considered to be of very good, as it is based on BASF's 2024 production data from the Ludwigshafen site in Germany.

Quality requirement	Specific requirement	Data quality level	Notes
Time-related coverage	Age of data and minimum time period for data collection.	Very Good	Production data of 2024
Geographical coverage	Upstream: Unit process for raw material should be collected for respective geographic region	Good	Based on own production within Germany and DE, RER or GLO Sphera datasets for some other raw materials.
	Core: Unit process for production should represent the real site.	Very Good	Primary data taken from BASF Ludwigshafen site in DE.
	Downstream: End-of-life disposal should represent the region of disposal.	Very Good	DE Sphera datasets are used. Datasets for transport are only available in RER.
Technical representativeness	Qualitative assessment of the degree to which the data set reflects the true population of interest (technology)	Good	Data was selected to be most representative of the region and technology used.

3.10 POWER MIX

For electricity and steam used in BASF production processes, market-based approach is applied and provided by valid GoOs. BASF Ludwigshafen site-specific datasets were considered, with emissions for electricity as 2.9E-01 kg CO_2/kWh. These datasets were created by Sphera for BASF.

For electricity used in foam installation, local based is applied, using an average German electricity grid mix from Sphera datasets, with emissions of 1.7 kg CO_2/kWh.

4. Scenarios and additional technical information

4.1 RAW MATERIAL SUPPLY (A1)

No scenarios applied in A1 as raw materials and suppliers are well known.

4.2 TRANSPORT (A2)

No scenarios applied in A2 as transport mode and distance are well known.

4.3 MANUFACTURING (A3)

No scenarios applied in A3 as manufacturing is based on primary production data.

4.4 TRANSPORT TO CONSTRUCTION SITE (A4)

No scenarios applied in A4 as data is well known, and an average distance was created.

4.5 ASSEMBLY (A5)

No scenarios applied in A5 as data is well known, and electricity grid mix and mix for water consumption was used.

4.6 USE (B1)

Not declared.

4.7 MAINTENANCE (B2)

Not declared.

4.8 REPAIR (B3)

Not declared.

4.9 REPLACEMENT (B4)

Not declared.

4.10 REFURBISHMENT (B5)

Not declared.

4.11 OPERATIONAL ENERGY USE (B6)

Not declared

4.12 OPERATIONAL WATER USE (B7)

Not declared

4.13 DE-CONSTRUCTION, DEMOLITION (C1)

After use, the product is deconstructed and directly disposed to landfill. Negligible power consumption is taken for demolition.

4.14 TRANSPORT END-OF-LIFE (C2)

The base case is assumed with a transport distance of 50 km by a small truck (17,3t) within Germany. Three additional scenarios were developed as follows:

	Scenario 1	Scenario 2	Scenario 3
Distance	50 km	100 km	200 km
Transport mode	Truck, 3.3t payload capacity; diesel driven, Euro 0-VI mix, cargo (RER)	Truck, 17.3t payload capacity; diesel driven, Euro 0-VI mix, cargo (RER)	Truck, 17.3t payload capacity; diesel driven, Euro 0-VI mix, cargo (RER)

4.15 END OF LIFE (C3, C4)

The base scenario assumes the disposal of inert material in landfills within Germany. This represents one of the least favorable disposal methods in terms of environmental impacts and is considered conservative, yet it remains the most accurate depiction for the region, as landfill disposal is the predominant practice for Cavipor® FTX in Germany. As no further waste processing is required, C3 is considered as 0. Three additional scenarios were developed as per dataset availability, as follows:

	Scenario 1	Scenario 2	Scenario 3
Type of disposal	Inert matter (construction waste) on landfill (DE)	Inert matter in waste incineration plant (DE)	Inert matter (unspecified construction waste) on landfill (RER)

4.16 BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARY (D)

The benefits are solely from packaging waste and steel scrap recycling. For the base case it is assumed that this is happening withing Germany. Three additional scenarios were developed as follows:

	Scenario 1	Scenario 2	Scenario 3
Benefits	DE datasets	DE datasets	RER datasets

5. Results

For the impact assessment, the characterization factors of the LCIA method EN 15804 +A2 Method v1.0 are used. Long-term emissions (>100 years) are not considered in the impact assessment. The results of the impact assessment are only relative statements that do not make any statements about endpoints of the impact categories, exceedance of threshold values, safety margins or risks. The following tables show the results of the indicators of the impact assessment, of the use of resources as well as of waste and other output flows.

5.1 ENVIRONMENTAL IMPACT INDICATORS PER 1 m³

CORE ENVIRONMENTAL IMPACT INDICATORS EN15804+A2

Abbreviation	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
AP	mol H^+ eqv.	8.0E-02	5.1E-02	1.6E-03	0.0E+00	9.8E-04	0.0E+00	3.2E-03	-1.9E-03
GWP-total	kg CO_2 eqv.	4.7E+01	7.4E+00	3.7E+00	0.0E+00	1.6E-01	0.0E+00	1.5E+00	-1.7E+00
GWP-b	kg CO_2 eqv.	-1.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E+00	0.0E+00
GWP-f	kg CO_2 eqv.	4.7E+01	7.3E+00	3.7E+00	0.0E+00	1.5E-01	0.0E+00	4.5E-01	-1.7E+00
GWP-luluc	kg CO_2 eqv.	9.7E-01	7.8E-02	5.8E-04	0.0E+00	1.6E-03	0.0E+00	2.7E-03	-6.4E-04
EP-m	kg N eqv.	2.5E-02	2.5E-02	6.8E-04	0.0E+00	4.9E-02	0.0E+00	8.2E-04	-6.3E-04
EP-fw	kg P eqv.	8.4E-05	2.0E-05	6.5E-05	0.0E+00	4.3E-07	0.0E+00	1.0E-06	-2.1E-06
EP-T	mol N eqv.	2.9E-01	2.7E-01	6.1E-03	0.0E+00	5.3E-03	0.0E+00	9.0E-03	-6.9E-03
ODP	kg CFC 11 eqv.	2.0E-07	8.9E-13	1.6E-11	0.0E+00	1.9E-14	0.0E+00	1.2E-12	-1.9E-11
POCP	kg NMVOC eqv	6.9E-02	4.7E-02	1.0E-03	0.0E+00	9.0E-04	0.0E+00	2.5E-03	-1.6E-03
ADP-f	MJ	7.3E+02	9.6E+01	8.5E+00	0.0E+00	2.0E+00	0.0E+00	5.9E+00	-2.4E+01
ADP-mm	kg Sb-eqv.	2.7E-06	5.0E-07	1.2E-07	0.0E+00	1.1E-08	0.0E+00	2.9E-08	-5.2E-07
WDP	m^3 world eqv.	7.6E-01	3.0E-02	3.2E-01	0.0E+00	6.4E-04	0.0E+00	5.1E-02	-2.3E-02

AP=Acidification (AP) | **GWP-total**=Global warming potential (GWP-total) | **GWP-b**=Global warming potential - Biogenic (GWP-b) | **GWP-f**=Global warming potential - Fossil (GWP-f) | **GWP-luluc**=Global warming potential - Land use and land use change (GWP-luluc) | **EP-m**=Eutrophication marine (EP-m) | **EP-fw**=Eutrophication, freshwater (EP-fw) | **EP-T**=Eutrophication, terrestrial (EP-T) | **ODP**=Ozone depletion (ODP) | **POCP**=Photochemical ozone formation - human health (POCP) | **ADP-f**=Resource use, fossils (ADP-f) | **ADP-mm**=Resource use, minerals and metals (ADP-mm) | **WDP**=Water use (WDP)

ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS EN15804+A2

Abbreviation	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
ETP-fw	CTUe	4.8E+02	1.2E+02	4.8E+00	0.0E+00	2.6E+00	0.0E+00	3.4E+00	-2.9E+00
PM	Disease incidence	1.5E-06	3.3E-07	1.3E-08	0.0E+00	6.2E-09	0.0E+00	4.0E-08	-1.4E-08
HTP-c	CTUh	1.1E-08	1.7E-09	4.7E-10	0.0E+00	3.5E-11	0.0E+00	8.1E-11	-1.7E-10
HTP-nc	CTUh	2.9E-07	9.5E-08	3.5E-08	0.0E+00	2.0E-09	0.0E+00	3.1E-09	-5.1E-09
IR	kBq U-235 eqv.	7.3E-01	1.8E-02	7.1E-02	0.0E+00	3.7E-04	0.0E+00	7.0E-03	-8.5E-02
SQP	Pt	9.0E+01	4.3E+01	4.6E+00	0.0E+00	9.0E-01	0.0E+00	1.7E+00	-5.5E+00

ETP-fw=Ecotoxicity, freshwater (ETP-fw) | **PM**=Particulate Matter (PM) | **HTP-c**=Human toxicity, cancer (HTP-c) | **HTP-nc**=Human toxicity, non-cancer (HTP-nc) | **IR**=Ionising radiation, human health (IR) | **SQP**=Land use (SQP)

CLASSIFICATION OF DISCLAIMERS TO THE DECLARATION OF CORE AND ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS

ILCD classification	Indicator	Disclaimer
ILCD type / level 1	Global warming potential (GWP)	None
	Depletion potential of the stratospheric ozone layer (ODP)	None
	Potential incidence of disease due to PM emissions (PM)	None
ILCD type / level 2	Acidification potential, Accumulated Exceedance (AP)	None
	Eutrophication potential, Fraction of nutrients reaching freshwater end compartment (EP-freshwater)	None
	Eutrophication potential, Fraction of nutrients reaching marine end compartment (EP-marine)	None
	Eutrophication potential, Accumulated Exceedance (EP-terrestrial	None
	Formation potential of tropospheric ozone (POCP)	None
	Potential Human exposure efficiency relative to U235 (IRP)	1
ILCD type / level 3	Abiotic depletion potential for non-fossil resources (ADP-minerals & metals)	2
	Abiotic depletion potential for fossil resources (ADP-fossil)	2
	Water (user) deprivation potential, deprivation-weight water consumption (WDP)	2
	Potential Comparative Toxic Unit for ecosystems (ETP-fw)	2
	Potential Comparative Toxic Unit for humans (HTP-c)	2
	Potential Comparative Toxic Unit for humans (HTP-nc)	2
	Potential Soil quality index (SQP)	2

Disclaimer 1 – This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some

construction materials is also not measured by this indicator.

Disclaimer 2 – The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

5.2 INDICATORS DESCRIBING RESOURCE USE AND ENVIRONMENTAL INFORMATION BASED ON LIFE CYCLE INVENTORY (LCI) PER 1 m³

PARAMETERS DESCRIBING RESOURCE USE

Abbreviation	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	5.2E+01	7.1E+00	7.1E+00	0.0E+00	1.5E-01	0.0E+00	1.0E+00	-8.6E+00
PERM	MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
PERT	MJ	5.2E+01	7.1E+00	7.1E+00	0.0E+00	1.5E-01	0.0E+00	1.0E+00	-8.6E+00
PENRE	MJ	7.3E+02	9.6E+01	8.5E+00	0.0E+00	2.0E+00	0.0E+00	5.9E+00	-2.4E+01
PENRM	MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
PENRT	MJ	7.3E+02	9.6E+01	8.5E+00	0.0E+00	2.0E+00	0.0E+00	5.9E+00	-2.4E+01
SM	MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
RSF	MJ	2.0E-27	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
NRSF	MJ	2.4E-26	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
FW	MJ	2.8E-01	3.4E-03	2.4E-02	0.0E+00	7.2E-05	0.0E+00	1.6E-03	-9.4E-03

PERE=renewable primary energy ex. raw materials | **PERM**=renewable primary energy used as raw materials | **PERT**=renewable primary energy total | **PENRE**=non-renewable primary energy ex. raw materials | **PENRM**=non-renewable primary energy used as raw materials | **PENRT**=non-renewable primary energy total | **SM**=use of secondary material | **RSF**=use of renewable secondary fuels | **NRSF**=use of non-renewable secondary fuels | **FW**=use of net fresh water

OTHER ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

Abbreviation	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
HWD	kg	2.0E-04	3.5E-09	1.5E-08	0.0E+00	7.3E-11	0.0E+00	1.5E-09	-2.3E-08
NHWD	kg	2.7E+00	1.3E-02	8.5E-01	0.0E+00	2.7E-04	0.0E+00	3.0E+01	-5.0E-03
RWD	kg	5.2E-03	1.3E-04	7.1E-04	0.0E+00	2.7E-06	0.0E+00	6.1E-05	-8.6E-04

HWD=hazardous waste disposed | **NHWD**=non-hazardous waste disposed | **RWD**=radioactive waste disposed

ENVIRONMENTAL INFORMATION DESCRIBING OUTPUT FLOWS

Abbreviation	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
CRU	kg	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
MFR	kg	3.6E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
MER	kg	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
EET	MJ	0.0E+00	0.0E+00	5.5E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
EEE	MJ	0.0E+00	0.0E+00	1.3E+01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

CRU=Components for re-use | **MFR**=Materials for recycling | **MER**=Materials for energy recovery | **EET**=Exported Energy Thermic | **EEE**=Exported Energy Electric

5.3 INFORMATION ON BIOGENIC CARBON CONTENT PER KILOGRAM

The following information describes the biogenic carbon content in (the main parts of) the product at the factory gate per kilogram:

Biogenic carbon content	Amount	Unit
Biogenic carbon content in the product	2.8E-03	kg C
Biogenic carbon content in accompanying packaging	0	kg C

UPTAKE OF BIOGENIC CARBON DIOXIDE

The following amount of carbon dioxide uptake is considered. Related uptake and release of carbon dioxide in downstream processes are not taken into account in this number although they do appear in the presented results. One kilogram of biogenic carbon content is equivalent to 44/12 kg of biogenic carbon dioxide uptake.

Uptake biogenic carbon dioxide	Amount	Unit
Product	1.0E-02	kg CO_2 (biogenic)
Packaging	0	kg CO_2 (biogenic)

6. Interpretation of results

6.1 CONTRIBUTION ANALYSIS

Across most of these categories, the lifecycle stage A1-A3 consistently shows the highest contribution, indicating that early production processes are a major driver of environmental impacts beyond just greenhouse gas emissions. A4 (transport to construction site) also contribute notably to certain categories, though to a lesser extent. and C2 (transport during end-of-life)

The following provides an overview of which production part contributes most significantly to environmental impacts, with climate change serving as an illustrative example. More than 60% of the climate change impact for A1-A3 comes from the Cavipor® F component. The other two components contain over 85% water and thus do not contribute significantly to the production phase. For Cavipor® F, nearly 65% of the total climate change impacts arise from raw materials since the organic binder contributes most. Utilities consumed during production account for nearly 10%, while transportation of these raw materials is close to 4% of the total climate change impact. Screening for more sustainable materials and process substitutes is under development but cannot be estimated at this point in time.

There are environmental impact categories where the main contributor is not A1-A3 but rather A4 (transport to construction site). Specifically, the categories eutrophication (marine) and eutrophication (terrestrial) show A4 as the dominant contributor.

6.2 SENSITIVITY ANALYSES

In general, the data quality for the A1-A3 modules is very high and can be considered highly reliable. This is due to the robust and comprehensive datasets available for these early life cycle stages and the fact that primary production data can be used, which is well within BASF's operational control.

However, greater uncertainties arise in modules A4 (transport to site), A5 (construction/installation), C (end-of-life), and D (benefits and loads beyond the system boundary). These uncertainties stem primarily from factors that are outside of BASF's direct influence, such as variability in transport distances, regional differences, and the lack of precise data on downstream processes. As such, the reliability of results for these modules is lower compared to A1-A3.

The results for modules C and D are particularly sensitive to the choice of datasets, transport distances, and regional context.

Overall, while the core production phase (A1-A3) offers robust and dependable results, interpretation of results for the later life cycle stages requires careful consideration of these uncertainties. Any comparative assessments or scenario analysis should note that results for modules A4, A5, C, and D are more subject to change depending on assumptions and external variables.

7. References

ISO 14040

ISO 14040:2006-10, Environmental management - Life cycle assessment - Principles and framework; EN ISO 14040:2006

ISO 14044

ISO 14044:2006-10, Environmental management - Life cycle assessment - Requirements and guidelines; EN ISO 14044:2006

ISO 14025

ISO 14025:2011-10: Environmental labels and declarations — Type III environmental declarations — Principles and procedures

ISO 758:1976

Liquid chemical products for industrial use — Determination of density at 20°C, ISO

EN 1602:2013

Thermal insulating products for building applications – Determination of apparent density. Brussels: European Committee for Standardization (CEN).

EN 12667:2001

Thermal performance of building materials and products – Determination of thermal resistance by means of guarded hot plate and heat flow meter methods – Products of high and medium thermal resistance. Brussels: European Committee for Standardization (CEN).

EN ISO 10456:2010

Building materials and products – Hygrothermal properties – Tabulated design values and procedures for determining declared and design thermal values. Brussels: European Committee for Standardization (CEN).

EN 12086

Thermal insulating products for building applications – Determination of water vapour transmission properties. Brussels: European Committee for Standardization (CEN), 2013.

15804:2012+A2:2019

EN 15804+A2: 2019: Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products

Kiwa-Ecobility Experts (Kiwa-EE)

General Product Category Rules - Version 2.1, 2022-02-14

Background database

Sphera database MLC 2025.1

NMD Determination Method V1.1 (March 2022)

PCR Part A

General Programme Instructions “Product Level” (SOP EE 1201_R.2.0, 2025), Kiwa-Ecobility Experts

PCR Part B

Requirements for the EPD for Mineral Insulating Materials, v11, 01.08.2024, Institute Construction and Environment e.V. (IBU)

Annex B1

Environmental Information Programme according to EN 15804 / ISO 21930 (SOP EE 1203_R.2.0, 2025), Kiwa-Ecobility Experts

8. Contact information

Publisher	Operator	Owner of the declaration
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Kiwa-Ecobility Experts is an established member of the ECO PLATFORM

We create chemistry

January 23rd, 2026
Product Stewardship Europe
BASF Monomers Division
pss.monomers@basf.com

Absence Declaration

Product name: Cavipor® Tonschaum Dämmung

Based on the information available to us from our raw material suppliers, and our knowledge of the products' compositions, the BASF products listed do not contain:

- **SVHC:** substances on the "Candidate List" according to Article 59(1) of the REACH-Regulation above 0,1%
- **CMR**: substances classified as CMR-substances category 1A or 1B above 0,1%

Consequently, we do not see any necessity that our products are analyzed for the presence of such impurities. The mentioned substances are not added intentionally.

This document was generated electronically and is valid without signature.
For further information, please contact pss.monomers@basf.com.

Please note:
Many substances are ubiquitous. The observance of all these substances is not part of our ongoing production control.
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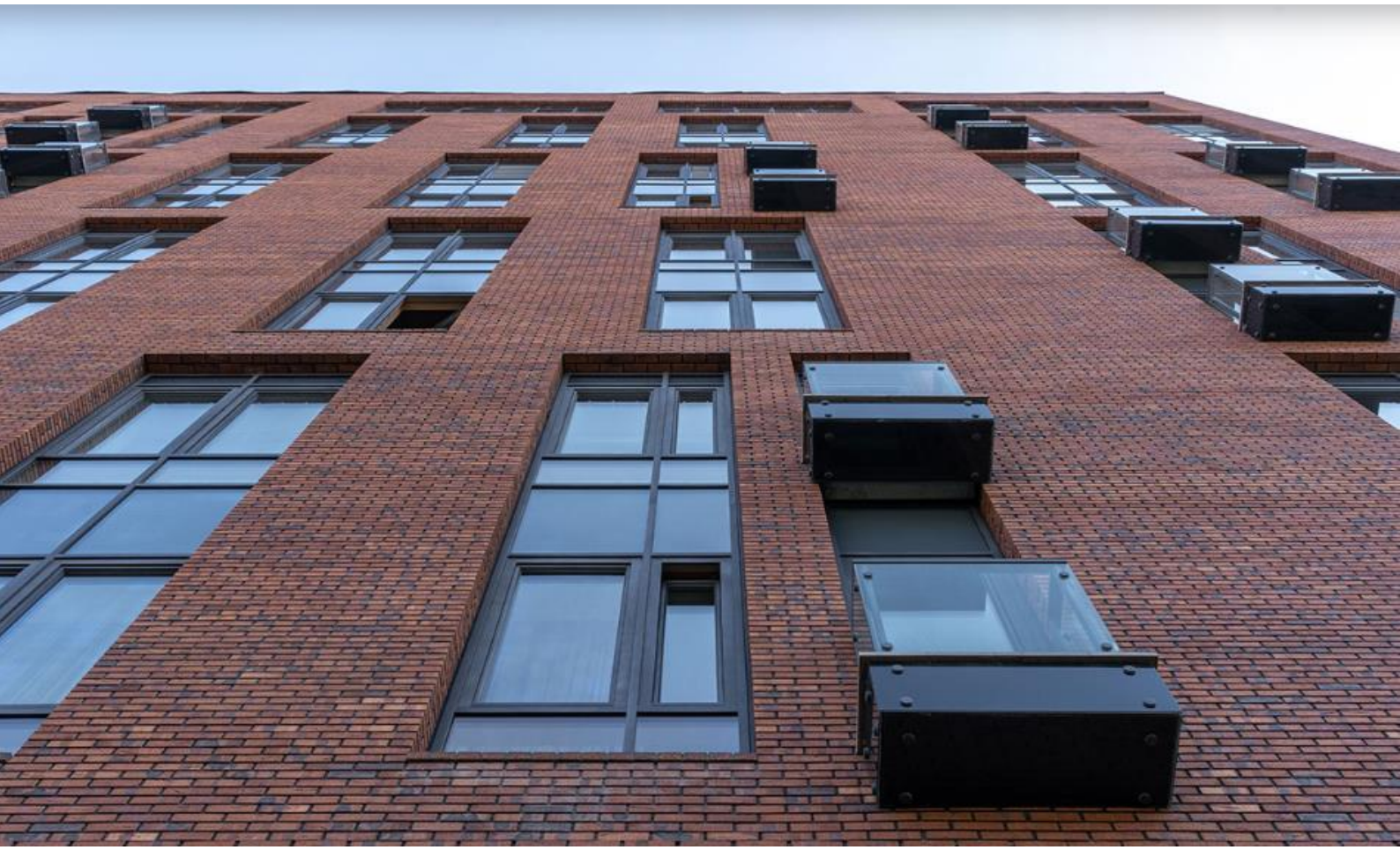
FIRETITE



BREEAM UK NC V6

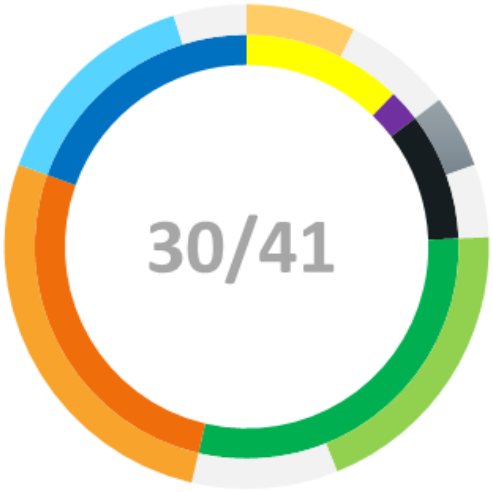
BREEAM GOAL AND CREDIT CONTRIBUTION

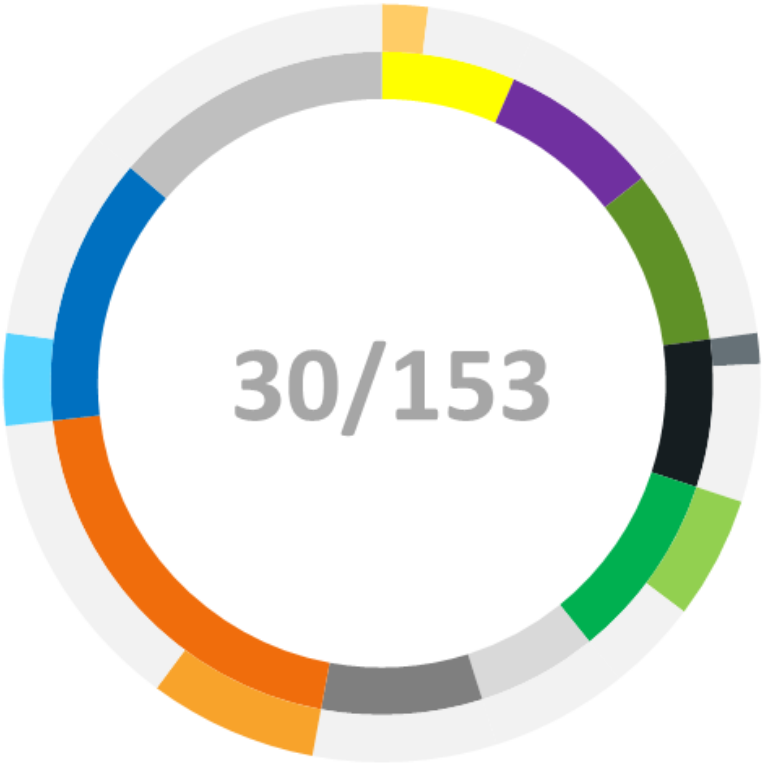
FIRETITE

BREEAM GOAL AND CREDIT CONTRIBUTION

The assumptions are made based **on BREEAM UK NC Version 6.0** scheme, for a fully fitted building. There is a degree of variability depending on function and scope.

ECON FIRETITE is designed for resilience and durability, is weather resistant and is manufactured using the minimum number of materials and energy usage.





ECON – FIRETITE

Influences on achieving 23% of a maximum 32% max potential percentages attained by an insulation material.

30 credits = 23%

41 credits = 32%

153 credits = 110%

BREEAM UK NC V6 categories

21 Management

20 Health and Wellbeing + hazards

31 Energy

12 Transport

9 Water

14 Materials

11 Waste

13 Land use and Ecology

12 Pollution

10 Innovation

Insulation Material potential score

Can contribute to obtain BREEAM UK NC V6 credits in the categories of:

8 Health and Wellbeing

11 Energy

12 Materials

4 Waste

1 Pollution

5 Innovation

ECON - FIRETITE

Can contribute to obtain BREEAM UK NC V6 credits in the categories of:

6 Health and Wellbeing

11 Energy

8 Materials

2 Waste

3 Innovation

FIRETITE

BREEAM PERFORMANCE

The BREEAM certification refers to the certification of the building. It does not evaluate the material, which is why the material has a contribution to the points but the material as such will not guarantee the scoring of the credits. As an example, to obtain the credits related to the GWP, BREEAM requires to have an EPD.

FIRETITE has an EPD so it could contribute to obtaining these.

HEA 02		HEA 05		HEA 04	
3	Higher Internal air quality through lower VOC emissions.	**2**	Contributes to improved performance regarding airborne and impact sound insulation values.	**1**	Contributes to improved thermal conductivity.
Low VOC emissions		Contributes to the effective acoustic design of buildings.		FIRETITE contributes to the overall thermal comfort of the building	

ENE 01 Opt. 1		ENE 04		ENE 05	
9+2	Contributes to lower energy consumption through improved	**1**	ECON FIRETITE can contribute to high insulation efficiency in the design options.	**1**	ECON FIRETITE can contribute to high insulation efficiency in the design options.
Lower Global Warming Potential (kg CO2eq.)		Minimizes heat loads and carbon emissions through design.		Minimizes heat loads and carbon emissions through design.	

MAT 01		MAT 02		MAT 05	
6	Production waste is captured and reused.	**1**	Environmental Product Declaration	**1**	ECON FIRETITE has a 50 year + lifespan.
Lower Global Warming Potential (kg CO2eq.)		EPD following EN15804		Durability Class Category A (EN12467).	

WST 01		WST 05	
1+1	Contributes to diversion from landfill.	**1**	ECON FIRETITE can contribute to high insulation efficiency in the design options.
No hazardous waste and easy reuse as crushed aggregates.		No hazardous waste	

FIRETITE

BREEAM UK New Construction V6	Criteria	Credits	Evidence - Products contribution
Health and Well Being			
HEA02 Indoor air quality – Emissions from construction products	Emissions from building products: insulation materials are 1 of the 5 to meet the emission limits: Formaldehyde ⩽ 0.06 mg/m³ . Total VOC ⩽1.0 mg/m³ . Carcinogens cat. 1A + B ⩽ 0.001 mg/m³ following	2/2	ECON FIRETITE has an EC1 plus certification, showing compliance with the requirements.
Post-construction indoor air quality measurement	Post-construction indoor air quality measurement: thresholds for averaged formaldehyde concentration level ⩽ 100µg/m³ over 30 minutes and averaged TVOC⩽ 500µg/m³ over 8 hours	1/1	ECON FIRETITE has < 3µg/m³ added formaldehyde helping to stay at an exceptionally low concentration level.
HEA04 Thermal comfort - Design for future thermal comfort	Thermal comfort levels are achieved through design, and controls are selected to maintain a thermally comfortable environment for occupants.	1/1	The thermal insulation level of ECON FIRETITE contributes to the comfort level of the building.
HEA05 Acoustic performance	Building's acoustic performance, including sound insulation, meets the appropriate standards for its purpose.	2/2	ECON FIRETITE reduces background noise through increased sound insulation of building envelope, partitions, ceilings, and aid in controlling reverberation time.
Energy			
ENE01 Reduction of Energy Use and Carbon Emissions	To recognize and encourage buildings designed to minimize operational energy demand, primary energy consumption and CO2 emissions.	9/9	ECON FIRETITE helps reducing operational energy demand, primary energy consumption and CO2 emissions through improving energy building performance (e.g., U-value).
ENE04 Low Carbon Design - Passive design analysis	Adoption of design measures, which reduce building energy consumption and associated carbon emissions and minimize reliance on active building services systems.	1/1	ECON FIRETITE contributes to implement passive design solutions that reduce building energy demand and associated carbon emissions.
ENE05 Energy Efficiency Cold Storage	To encourage the installation of energy efficient refrigeration systems, therefore reducing operational greenhouse gas emissions. The building has been designed to minimize heat loads through high levels of insulation.	1 /1	ECON FIRETITE can contribute to high insulation efficiency in the design options.
Materials			
MAT01 Environmental impacts from construction products – Building life cycle assessment (LCA)	Use of robust and appropriate life cycle assessment tools and specification of construction materials with a low environmental impact over the full life cycle of the building.	6 /6	ECON FIRETITE has a third party verified EPD, done against EN 15804, showing a lower GWP compared to comparable products in the market.

BREEAM UK New Construction V6	Criteria	Credits	Evidence - Products contribution
Materials			
MAT02 Environmental impacts from construction products – Environmental Product Declarations (EPD)	Availability of robust and comparable data on the impacts of construction products through the provision of EPD.	1/1	ECON FIRETITE has a third party verified EPD, done against EN 15804 which contributes to reach the target of 20 points in products with EPDs.
MAT03 Responsible sourcing of construction products - Measuring responsible sourcing	Availability of Responsible Sourcing Certification Scheme.	0/3	ECON FIRETITE does not have a RSCS
MAT05 Designing for durability and resilience	To reduce the need to repair and replace materials resulting from damage to exposed elements of the building and landscape.	1/1	ECON FIRETITE as a life span if the building and is not exposed to the external elements.
Waste			
WST01 Construction waste management - Diversion of resources from landfill	To promote resource efficiency via the effective and appropriate management of construction waste.	1/1	ECON FIRETITE can be fully reused as crashed aggregate contributing for high levels of diversion from landfill.
WST05 Adaptation to climate change	Minimize the future need of conducting works to adapt the building to take account of more extreme weather changes resulting from climate change and changing weather patterns.	2/2	ECON FIRETITE contributes to thermal comfort helping on risk management of heat waves, warmer summers, increased solar radiation.
Pollution			
POL05 Reduction of noise pollution	To reduce the noise arising from fixed installations affecting nearby noise-sensitive buildings.	0/1	ECON FIRETITE is not used in light weight construction.
Innovation – Exemplary Credits			
INN 01 HEA02 Indoor air quality - Emissions from construction products	Emissions from building products: insulation materials are one of the 5 to meet the emission limits: Formaldehyde $\leqslant$ 0.01 mg/m^3 . Total VOC $\leqslant$0.3 mg/m^3 . Carcinogens cat. 1A + B $\leqslant$ 0.001 mg/m^3 following.	0/1	ECON FIRETITE has an EC1 plus certification, but the requirements are not as demanding as for an exemplary credit under BREEAM UK NC V6.
INN 02 ENE01 Reduction of Energy Use and Carbon Emissions	To recognize and encourage buildings designed to minimize operational energy demand, primary energy consumption and CO2 emissions.	2/2	ECON FIRETITE help reducing oper. energy demand, primary energy cons. and CO2 emissions through improving energy building performance
INN 03 MAT03 Responsible sourcing of construction products - Measuring responsible sourcing	Availability of Responsible Sourcing Certification Scheme – reach 50% of materials.	0/1	ECON FIRETITE does not have a RSCS
INN 04 WST01 Construction waste management	To promote resource efficiency via the effective and appropriate management of construction waste.	1/1	ECON FIRETITE can be fully reused as crashed aggregate contributing for high levels of deviation from landfill.

Supporting HEA02 and INN01 credits:

Gemeinschaft Emissionskontrollierte Verlegewerkstoffe, Klebstoffe und Bauprodukte e.V.
Association for the Control of Emissions from Products for Flooring Installation, Adhesives and Building Materials

GEV EMICODE

Awarding of licence for the use of EMICODE

Licence Number:	13420/06.02.19
For the product	FIRETITE™
Due to application date	April 28, 2021

With reference to the classification in accordance with the directives as stipulated in § 10 of the GEV trademark constitution

on behalf of the GEV for the above mentioned product as per § 5, section 4 of the GEV trademark constitution is awarded the licence for the use of the GEV trademark

GEV-EMICODE EC 1 PLUS very low emission

This product meets with the guidelines for the criteria of use listed reverse.
The company is ordinary member of the GEV.

OM 166 April 29, 2021
valid until April 29, 2026

The Secretary General
Association for the Control of Emissions in Products for Flooring Installation, Adhesives and Building Materials (GEV)
Völklinger Straße 4 - D-40219 Düsseldorf

FIRETITE

Supporting MAT05 credits:

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BAW-21-227-S-A-UK
BDA Agrément®
FIRETITE
Cavity Wall Insulation (Injected Foam)

ECON Polyurethane Ltd.
Letraset Building, Wotton Road
Kingsnorth Industrial Estate
Ashford, Kent
TN23 6LN
+44 (0)1233 229500
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www.econ-pu.com

SCOPE OF AGRÉMENT

This BDA Agrément® (hereinafter 'Agrément') relates to FIRETITE (hereinafter the 'System'), an in-situ injected thermal insulation system which contributes to the airtightness and watertightness of external masonry cavity walls (where masonry includes clay and calcium silicate bricks, concrete blocks, and natural and reconstituted stone blocks). The System is for use in existing and new dwellings, and buildings other than dwellings up to and including 12 m in height with cavity widths between 40 mm and 150 mm. The System may also be used in walls above 12 m in height, where the building has been assessed as suitable by the Agrément holder.

DESCRIPTION

The System consists of three aqueous components (see Section 2.1.1) that are mixed to a defined ratio with pressurised air to create a grey, mineral-based foam, in accordance with the requirements of EAD 041561-00-1201. To form a thermal insulation layer, this foam is injected into a cavity wall through a series of holes, drilled in a predetermined pattern, until the cavity is fully filled.

ILLUSTRATION

THIRD-PARTY ACCEPTANCE

None requested by the Agrément holder.

STATEMENT

It is the opinion of Kiwa Ltd. that the System is safe and fit for its intended use, provided it is specified, installed and used in accordance with this Agrément.

Craig Devine
Operations Manager, Building Products

Alpheo Miotha CEng FIMMM MBA
Head of Operations, Building Products

econ BUILDING PRODUCTS

FIRETITE

Supporting HEA04, HEA05, ENE01, ENE04, ENE05, MAT01, MAT02, WST01 WST05, INN02 and INN02 credits:

ENVIRONMENTAL PRODUCT DECLARATION

as per *ISO 14025* and *EN 15804+A1*

Owner of the Declaration	BASF SE
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-BAS-20180124-IBA1-EN
Issue date	09.03.2020
Valid to	05.03.2024

Cavipor® FTX 1

BASF SE

Institut Bauen und Umwelt e.V.

www.ibu-epd.com | https://epd-online.com

BASF We create chemistry

Deutsches Institut für Bautechnik

Member of EOTA
www.eota.eu

Approval body for construction products and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and Laender Governments

Designated according to Article 29 of Regulation (EU) No 305/2011 and member of EOTA (European Organisation for Technical Assessment)

European Technical Assessment ETA-19/0240 of 17 October 2023

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the European Technical Assessment:	Deutsches Institut für Bautechnik
Trade name of the construction product	"Cavipor FTX 1"
Product family to which the construction product belongs	In-situ formed thermal insulation made of mineral-based foam
Manufacturer	BASF SE Carl-Bosch-Straße 38 67056 Ludwigshafen am Rhein DEUTSCHLAND
Manufacturing plant	BASF SE Carl-Bosch-Straße 38 67056 Ludwigshafen am Rhein DEUTSCHLAND
This European Technical Assessment contains	6 pages including 1 annex which form an integral part of this assessment
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of	041561-00-1201
This version replaces	ETA-19/0240 issued on 5 October 2020

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Specific part

1 Technical description of the product

This European Technical Assessment applies to thermal insulation product using the predominantly mineral thermal insulation foam “Cavipor FTX 1” which is used to completely fill closed cavities in walls (e.g. in external walls with double-wall masonry), ceilings and roofs. The thermal insulation foam is injected as in-situ foam into the cavities.

The liquid components of the thermal insulation foam are delivered to the construction site e.g. in drums or containers. The first component (surfactant and additives) is foamed with the help of pressurized air and is then mixed with the second component (mineral fillers, polymer binders and additives). Finally a cross-linking agent is added as the third component.

The European Technical Assessment has been issued for the product on the basis of agreed data/ information, deposited with Deutsches Institut für Bautechnik, which identifies the product that has been assessed. The European Technical Assessment applies only to products corresponding to this agreed data/information.

2 Specification of the intended use in accordance with the applicable European Assessment Document

The thermal insulation foam “Cavipor FTX 1” can be used as a thermal insulation layer with a thickness d ≤ 150 mm for thermally insulating double-wall masonry (cavity completely filled) in accordance with DIN EN 1996-1-1 (EC 6).

The thermal insulation foam can be used also as insulation of cavities (completely filled) for the following intended uses:

- Internal insulation of ceilings (underside) or roofs and insulation below the rafters/supporting structure, suspended ceilings
- Thermal insulation between rafter
- External insulation of walls behind cladding
- Internal insulation of walls
- Insulation of walls with timber frame construction and closed panel timber frame construction or comparable partitions

Regarding the application of the thermal insulation foam, the respective national regulations shall additionally be observed (e.g. regulations concerning the condensation).
The performance according to section 3 only applies if the thermal insulation product is installed according to the manufacture's installation instructions by machine-processed injection and considering the conditions in accordance with annex A.

The thermal insulation foam is not intended for use between diffusion-resistant layers.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the thermal insulation product of at least 50 years. The indications given on the working life cannot be interpreted as a guarantee given by the manufacturer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

3 Performance of the product and references to the methods used for its assessment

For sampling, conditioning and testing the provisions of the EAD No 041561-00-1201 “In-situ formed thermal insulation made of mineral-based foam” apply.

3.1 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire test acc. to EN 13823:2010+A1:2014 and EN ISO 1716:2010	Class A2-s1,d0 acc. to EN 13501-1:2018 [1, 2]

[1] valid for applications on or between substrates made of building materials classified as A1 or A2-s1,d0 acc. to EN 13501-1 with a thickness d ≥ 12 mm and a density ρ ≥ 650 kg/m³
[2] valid for a thickness range as stated in clause 2 and a density range as stated in table 3.2

3.2 Energy economy and heat retention (BWR 6)

Essential characteristic	Performance
Thermal conductivity test acc. to EN 12667:2001 Conversion of humidity acc. to EN ISO 10456:2010 Moisture conversion factor (23 °C/ 50 % rel. humidity to 23 °C/ 80 % rel. humidity)	Declared value of thermal conductivity $\lambda_{D\ (23/50)}$ = 0.034 W/(m·K) * F_m = 1.015
Density test acc. to EN 1602:2013	Density range 29 kg/m³ to 35 kg/m³
Water absorbtion at long term partial immersion test acc. to EN 12087:2013	 W_{lp} ≤ 1.0 kg/m²
Dimensional stability at 23 °C and 50% relative humidity test acc. to EN 1603:2013 Conditioning: 28 d at 23 °C and 50 % relative humidity	Relative changes in length, width and thickness ≤ 2.0 % (length, width, thickness)
Dimensional stability at 70 °C and 90% relative humidity test acc. to EN 1604:2013 Conditioning: 28 d at 70°C and 90 % relative humidity	Relative changes in length, width and thickness ≤ 5.0 % (length, width) ≤ 12.0% (thickness)
Dimensional stability at - 30 °C test acc. to EN 1604:2013 Conditioning: 24 h at - 30 °C	Relative changes in length, width and thickness ≤ 2.0 % (length, width, thickness)
Reactivity acc. to a.m. EAD (clause 2.2.8)	≤ 60 seconds

* Declared value of thermal conductivity for a moisture content of the insulation product at 23 °C/50% relative humidity, representative of at least 90% of production with a 90% confidence level.

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with the European Assessment Document EAD No 041561-00-1201 “In-situ formed thermal insulation made of mineral-based foam” the legal basis is:

Commission Decision 1999/91/EC (as amended).

The system to be applied is: system 3.

In addition, with regard to reaction to fire the applicable European legal act is: 1999/91/EC (as amended).

The system to be applied is: system 1.

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

Issued in Berlin on 17 October 2023 by Deutsches Institut für Bautechnik

Frank Iffländer
Head of Section

beglaubigt:
Getzlaff

The performances of the thermal insulation foam given in Section 3 apply if the following is considered concerning installation and use:

- Before built-in the foam, the executing company ensures that the building components forming the cavity to be filled are in a proper condition (without defects and cracks) and free from moisture.
- The manufacture's installation instructions are taken into account. This involves checking whether special measures are required when producing the thermal insulation layer on site (e.g. concerning the foaming pressure).
- The thermal insulation foam is only processed by companies stated in a list of the manufacturer which have adequate experience in installing the insulation foam. These companies have been trained for this purpose by the manufacturer.
- The foam is built-in at air temperatures of a least 5°C.
- The thermal insulation foam is uniform in texture and colour. The density of the installed thermal insulation foam (dry) is 29 kg/m³ to 35 kg/m³.
- The executing company ensures the density and the thickness of the installed insulation layer.
- When using thermal insulation foam to completely fill the cavity of double-wall masonry for external walls, the following is also taken into account:
  - Particular care must be taken to ensure that visible faces are properly jointed. Defects and cracks in the joints must be eliminated before inserting the core insulation.
  - Existing ventilation openings in the outer masonry leaf at the base of the wall are maintained.
  - The core insulation thickness used for the calculation of the thermal resistance is determined by the average clear distance between the masonry leaves. To determine this distance, the bed joint of the masonry is drilled through at at least five places per wall surface and floor to determine the depths of the free cavity at these places. The insulation thickness is given as the average of these five measurements (rounded to 5 mm).
- For each application site, the executing company issues a certificate which, by reference to this European Technical Assessment, contains the following information:
  - mineral-based thermal insulation foam built-in on site
  - name and address of the executing company
  - building project and building component
  - date of installation
  - installation thickness (average clear distance) of the core insulation