SENTINEL HOLDING
INSTITUT

# SHI PRODUCT PASSPORT

**Find products. Certify buildings.**

SHI Product Passport No.:

**1093-10-1013**

# OTTOSEAL® A 220 Turbo

Product group: Acrylic

OTTO CHEMIE
DICHTEN & KLEBEN

OTTO-CHEMIE
Krankenhausstraße 14
83413 Fridolfing

## Product qualities:

- SHI Product Assessment 2024
- QNG Qualitätssiegel Nachhaltiges Gebäude
- DGNB NEW CONSTRUCTION 2023
- DGNB NEW CONSTRUCTION 2018
- BNB-BN NEUBAU V2015
- EU taxonomy
- BREEAM DE NEUBAU 2018
- LEED v4.1 (outside US)

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

Köttner

**Helmut Köttner**
Scientific Director
Freiburg, 14 April 2026

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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

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 | Notice |
|---|---|---|---|---|
| SHI Product Assessment | Sealants and adhesives | TVOC ≤ 300 µg/m$^3$<br>Formaldehyd ≤ 24 µg/m$^3$ | Indoor Air Quality Certified (Advisory Note) | Achtung, enthält Isothiazolinone zur Topfkonservierung. Kann Allergien auslösen. |
| **Valid untill: 25 August 2030** | | | | |

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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 | 4.1 On-site applied adhesives and sealants (acrylates and silicones) in interior spaces | VOC / Emissions / hazardous substances / SVHC / chlorinated paraffins / biocides (product types 7 and 9 according to Regulation (EU) No. 528/2012) | QNG ready |

**Verification:** Sicherheitsdatenblatt 24.06.2025, Nachhaltigkeitsdatenblatt 10.06.2025

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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) | 11 Indoor bonding and waterproofing. | VVOCs, VOCs, SVOC emissions and content of hazardous substances | Quality level 4 |
| **Verification:** Sicherheitsdatenblatt 24.06.2025, EC1 Plus Zertifikat (21491/10.10.13) vom 26.08.2025 | | | |

| Criteria | No. / Relevant building components / construction materials / surfaces | Considered substances / aspects | Quality level |
|---|---|---|---|
| ENV 1.2 Local environmental impact, 29.05.2025 (4th edition) | 11 Indoor bonding and waterproofing | VVOCs, VOCs, SVOC emissions and content of hazardous substances | Quality level 4 |
| **Verification:** Sicherheitsdatenblatt 24.06.2025, EC1 Plus Zertifikat (21491/10.10.13) vom 26.08.2025 | | | |

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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 | 12 Adhesive bonds on small joints under mechanical stress | Chlorinated paraffins, solvents, HC | Quality level 4 |
| **Verification:** Nachhaltigkeitsdatenblatt vom 22.02.2024 | | | |

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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 | 8 Adhesives and sealants made of PU, SMP (silan-modified polymers), acrylic (including dispersion adhesives), or silicone | VOC / hazardous substances / biocides | Quality level 5 |

**Verification:** Sicherheitsdatenblatt 24.06.2025, Nachhaltigkeitsdatenblatt 10.06.2025, EC1 Plus Zertifikat (21491/10.10.13) vom 26.08.2025

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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 | | Substances according to Annex C | EU taxonomy compliant |
| **Verification:** Sicherheitsdatenblatt 24.06.2025 | | | |

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# BREEAM DE Neubau 2018

BREEAM (Building Research Establishment Environmental Assessment Methodology) is a UK-based building assessment system that evaluates the sustainability of new constructions, refurbishments, and conversions. Developed by the Building Research Establishment (BRE), the system aims to assess and improve the environmental, economic, and social performance of buildings.

| Criteria | Product category | Considered substances | Quality level |
|---|---|---|---|
| Hea 02 Indoor Air Quality | Interior adhesives and sealants (including flooring adhesives) | Emissions: Formaldehyde, TVOC, TSVOC, carcinogens | Exemplary quality |
| **Verification:** EMICODE EC1+-Zertifikat vom 26.08.2025 | | | |

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# LEED v4.1

LEED (Leadership in Energy and Environmental Design) is an internationally recognised building certification system developed by the U.S. Green Building Council. It is one of the most widely used sustainability standards for buildings worldwide and is particularly applied in internationally oriented projects. LEED assesses buildings holistically across categories such as energy efficiency, resource conservation, material selection, indoor environmental quality and site sustainability. Depending on the number of points achieved, projects are awarded one of the certification levels: LEED Certified, Silver, Gold or Platinum.

| Criteria | Product category | Assessment |
|---|---|---|
| EQ Credit: Low-Emitting Materials | Kleb- und Dichtstoffe | compliant |
| **Verification:** EMICODE EC1+-Zertifikat vom 26.08.2025 | | |

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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.




The EMICODE® label, awarded by the German manufacturers' association "GEV – Gemeinschaft Emissionskontrollierte Verlegewerkstoffe, Klebstoffe und Bauprodukte e. V.", is primarily relevant for flooring installation materials. The EMICODE® EC1$^{PLUS}$ label, as the premium class, sets significantly stricter emission limits than the other label variants.




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.

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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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www.sentinel-holding.eu

Technisches Datenblatt

# OTTOSEAL® A 220 Turbo SPEZIAL

## Der sofort überstreichbare Acryl-Dichtstoff

1K-Acryl-Dichtstoff | Für Innen und Außen | A 220




## Eigenschaften

- Sehr schnell überstreichbar / überlackierbar - bitte Anwendungshinweise im technischen Datenblatt beachten
- Zeitsparend – durch optimal auf die Überstreichbarkeit angepasste Rezeptur
- Frostunempfindlich - Kann bis zu 48 Stunden bei max. -10 °C gelagert und transportiert werden
- Minimierte Rissbildung – geprüft mit handelsüblichen Farbsystemen
- Keine Vergilbung

## Anwendungsgebiete

- Abdichten von Anschlussfugen im Sockel-, Wand- und Deckenbereich
- Einsetzbar bei dekorativen Renovierungsarbeiten wie z.B. Stuckarbeiten, füllen von Mauerrissen etc.

## Normen und Prüfungen

- Geprüft nach EN 15651 - Teil 1: F EXT-INT 7,5 P
- Geprüftes Brandverhalten nach EN 13501: Klasse E
- EMICODE® EC 1 Plus - sehr emissionsarm
- Sentinal Holding Institut - Zertifiziert und ausgezeichnet mit dem SHI-Produktpass - Einstufung für DGNB, QNG, BNB, BREEAM und EU-Taxonomie
- Französische VOC-Emissionsklasse A+
- Für Anwendungen gemäß IVD-Merkblatt Nr. 12+20+29+31+32+35 geeignet

## Technische Daten

| | |
|---|---|
| Hautbildungszeit bei 23 °C/50 % rLf [min] | ~ 10 |
| Verarbeitungstemperatur von/bis [°C] | + 5 / + 35 |
| Viskosität bei 23 °C | pastös, standfest |
| Dichte bei 23 °C nach ISO 1183-1 [g/cm³] | ~ 1,6 |
| Shore-A-Härte nach ISO 868 | ~ 14 |
| Zulässige Gesamtverformung [%] nach ISO 9046 | 10 |
| Zulässige Gesamtverformung [%] gemäß EN 15651-Teil 1 | 7,5 |
| Dehnspannungswert bei 100 % nach ISO 37, Typ 3 [N/mm²] | ~ 0,45 |
| Reißdehnung nach ISO 37, Typ 3 [%] | ~ 200 |
| Zugfestigkeit nach ISO 37, Typ 3 [N/mm²] | ~ 0,5 |
| Temperaturbeständigkeit von/bis [°C] | - 20 / + 80 |
| Maximale Fugenbreite [mm] | 25 |
| Volumenschwund nach ISO 10563 [%] | ~ 20 |

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www.otto-chemie.de

**Anwendungsberatung**
+49 8684 908-4300
@ tae@otto-chemie.de

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| | |
|---|---|
| Lagerstabilität bei 23 °C/50 % rLf für Kartusche/Beutel [Monate] | 12 [1] [2] |

1) ab Herstellung

2) Frostfrei lagern

Diese Werte sind nicht zur Erstellung von Spezifikationen bestimmt. Bitte wenden Sie sich vor der Erstellung von Spezifikationen an OTTO-CHEMIE.

## Vorbehandlung

Die Haftflächen müssen sauber, staub- und fettfrei sowie tragfähig sein.
Die Haftflächen müssen gereinigt und jegliche Verunreinigungen, wie Trennmittel, Konservierungsmittel, Fett, Öl, Staub, Wasser, alte Kleb-/Dichtstoffe sowie andere die Haftung beeinträchtigende Stoffe entfernt werden. Reinigen von nicht-porösen Untergründen: Reinigung mit OTTO Cleaner T (keine Ablüftezeit erforderlich) und sauberem, flusenfreiem Tuch. Reinigen von porösen Untergründen: Oberflächen mechanisch, z.B. mit einer Stahlbürste oder einer Schleifscheibe, von losen Partikeln säubern.

## Grundierungstabelle

Die Anforderungen an elastische Abdichtungen und Klebungen sind abhängig von den jeweiligen äußeren Einflüssen. Extreme Temperaturschwankungen, Dehn- und Scherkräfte, wiederholter Kontakt mit Wasser etc. stellen hohe Ansprüche an eine Haftverbindung. In solchen Fällen ist bei Empfehlungen (z.B. +/OTTO Primer 1216) die Verwendung des genannten Primers ratsam, um eine möglichst belastbare Verbindung zu erzielen.

| | |
|---|---|
| Acryl-Sanitär (z.B. Wannen) | - |
| Acrylglas/PMMA | OTTOSEAL® S 72 |
| Aluminium blank | + / 1226 |
| Aluminium eloxiert | + / 1225 |
| Beton | + / 1105 / 1225 |
| Blei | - |
| Chrom | + / 1225 |
| Edelstahl | + / 1225 |
| Faserzement | + / 1105 / 1225 |
| Gipskarton | + / 1225 |
| Glas | - |
| Holz, lackiert (lösemittelhaltig) | + / 1226 |
| Holz, lackiert (wässrige Systeme) | + / 1226 |
| Holz, lasiert (lösemittelhaltig) | + / 1226 |
| Holz, lasiert (wässrige Systeme) | + / 1226 |
| Holz, unbehandelt | + 1105 / 1225 |
| Keramik, glasiert | + / T |
| Keramik, unglasiert | + / T |
| Kunststoffprofile (Hart-PVC z.B. Vinnolit) | + / 1105 |
| Kupfer | + / 1226 |
| Melaminharzplatten | - |
| Messing | + /1105 |
| Naturstein (Marmor, Granit etc.) | OTTOSEAL® S 70 |
| Polypropylen (PP) | - |
| Porenbeton | + / 1105 / 1225 |
| Putz | + / 1105 / 1225 |
| PVC-hart | + / 1105 |
| PVC-weich-Folien | - |
| Weißblech | - |
| Zink, verzinktes Eisen | - |

+ = ohne Grundierung gute Haftung
- = nicht geeignet
T = Test/Vorversuch empfohlen
Die oben aufgeführte Tabelle beruht auf Haftversuchen unter Laborbedingungen. In der Praxis sind die Hafteigenschaften von einer Vielzahl von äußeren Einflüssen (Witterung, Verunreinigungen, Belastungen etc.) abhängig. Aus diesem Grund dient die Hafttabelle nur zur Orientierung und stellt keine verbindliche Aussage dar.

## Besondere Hinweise

Die schnelle Überstreichbarkeit bezieht sich auf eine Fugenbreite bis 5 mm. Fugen zwischen 5 mm bis 10 mm Breite können bereits nach 4 Stunden überstrichen werden. Die maximale Fugentiefe sollte 5 mm betragen. Bei Fugen, die diese Abmessungen überschreiten, empfehlen wir eine Trocknungszeit von einer Woche.
Vor dem Einsatz des Produktes hat der Anwender sicherzustellen, dass die Werkstoffe/Materialien in dem Kontaktbereich mit diesem und miteinander verträglich sind und sich nicht schädigen oder verändern (z. B. verfärben). Bei Werkstoffen/Materialien, die in der Folge im Bereich des Produktes verarbeitet werden, hat der Anwender im Vorfeld abzuklären, dass deren Inhaltsstoffe bzw. Ausdünstungen zu keiner Beeinträchtigung oder Veränderung (z. B. Verfärbung) des Produktes führen können.
Gegebenenfalls hat der Anwender Rücksprache mit dem jeweiligen Hersteller der Werkstoffe/Materialien zu nehmen.
Nicht bei Temperaturen unter +5 °C verarbeiten.
Während der Aushärtung/Trocknung kommt es zur Farbveränderung des Dichtstoffes. Der endgültige Farbton wird nach vollständiger Aushärtung erreicht.
Verträglichkeit mit Anstrichen auf wässriger Basis ist in den meisten Fällen gegeben. Aufgrund der Vielzahl der am Markt erhältlichen Anstrichsysteme empfehlen wir jedoch die Verträglichkeit von Dichtstoff und Anstrich zu überprüfen oder Rücksprache mit unserer Anwendungstechnik zu halten.
Berührungskontakt mit bitumenhaltigen und weichmacherabgebenden Materialien wie z.B. Butyl, EPDM, Neopren, Isolier- und Schwarzanstrichen vermeiden.

## Anwendungshinweise

Dichtstoff mit Hand- oder Druckluftpistole gleichmäßig ausspritzen, Oberfläche vor beginnender Hautbildung mit angefeuchtetem Werkzeug anpressen. Verunreinigungen in frischem Zustand mit Wasser entfernen. Unser Produkt kann überstrichen / überlackiert werden. Die Verträglichkeit zwischen Beschichtung und unserem Produkt muss vor der Anwendung durch den Anwender/Verarbeiter überprüft werden - ggf. unter Produktionsbedingungen. Unsere OTTO Anwendungstechnik unterstützt Sie gerne unverbindlich.
Dichtstoffe sollten grundsätzlich nur dann vollflächig überstrichen werden, wenn der Anstrich oder das Farbsystem die zu erwartenden Bewegungen des Dichtstoffes ohne optische Beeinträchtigungen ausgleichen kann.
Acrylat-Dichtstoffe härten unter Abgabe von Wasser aus, dadurch lässt sich ein Volumenverlust nicht vermeiden. Dies kann in Einzelfällen zur Bildung von Rissen führen.
Wegen der Vielzahl möglicher Einflüsse bei der Verarbeitung und der Anwendung ist vom Verarbeiter stets eine Probeverarbeitung und -anwendung vorzunehmen.
Das konkrete Aufbrauchdatum ist dem Gebindeaufdruck zu entnehmen und zu beachten.
Wir empfehlen, unsere Produkte in den ungeöffneten Originalgebinden trocken (< 60 % rLF) im Temperaturbereich von + 15° C bis + 25° C zu lagern. Werden die Produkte über längere Zeiträume (mehrere Wochen) bei höherer Temperatur/ Luftfeuchtigkeit gelagert und / oder transportiert, kann eine Verringerung der Haltbarkeit bzw. eine Veränderung der Materialeigenschaften nicht ausgeschlossen werden.

## Lieferform

| | **310 ml Kartusche** |
|---|---|
| ◯ **weiß** | A220-04-C01 |
| **Stück pro Verpackungseinheit** | **20** |
| **Stück pro Palette** | **1200** |

Keine Sonderfarben möglich.
Aus darstellungstechnischen Gründen können die abgebildeten Farben von den Originalfarben der Produkte abweichen.

## Sicherheitshinweise

Bitte das Sicherheitsdatenblatt beachten.
Nach erfolgter Aushärtung ist das Produkt geruchlos.

## Entsorgung

Hinweise zur Entsorgung siehe Sicherheitsdatenblatt.

## Markenhinweise

EMICODE® ist eine eingetragene Marke der GEV e. V. (Düsseldorf)

## Mängelhaftung

Die vorstehenden Informationen und unsere anwendungstechnische Beratung in Wort, Schrift und durch Versuche erfolgen nach bestem Wissen, gelten jedoch nur als unverbindliche Hinweise, auch in Bezug auf etwaige Schutzrechte Dritter. Die Angaben in dieser Druckschrift befreien den Verarbeiter nicht von einer eigenen Prüfung unserer Produkte im Hinblick auf ihre Eignung für die beabsichtigten Verfahren und Zwecke. Anwendung, Verwendung und Verarbeitung unserer Produkte und der auf Grund unserer anwendungstechnischen Beratung hergestellten Produkte erfolgen außerhalb unserer Kontrollmöglichkeiten und liegen daher ausschließlich in der Verantwortung des Verarbeiters. Unterliegt die Anwendung, für die unsere Produkte herangezogen werden, einer behördlichen Genehmigungspflicht, so ist der Anwender für die Erlangung dieser Genehmigungen verantwortlich. Wir behalten uns das Recht zur Anpassung des Produktes an den technischen Fortschritt und an neue Entwicklungen vor. Im Übrigen verweisen wir auf unsere Allgemeinen Geschäftsbedingungen, insbesondere auch bezüglich einer etwaigen Mängelhaftung. Sie finden unsere AGB unter www.otto-chemie.de.

# Sicherheitsdatenblatt

**gemäß Verordnung (EG) Nr. 1907/2006, Artikel 31**

Druckdatum: 24.06.2025 Version: 1 überarbeitet am: 24.06.2025

## ABSCHNITT 1: Bezeichnung des Stoffs beziehungsweise des Gemischs und des Unternehmens

· **1.1 Produktidentifikator**

· **Handelsname: OTTOSEAL A 220 Turbo**

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

· **Verwendung des Stoffes / des Gemisches** Acryl-Dichtstoff

· **Verwendungen, von denen abgeraten wird** Angaben im technischen Datenblatt beachten

· **1.3 Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**

· **Hersteller/Lieferant:**
Hermann Otto GmbH
Krankenhausstraße 14
D-83413 Fridolfing
Tel.: 0049/(0)8684/908-0
Fax.: 0049/(0)8684/908-1840

· **Auskunftgebender Bereich:**
Tel.: 0049- (0)8684- 908- 2363 ( -4300 )
E-Mail: msds@otto-chemie.de

· **1.4 Notrufnummer:**
Giftnotruf München Tel.: 0049- (0)89- 192 40 (24 h von Mo.-So.)
für Österreich: 0043-1-40 6-43 43 (Vergiftungsinformationszentrale der Gesundheit Österreich GmbH- 24h täglich)
Tel: 0049 (0)89 220 61012 (Carechem 24)

## ABSCHNITT 2: Mögliche Gefahren

· **2.1 Einstufung des Stoffs oder Gemischs**

· **Einstufung gemäß Verordnung (EG) Nr. 1272/2008**
Das Produkt ist gemäß CLP-Verordnung nicht eingestuft.

· **2.2 Kennzeichnungselemente**

· **Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008** entfällt

· **Gefahrenpiktogramme** entfällt

· **Signalwort** entfällt

· **Gefahrenhinweise** entfällt

· **Zusätzliche Angaben:**
EUH208 Enthält 1,2-Benzisothiazol-3(2H)-on, Gemisch aus: 5-Chlor-2-methyl-2H-isothiazol-3-on und 2-Methyl-2H-isothiazol-3-on. Kann allergische Reaktionen hervorrufen.
EUH210 Sicherheitsdatenblatt auf Anfrage erhältlich.

· **2.3 Sonstige Gefahren**

· **Ergebnisse der PBT- und vPvB-Beurteilung**

· **PBT:** Nicht anwendbar.

· **vPvB:** Nicht anwendbar.

· **Feststellung endokrinschädlicher Eigenschaften**
Dieses Produkt enthält keine Bestandteile, die gemäß REACH Artikel 57(f) oder der delegierten Verordnung (EU) 2017/2100 der Kommission oder der delegierten Verordnung (EU) 2018/605 der Kommission in Mengen von 0,1 % oder mehr endokrinschädliche Eigenschaften aufweisen.

## ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

· **3.2 Gemische**

· **Beschreibung:** Acrylsäureester-Copolymer mit Füllstoffen und Zuschlagstoffen

· **Gefährliche Inhaltsstoffe:**

CAS: 2634-33-5 1,2-Benzisothiazol-3(2H)-on <0,036%
EINECS: 220-120-9 Eye Dam. 1, H318; Aquatic Acute 1, H400; Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1A, H317
Spezifische Konzentrationsgrenze:
Skin Sens. 1A; H317: C ≥ 0,036%

(Fortsetzung auf Seite 2)

# Sicherheitsdatenblatt

**gemäß Verordnung (EG) Nr. 1907/2006, Artikel 31**

Druckdatum: 24.06.2025 Version: 1 überarbeitet am: 24.06.2025

**Handelsname: OTTOSEAL A 220 Turbo**

(Fortsetzung von Seite 1)

CAS: 55965-84-9 Gemisch aus: 5-Chlor-2-methyl-2H-isothiazol-3-on und 2-Methyl-2H- <0,0015%
isothiazol-3-on
Acute Tox. 3, H301; Acute Tox. 2, H310; Acute Tox. 2, H330;
Skin Corr. 1C, H314; Eye Dam. 1, H318; Aquatic Acute 1,
H400 (M=100); Aquatic Chronic 1, H410 (M=100); Skin Sens. 1A,
H317, EUH071
Spezifische Konzentrationsgrenzen:
Skin Corr. 1C; H314: C ≥ 0,6 %
Skin Irrit. 2; H315: 0,06 % ≤ C < 0,6 %
Eye Dam. 1; H318: C ≥ 0,6 %
Eye Irrit. 2; H319: 0,06 % ≤ C < 0,6 %
Skin Sens. 1A; H317: C ≥ 0,0015 %

· **zusätzl. Hinweise:**
Partikelförmige Rohstoffe mit Inhalationsrisiko sind untrennbar in der Produktmasse gebunden und lösen daher keine Einstufung als inhalationsgefährdend aus. Aufgrund der physikalischen Eigenschaften des Produkts ist eine inhalative Exposition durch Partikeln nicht möglich.

## ABSCHNITT 4: Erste-Hilfe-Maßnahmen

· **4.1 Beschreibung der Erste-Hilfe-Maßnahmen**
· **nach Einatmen:** Für Frischluft sorgen
· **nach Hautkontakt:**
Sofort mit Wasser und Seife abwaschen und gut nachspülen.
Bei andauernder Hautreizung Arzt aufsuchen.
· **nach Augenkontakt:**
Augen bei geöffnetem Lidspalt mehrere Minuten unter fließendem Wasser abspülen und Arzt konsultieren. Auf Kontaklinsen prüfen und falls vorhanden entfernen.
· **nach Verschlucken:**
Kein Erbrechen herbeiführen. Sofort Arzthilfe zuziehen. Verpackung oder Etikett vorzeigen.
· **4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen**
Keine weiteren relevanten Informationen verfügbar.
· **4.3 Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung**
Keine weiteren relevanten Informationen verfügbar.

## ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

· **5.1 Löschmittel**
· **Geeignete Löschmittel:**
CO2, Löschpulver oder Wassersprühstrahl. Größeren Brand mit Wassersprühstrahl oder alkoholbeständigem Schaum bekämpfen.
· **5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren**
Beim Erhitzen oder im Brandfalle Bildung giftiger Gase möglich.
· **5.3 Hinweise für die Brandbekämpfung**
· **Besondere Schutzausrüstung:** Explosions- und Brandgase nicht einatmen.

## ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

· **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**
Für ausreichende Lüftung sorgen.
· **6.2 Umweltschutzmaßnahmen:**
Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.
· **6.3 Methoden und Material für Rückhaltung und Reinigung:**
Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.

(Fortsetzung auf Seite 3)

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· **6.4 Verweis auf andere Abschnitte**
Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.

## ABSCHNITT 7: Handhabung und Lagerung

· **7.1 Schutzmaßnahmen zur sicheren Handhabung**
Für gute Belüftung/Absaugung am Arbeitsplatz sorgen.
Siehe Punkt 8: Persönliche Schutzausrüstung.

· **7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**
· **Lagerung:**
· **Anforderung an Lagerräume und Behälter:** Eindringen in den Boden sicher verhindern.
· **Zusammenlagerungshinweise:** Getrennt von Lebensmitteln lagern.
· **Weitere Angaben zu den Lagerbedingungen:**
In gut verschlossenen Gebinden kühl und trocken lagern.
Vor Hitze und direkter Sonnenbestrahlung schützen.
· **Lagerklasse LGK gemäß TRGS 510:** 12
· **7.3 Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

## ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

· **8.1 Zu überwachende Parameter**
· **Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:**

**2634-33-5 1,2-Benzisothiazol-3(2H)-on**
MAK vgl.Abschn.IIb und Xc

**55965-84-9 Gemisch aus: 5-Chlor-2-methyl-2H-isothiazol-3-on und 2-Methyl-2H-isothiazol-3-on**
MAK Langzeitwert: 0,2E mg/m³
vgl.Abschn.Xc

· **Zusätzliche Hinweise:** Als Grundlage dienten die bei der Erstellung gültigen Listen.

· **8.2 Begrenzung und Überwachung der Exposition**
· **Geeignete technische Steuerungseinrichtungen** Keine weiteren Angaben, siehe Abschnitt 7.
· **Individuelle Schutzmaßnahmen, zum Beispiel persönliche Schutzausrüstung**
· **Allgemeine Schutz- und Hygienemaßnahmen:**
Die üblichen Vorsichtsmaßnahmen beim Umgang mit Chemikalien sind zu beachten.
Vor den Pausen und bei Arbeitsende Hände waschen.
Berührung mit den Augen und der Haut vermeiden.
· **Atemschutz** nicht erforderlich.
· **Handschutz** Schutzhandschuhe.
· **Handschuhmaterial**
Die Schutzhandschuhe sollten in jedem Fall auf ihre Arbeitsplatz- spezifische Eignung ( z.B. Feinfühligkeit, mechanische Beständigkeit, Produktverträglichkeit, Permeationszeit)geprüft werden. Anweisungen und Informationen der Handschuhhersteller zur Anwendung, Lagerung, Pflege und zum Austausch der Handschuhe befolgen. Die Schutzhandschuhe sollten bei Beschädigung oder ersten Abnutzungserscheinungen sofort ersetzt werden. Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich. Bezugsnummer EN 374.
Empfohlenes Handschuhmaterial: z.B. Nitrilkautschuk
Empfohlene Materialstärke: > 0,4 mm
· **Durchdringungszeit des Handschuhmaterials** Durchbruchzeit: 10 - 30 min
· **Augen-/Gesichtsschutz** Schutzbrille.
· **Körperschutz:** Arbeitsschutzkleidung.



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## ABSCHNITT 9: Physikalische und chemische Eigenschaften

· **9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften**

| | |
|---|---|
| · **Allgemeine Angaben** | |
| · **Aggregatzustand** | Flüssig |
| · **Farbe** | gemäß Produktbezeichnung |
| · **Geruch:** | charakteristisch |
| · **Schmelzpunkt/Gefrierpunkt:** | nicht anwendbar |
| · **Siedepunkt oder Siedebeginn und Siedebereich** | nicht anwendbar |
| · **Untere und obere Explosionsgrenze** | |
| · **untere:** | entfällt |
| **obere:** | entfällt |
| · **Flammpunkt:** | Nicht anwendbar (Testmethoden für Flammpunkt nicht gültig für pastöse Stoffe und hochviskose Flüssigkeiten) |
| · **Zersetzungstemperatur:** | Nicht bestimmt. |
| · **pH-Wert:** | Nicht anwendbar. |
| · **Viskosität:** | Nicht bestimmt. |
| · **Löslichkeit** | |
| · **Wasser:** | dispergierbar |
| · **Verteilungskoeffizient n-Oktanol/Wasser (log-Wert)** | Nicht bestimmt. |
| · **Dampfdruck:** | Nicht bestimmt. |
| · **Dichte und/oder relative Dichte** | |
| · **Dichte:** | siehe Technisches Datenblatt |
| · **Relative Dichte** | Nicht bestimmt. |
| · **Dampfdichte** | Nicht bestimmt. |
| · **Partikeleigenschaften** | Nicht bestimmt |

· **9.2 Sonstige Angaben**

| | |
|---|---|
| · **Form:** | pastös |
| · **Explosive Eigenschaften:** | Nicht bestimmt. |
| · **Angaben über physikalische Gefahrenklassen** | |
| · **Aerosole** | entfällt |
| · **Entzündbare Flüssigkeiten** | entfällt |

## ABSCHNITT 10: Stabilität und Reaktivität

· **10.1 Reaktivität** Keine weiteren relevanten Informationen verfügbar.
· **10.2 Chemische Stabilität**
· **Thermische Zersetzung / zu vermeidende Bedingungen:**
Keine Zersetzung bei bestimmungsgemäßer Verwendung.
Starke Erhitzung vermeiden.
· **10.3 Möglichkeit gefährlicher Reaktionen** Keine gefährlichen Reaktionen bekannt.
· **10.4 Zu vermeidende Bedingungen** Keine weiteren relevanten Informationen verfügbar.
· **10.5 Unverträgliche Materialien:** Keine weiteren relevanten Informationen verfügbar.
· **10.6 Gefährliche Zersetzungsprodukte:** Keine gefährlichen Zersetzungsprodukte bekannt.

## ABSCHNITT 11: Toxikologische Angaben

· **11.1 Angaben zu den Gefahrenklassen im Sinne der Verordnung (EG) Nr. 1272/2008**
· **akute Toxizität:** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

(Fortsetzung auf Seite 5)

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· **Einstufungsrelevante LD/LC50-Werte:**

**13463-67-7 Titandioxid**

| | | |
|---|---|---|
| Oral | LD50 | >5.000 mg/kg (rat) |
| Dermal | LD50 | >5.000 mg/kg (rbt) |
| Inhalativ | LC50/4 h | >6,82 mg/l (rat) |

· **Primäre Reizwirkung:**
· **Bei Hautkontakt:** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
· **Bei Augenkontakt:** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
· **Sensibilisierung der Atemwege/Haut**
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
· **Keimzellmutagenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
· **Karzinogenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
· **Reproduktionstoxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
· **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
· **Spezifische Zielorgan-Toxizität bei wiederholter Exposition**
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
· **Aspirationsgefahr** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
· **11.2 Angaben über sonstige Gefahren**
· **Endokrinschädliche Eigenschaften**
Keiner der Inhaltsstoffe ist enthalten.

## ABSCHNITT 12: Umweltbezogene Angaben

· **12.1 Toxizität** Keine weiteren relevanten Informationen verfügbar
· **12.2 Persistenz und Abbaubarkeit** Keine weiteren relevanten Informationen verfügbar.
· **12.3 Bioakkumulationspotenzial** Keine weiteren relevanten Informationen verfügbar.
· **12.4 Mobilität im Boden** Keine weiteren relevanten Informationen verfügbar.
· **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
· **PBT:** Nicht anwendbar.
· **vPvB:** Nicht anwendbar.
· **12.6 Endokrinschädliche Eigenschaften**
Dieses Produkt enthält keine Bestandteile, die gemäß REACH Artikel 57(f) oder der delegierten Verordnung (EU) 2017/2100 der Kommission oder der delegierten Verordnung (EU) 2018/605 der Kommission in Mengen von 0,1 % oder mehr endokrinschädliche Eigenschaften aufweisen.
· **12.7 Andere schädliche Wirkungen**
· **Weitere ökologische Hinweise:**
· **Allgemeine Hinweise:**
Wassergefährdungsklasse 1 : schwach wassergefährdend
Nicht in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.

## ABSCHNITT 13: Hinweise zur Entsorgung

· **13.1 Verfahren der Abfallbehandlung**
· **Empfehlung:**
Örtliche behördliche Vorschriften beachten.
Material kann nach der Aushärtung zusammen mit dem Hausmüll oder den Gewerbeabfällen entsorgt werden.
Unverbrauchtes Material ( flüssig, pastös ) ist als Sonderabfall zu entsorgen.

· **Verpackungen:**
· **Empfehlung:**
Restentleerte Verpackungen können einer Wiederverwertung/Recycling zugeführt werden.

(Fortsetzung auf Seite 6)

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Nicht reinigungsfähige Verpackungen bzw. Verpackungen mit Restinhalten sind wie der Stoff zu entsorgen.

## ABSCHNITT 14: Angaben zum Transport

· **14.1 UN-Nummer oder ID-Nummer**
· **ADR, IMDG, IATA** entfällt
· **14.2 Ordnungsgemäße UN-Versandbezeichnung**
· **ADR, IMDG, IATA** entfällt
· **14.3 Transportgefahrenklassen**

· **ADR, ADN, IMDG, IATA**
· **Klasse** entfällt
· **14.4 Verpackungsgruppe**
· **ADR, IMDG, IATA** entfällt
· **14.5 Umweltgefahren:** Nicht anwendbar.
· **14.6 Besondere Vorsichtsmaßnahmen für den Verwender** Nicht anwendbar.
· **14.7 Massengutbeförderung auf dem Seeweg gemäß IMO-Instrumenten** Nicht anwendbar.

· **Transport/weitere Angaben:** Kein Gefahrgut nach obigen Verordnungen
· **UN "Model Regulation":** entfällt

## ABSCHNITT 15: Rechtsvorschriften

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

· **Richtlinie 2012/18/EU**
· **Namentlich aufgeführte gefährliche Stoffe - ANHANG I** Keiner der Inhaltsstoffe ist enthalten.
· **Richtlinie 2011/65/EU zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten – Anhang II**
Keiner der Inhaltsstoffe ist enthalten.
· **VERORDNUNG (EU) 2019/1148**
· **Anhang I - BESCHRÄNKTE AUSGANGSSTOFFE FÜR EXPLOSIVSTOFFE (Oberer Konzentrationsgrenzwert für eine Genehmigung nach Artikel 5 Absatz 3)**
Keiner der Inhaltsstoffe ist enthalten.
· **Anhang II - MELDEPFLICHTIGE AUSGANGSSTOFFE FÜR EXPLOSIVSTOFFE**
Keiner der Inhaltsstoffe ist enthalten.
· **Verordnung (EG) Nr. 273/2004 betreffend Drogenausgangsstoffe**
Keiner der Inhaltsstoffe ist enthalten.
· **Verordnung (EG) Nr. 111/2005 zur Festlegung von Vorschriften für die Überwachung des Handels mit Drogenaustauschstoffen zwischen der Gemeinschaft und Drittländern**
Keiner der Inhaltsstoffe ist enthalten.

· **Nationale Vorschriften:**

· **Wassergefährdungsklasse:** WGK 1 (Selbsteinstufung VwVwS): schwach wassergefährdend.
· **Angaben zum internationalen Registrierungsstatus:**

| | |
|---|---|
| REACH - Europe | gelistet bzw. konform |
| AICS - Australia | gelistet bzw. konform |
| DSL - Canada | gelistet bzw. konform |
| IECSC - China | gelistet bzw. konform |
| ENCS - Japan | gelistet bzw. konform |
| ECL - Korea | nicht gelistet |
| NZIoC - New Zealand | gelistet bzw. konform |
| PICCS - Philippines | gelistet bzw. konform |

(Fortsetzung auf Seite 7)

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*TSCA - USA* *gelistet bzw. konform*
*TCSI - Taiwan* *gelistet bzw. konform*
· ***15.2 Stoffsicherheitsbeurteilung:*** *Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.*

## ABSCHNITT 16: Sonstige Angaben

*Die Angaben stützen sich auf den heutigen Stand unserer Kenntnisse, sie stellen jedoch keine Zusicherung von Produkteigenschaften dar und begründen kein vertragliches Rechtsverhältnis. Dieses Sicherheitsdatenblatt entspricht der Verordnung (EG) Nr. 1907/2006, Artikel 31 in der Fassung der Verordnung (EU) 2020/878.*

· ***Relevante Sätze***
*H301 Giftig bei Verschlucken.*
*H302 Gesundheitsschädlich bei Verschlucken.*
*H310 Lebensgefahr bei Hautkontakt.*
*H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.*
*H315 Verursacht Hautreizungen.*
*H317 Kann allergische Hautreaktionen verursachen.*
*H318 Verursacht schwere Augenschäden.*
*H319 Verursacht schwere Augenreizung.*
*H330 Lebensgefahr bei Einatmen.*
*H400 Sehr giftig für Wasserorganismen.*
*H410 Sehr giftig für Wasserorganismen mit langfristiger Wirkung.*
*EUH071 Wirkt ätzend auf die Atemwege.*

· ***Abkürzungen und Akronyme:***
*ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)*
*IMDG: International Maritime Code for Dangerous Goods*
*IATA: International Air Transport Association*
*GHS: Globally Harmonised System of Classification and Labelling of Chemicals*
*EINECS: European Inventory of Existing Commercial Chemical Substances*
*ELINCS: European List of Notified Chemical Substances*
*CAS: Chemical Abstracts Service (division of the American Chemical Society)*
*LC50: Lethal concentration, 50 percent*
*LD50: Lethal dose, 50 percent*
*PBT: Persistent, Bioaccumulative and Toxic*
*vPvB: very Persistent and very Bioaccumulative*
*Acute Tox. 3: Akute Toxizität – Kategorie 3*
*Acute Tox. 4: Akute Toxizität – Kategorie 4*
*Acute Tox. 2: Akute Toxizität – Kategorie 2*
*Skin Corr. 1C: Hautreizende/-ätzende Wirkung – Kategorie 1C*
*Skin Irrit. 2: Hautreizende/-ätzende Wirkung – Kategorie 2*
*Eye Dam. 1: Schwere Augenschädigung/Augenreizung – Kategorie 1*
*Skin Sens. 1A: Sensibilisierung der Haut – Kategorie 1A*
*Aquatic Acute 1: Gewässergefährdend - akut gewässergefährdend – Kategorie 1*
*Aquatic Chronic 1: Gewässergefährdend - langfristig gewässergefährdend – Kategorie 1*

# Konformitätserklärung für Produkte mit Muster-EPDs

Der Industrieverband Deutsche Bauchemie e.V., in dem Hermann Otto GmbH Mitglied ist, hat sogenannte Muster-Umweltproduktdeklarationen (Muster-EPD) entwickelt und durch das unabhängige Institut Bauen und Umwelt e.V. (IBU) verifizieren lassen.

Diese durch das IBU verifizierten Muster-EPDs wurden von der Deutschen Bauchemie und dem IBU veröffentlicht.

Anhand unserer Produktrezepturen wurde überprüft, ob unsere Produkte durch die Muster-EPD abgedeckt werden.

Mit dieser Erklärung bestätigen wir, dass das Produkt

von der beigefügten Muster-EPD erfasst wird

Das heißt, dass die Ökobilanzdaten und die sonstigen Inhalte der beigefügten Muster-EPD auf das oben genannte Produkt zutreffen und für die Bewertung der Nachhaltigkeit von Gebäuden, in denen das oben genannte Produkt verbaut wurde, herangezogen werden können.

Hermann Otto GmbH

Fridolfing,

Hermann Otto GmbH | Krankenhausstr.14 | 83413 Fridolfing, Deutschland
Tel.: +49 8684 908-0 | Fax: +49 8684 1840
E-Mail: info@otto-chemie.de | Internet: www.otto-chemie.de

ISO 9001, ISO 14001
Zertifiziertes Integriertes Managementsystem für Qualität und Umwelt
www.tuev-sued.de/ms-zert

OTTO CHEMIE
DICHTEN & KLEBEN

# ENVIRONMENTAL PRODUCT DECLARATION

as per *ISO 14025* and *EN 15804+A2*

| | |
|---|---|
| Owner of the Declaration | DBC, EFCC, FEICA, IVK |
| Programme holder | Institut Bauen und Umwelt e.V. (IBU) |
| Publisher | Institut Bauen und Umwelt e.V. (IBU) |
| Declaration number | EPD-DBC-20220146-IBF1-EN |
| Issue date | 08.06.2022 |
| Valid to | 07.06.2027 |

## Dispersion-based products, group 1

DBC - Deutsche Bauchemie e.V.

EFCC - European Federation for Construction Chemicals

FEICA - Association of the European Adhesive and Sealant Industry

IVK - Industrieverband Klebstoffe e.V.

Institut Bauen und Umwelt e.V.

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

ECO PLATFORM EPD VERIFIED



# 1. General Information

DBC - Deutsche Bauchemie e.V.
EFCC - European Federation for Construction Chemicals
FEICA - Association of the European Adhesive and Sealant Industry
IVK - Industrieverband Klebstoffe e.V.

Dispersion-based products, group 1

**Programme holder**
IBU – Institut Bauen und Umwelt e.V.
Hegelplatz 1
10117 Berlin
Germany

**Owner of the declaration**
DBC, Mainzer Landstr. 55, D-60329 Frankfurt a.M.
EFCC, 172 Boulevard du Triomphe, B-1160 Brussels
FEICA, Rue Belliard 40, B-1040 Brussels
IVK, Völklingerstr. 4, D-40219 Düsseldorf

**Declaration number**
EPD-DBC-20220146-IBF1-EN

**Declared product / declared unit**
1 kg / 1 kg; density 1,000 - 1,500 kg/m³

**This declaration is based on the product category rules:**
Dispersion adhesives and primers for floor coverings, 01.2019
(PCR checked and approved by the SVR)

**Scope:**
This verified EPD entitles the holder to bear the symbol of the Institut Bauen und Umwelt e.V. It exclusively applies to products produced in Europe and applies to a period of five years from the date of issue. This EPD may be used by members of DBC, EFCC, FEICA and IVK and their members provided it has been proven that the respective product can be represented by this EPD. For this purpose, a guideline is available at the secretariats of the four associations. The members of the associations are listed on their respective websites.

**Issue date**
08.06.2022

**Valid to**
07.06.2027

The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

The EPD was created according to the specifications of *EN 15804+A2*. In the following, the standard will be simplified as *EN 15804*.

**Verification**

| |
|---|
| The standard *EN 15804* serves as the core PCR |
| Independent verification of the declaration and data according to *ISO 14025:2011* |
| ☐ internally ☒ externally |

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# 2. Product

## 2.1 Product description/Product definition

This EPD comprises dispersion-based products with a Volatile Organic Compound (VOC) content ≤1 % (VOC definition according to *Decopaint Directive*). The products typically consist of organic binding agents based on synthetic and/or natural resins, mineral fillers such as chalk as well as water and smaller volumes of auxiliaries (thickening agents, defoaming agents, surface-active agents, preservatives etc.). They dry physically through evaporation of the water contained therein. They comply with manifold, often specific, functions in the construction, furnishing and repair of buildings. Using dispersion-based products decisively improves the fitness for use of structures and extends their life expectancy. The product displaying the highest environmental impacts within the class of dispersion-based products considered was used as a representative product for calculating the Life Cycle Assessment results (worst-case approach).

For the placing on the market in the European Union/European Free Trade Association (EU/EFTA) with the exception of Switzerland) products falling under the Regulation (EU) No 305/2011 (*CPR*) need a Declaration of Performance taking into consideration either the relevant harmonised European standard or

the European Technical Assessment and the CE marking. For the application and use of the products the respective national provisions apply.

### 2.2 Application

Dispersion-based products are used for the following applications:

**Module 1: Dispersion adhesives, fixatives, precoatings and primers for floor coverings and parquet flooring**
Adhesives for, e.g. tufted carpets with various backings, woven textile coverings, fibre-bonded and natural fibre coverings, resilient coverings (PVC, rubber, PVC-free luxury vinyl tiles), linoleum, insulating bases and underlays, parquet, laminate and wood blocks on surfaces ready for laying. The products are suitable for normal wear in residential and commercial areas, also on heated floor constructions.

**Module 2: Dispersion-based tile adhesive**
Products for bonding ceramic tiles and paving as well as natural stone for internal and external installations on walls, floors and ceilings

**Module 3: Dispersion-based adhesives and sealants**
As structural adhesives and sealants: ·structural and repair adhesives, dispersion filler compounds, joint sealants

**Module 4: Dispersion-based products for waterproofing of buildings**
Products for waterproofing floors and/or walls in wet rooms inside buildings

**Module 5: Dispersion-based primers and bonding agents for concrete and floor screeds**
Products to improve the adhesion of e.g. self-levelling compounds or repair mortars on absorbent cement and calcium sulphate screeds, concrete, dry construction boards

**Module 6: Dispersion-based products for surface protection of concrete**
To increase the durability of concrete and reinforced steel structures as well as for new concrete and for maintenance and repair work (for areas without vehicle traffic)

**Module 7: Dispersion-based primers and barrier coatings**
Products to protect a substrate from e.g. the immersion of water, thus preventing degradation, corrosion or damage

### 2.3 Technical Data

The density of the products is between 1,00 and 1,50 g/cm³, other relevant technical data can be found in the manufacturer’s technical documentation.

**Module 1: Dispersion adhesives, fixatives, precoatings and primers for floor coverings and parquet flooring**
Dispersion adhesives for floor coverings have to comply with the requirements of the *EN ISO 22636*. The mechanical requirements of *EN ISO 22636* don’t apply to fixatives; their strengths are lower in accordance with their specifications. The performance characteristics of precoatings and primers are subject to the manufacturer's technical documentation/declaration of performance. Dispersion adhesives for parquet: The test procedures and requirements of the *EN ISO 17178* have to be fulfilled.

**Module 2: Dispersion-based tile adhesive**
The requirements on essential characteristics according to *EN 12004*, must be maintained. These are:
Tensile adhesion strength after dry storage (*EN 12004-2*)
-Tensile adhesion strength after water immersion (*EN 12004-2*)
-Tensile adhesion strength after heat ageing (*EN 12004*)
-Tensile adhesion strength after freeze/thaw cycles (*EN 12004-2*)
-Open time: Tensile strength (*EN 12004-2*)
Further essential characteristics in accordance with the manufacturer's technical documentation

**Module 3: Dispersion-based adhesives and sealants**
Performance characteristics in accordance with the manufacturer's technical documentation/declaration of performance

**Module 4: Dispersion-based products for waterproofing of buildings**
The minimum requirement of *EAD 030352-00-0503* - Liquid applied watertight covering kits for wet room floors and/or walls- must be maintained. The essential characteristics are to be specified in accordance with the European technical assessment (ETA, specification no.).

**Module 5: Dispersion-based primers and bonding agents for concrete and floor screeds**
Performance characteristics in accordance with the manufacturer's technical documentation

**Module 6: Dispersion-based products for surface protection of concrete**
The requirements on essential characteristics for all intended uses in accordance with *EN 1504-2*, Tables 1 and 5, must be maintained. These are:
- Permeability to $CO_2$ (*EN 1062-6*)
- Water vapour permeability (*EN ISO 7783-1/-2*)
- Capillary absorption and permeability to water (*EN 1062-3*)
- Adhesion strength by pull-off test (*EN 1542*)

Further essential characteristics in accordance with the manufacturer's technical documentation/declaration of performance

**Module 7: Dispersion-based primers and barrier coatings**
The requirements of the *Decopaint Directive* must be maintained.
Essential characteristics in accordance with the manufacturer's technical documentation/declaration of performance.

### 2.4 Delivery status

Liquid or pasty in containers made of plastic or metal. Typical container sizes contain 1 to 30 kg, usually 10 to 20 kg of product on pallets. For larger applications,

vats with approx. volumes of 200 kg (litres) or IBCs (intermediate bulk containers) with a capacity of 1 tonne (m³) or more are also used. A plastic container was modelled for the Life Cycle Assessment.

### 2.5 Base materials/Ancillary materials

Dispersion-based products usually comprise at least one synthetic resin dispersion, natural or synthetic resins dispersed in water, mineral fillers (e.g. chalk) and/or pigments. Auxiliaries such as thickening agents, defoaming agents, surface-active and dispersing agents as well as preservatives are used to fine-tune the product features. **Typically**, the products covered by this EPD contain the following range of base materials and auxiliaries (% by mass):

- Synthetic polymer dispersion (solids portion): 5 - 65
- Natural resins, natural resin derivatives: 0 - 25
- Mineral fillers: 0 - 60
- Pigments: 0 - 35
- Water: 15 - 95
- Auxiliaries: 1 - 5
- Thickening agents: < 3
- Dispersing agents/Emulsifying agents: < 2
- Wetting agent: 2
- Other: 0 - 2
- VOC according to *Decopaint Directive*: <1 % **(mandatory)**

These ranges are average values and the composition of products complying with the EPD can deviate from these concentration levels in individual cases. More detailed information is available in the respective manufacturer's documentation (e.g. product data sheets).

*Note: For companies to declare their products within the scope of this EPD it is not sufficient to simply comply with the product composition shown above. The application of this EPD is only possible for member companies of DBC, EFCC, FEICA, and IVK member associations and only for specific formulations with a total score below the declared maximum score for a product group according to the associated guidance document.*

**1. substances from the "Candidate List of Substances of Very High Concern for Authorisation" (SVHC)**

If this product contains substances listed in the *candidate list* (latest version) exceeding 0.1 percentage by mass, the relevant information can be found in the safety data sheet of the relevant product covered by this model EPD.

**2. CMR substances in categories 1A and 1B**

If this product contains other carcinogenic, mutagenic, reprotoxic (CMR) substances in categories 1A or 1B which are not on the *candidate list*, exceeding 0.1 percentage by mass, the relevant information can be found in the safety data sheet of the relevant product covered by this model EPD.

**3. Biocide products added to the construction product**

If this construction product contains biocide products, the active substances, information on the concentration and/or concentration range, the product type together with information on their hazardous properties are listed in the safety data sheet of the respective product.

### 2.6 Manufacture

Dispersion-based products are usually mixed discontinuously in batch mode, i.e. in individual batches or a series of individual batches, and filled into the delivery containers.

### 2.7 Environment and health during manufacturing

As a general rule, no particular environmental or health protection measures other than those specified by law are necessary.

### 2.8 Product processing/Installation

Dispersion based products are processed on site using suitable tools, usually by hand. The products are applied by trowelling/knife-coating, painting, rolling or spraying. Precautions for safe handling and storage (e.g. air exchange, exhaust ventilation, personal protective measures, conditions for safe storage) must be observed in accordance with the information on the safety data sheet.

Depending on the application and product specifications, between 50 and 1,500 g/m² are applied.

### 2.9 Packaging

A detailed description of packaging is provided in section 2.4. Empty containers and clean foils can be recycled.

### 2.10 Condition of use

During the use phase, dispersion-based products are existent as hardened film. They are long-lasting products which protect our buildings in the form of adhesives, primers, coatings or sealants as well as make an essential contribution towards their appearance, function and sustainability.

### 2.11 Environment and health during use

**Option 1 – Products for applications outside indoor areas with permanent stays by people**

No risks are known for water, air and soil if the products are used as designated.

**Option 2 – Products for applications inside indoor areas with permanent stays by people**

When used in indoor areas with permanent stays by people, evidence of the emission performance of construction products in contact with indoor air must be submitted according to national requirements (see chapter 7). No further influences by emissions on the environment and health are known.

### 2.12 Reference service life

Dispersion-based products fulfill manifold, often specific, functions in the construction or refurbishment of building structures. They decisively improve the usability of building structures and significantly extend their original service lives. The anticipated reference service life depends on the specific installation situation and the exposure associated with the product. It can be influenced by weathering as well as mechanical or chemical load.

### 2.13 Extraordinary effects

**Fire**

In terms of the volumes applied, dispersion based products have no or only a marginal influence on the fire performance characteristics of the building structure in which they have been installed.

**Water**
Dispersion-based products are water-resistant only to a certain degree and their strength can deteriorate when exposed to water for longer periods (of time); detaching from the surface is possible in a worst-case scenario. The components of dispersion-based products are not hazardous to water or only slightly hazardous to water. Owing to the overall low volumes of dispersion-based products used on buildings, no relevant contribution towards environmental damage can be anticipated by buildings featuring dispersion-based products in the event of extraordinary exposure to water.

**Mechanical destruction**
The mechanical destruction of dispersion-based products does not lead to any decomposition products which are harmful to the environment or health.

### 2.14 Re-use phase
According to present knowledge, no environmentally hazardous effects in terms of landfilling are to be generally anticipated through dismantling and recycling components to which dispersion-based products have been applied and on which they have dried.

### 2.15 Disposal
The low amounts of a dispersion-based product applied to a construction product will not interfere with the disposal/recycling of this.
Hardened product residue mechanically removed from substrates must be disposed of as commercial/construction waste. The following waste codes according to the European List of Waste (*2000/532/EC*) can apply:
**Hardened product residue:**
080112 Paint and varnish waste with the exception of that covered by 08 01 11
080410 Adhesive and sealant compound waste with the exception of that covered by 08 04 09

### 2.16 Further information
More information is available on the manufacturer's product or safety data sheets and is available on the manufacturer's websites or on request. Valuable technical information is also available on the associations' websites.

## 3. LCA: Calculation rules

### 3.1 Declared Unit
This EPD refers to the declared unit of 1 kg of dispersion-based product, group 1; applied into the building with a density of 1,000 - 1,500 kg/m³ in accordance with the *IBU PCR* part B for dispersion adhesives and primers for floor coverings.
The results of the Life Cycle Assessment provided in this declaration have been selected from the product with the highest environmental impact (worst-case scenario).
Depending on the application, a corresponding conversion factor such as the density to convert volumetric use to mass must be taken into consideration.

The Declaration type is according to *EN 15804*: Cradle to gate with options, modules C1–C3, and module D (A1–A3, C, D) and additional modules (A4-A5).

**Declared unit**

| Name | Value | Unit |
|---|---|---|
| Declared unit | 1 | kg |
| Gross density | 1,000-1,500 | kg/m^3 |

### 3.2 System boundary
Modules A1, A2 and A3 are taken into consideration in the LCA:
- A1 Production of preliminary products
- A2 Transport to the plant
- A3 Production incl. provision of energy, production of packaging as well as auxiliaries and consumables and waste treatment
- A4 Transport to site
- A5 Installation, product applied into the building during A5 phase operations and packaging disposal.

The end of life for the packaging material considered is described below:
-Incineration, for materials like plastic and wood.
-C1-C2-C3-D
The building deconstruction (demolition process) takes place in the C1 module which considers energy production and consumption in terms of diesel and all the emissions connected with the fuel-burning process to run the machines. After the demolition, the product is transported to the end-of-life processing (C2 module) where all the impacts related to the transport processes are considered. For precautionary principle and as a worst-case scenario, thermal treatment is the only end of life scenario considered. This is modelled by the incineration process (module C3) where the product ends its life cycle.
Module D accounts for potential benefits that are beyond the defined system boundaries. Credits are generated during the incineration of wastes and related electricity produced that are occurring in the A5 module.

### 3.3 Estimates and assumptions
For this EPD formulation and production data defined and collected by FEICA were considered. Production waste was assumed to be disposed of by incineration without credits as a worst-case.
An average of plastic containers and wooden pallets was considered in the LCA.

### 3.4 Cut-off criteria
All raw materials submitted for the formulations and production data were taken into consideration.
The manufacture of machinery, plant and other infrastructure required for the production of the products under review was not taken into consideration in the LCA.
Transport of packaging materials is excluded.

### 3.5 Background data
Data from the *GaBi* database SP40 (2020) was used as background data.

### 3.6 Data quality

Representative products were applied for this EPD and the product in the group displaying the highest environmental impact was selected for calculating the LCA results. The background datasets used are less than 4 years old.
Production data and packaging are based on details provided by the manufacturer. The formulation used for evaluation refers to a specific product.
The data quality of the background data is considered to be good.

### 3.7 Period under review

Representative formulations are valid for 2021.

### 3.8 Allocation

Mass allocation has been applied when primary data have been used and implemented into the LCA model.

### 3.9 Comparability

Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to *EN 15804* and the building context, respectively the product-specific characteristics of performance, are taken into account.

The *GaBi* database SP40 (2020) was used.

## 4. LCA: Scenarios and additional technical information

**Characteristic product properties**
**Information on biogenic Carbon**
The packaging material contains biogenic carbon content which is presented below.

**Information on describing the biogenic Carbon Content at factory gate**

| Name | Value | Unit |
|---|---|---|
| Biogenic Carbon Content in product | - | kg C |
| Biogenic Carbon Content in accompanying packaging | 0.016 | kg C |

For the preparation of building life cycle assessments, it must be taken into account that in module A5 (installation in the building) the biogenic amount of $CO_2$ (0.016 kg C *3.67 = 0.059 kg $CO_2$-eq.) of the packaging bound in module A1-A3 is mathematically booked out.

**Transport to the building site (A4)**

| Name | Value | Unit |
|---|---|---|
| Transport distance | 1000 | km |
| Gross weight | 34 - 40 | t |
| Payload capacity | 27 | t |

**Installation into the building (A5)**

| Name | Value | Unit |
|---|---|---|
| Other resources for packaging material | 0.067 | kg |
| Material loss | 0.01 | kg |

Material loss regards the amount of product not used during the application phase into the building. This amount is 1% of the product, impacts related to the production of this part are charged to the A5 module. This percentage is considered as waste to disposal and impacts of its end of life have been considered in the LCA model and declared in A5.

**End of life (C1-C3)**

| Name | Value | Unit |
|---|---|---|
| Collected as mixed construction waste | 1 | kg |
| Incineration | 1 | kg |

# 5. LCA: Results

## DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; ND = MODULE OR INDICATOR NOT DECLARED; MNR = MODULE NOT RELEVANT)

| PRODUCT STAGE | | | CONSTRUCTION PROCESS STAGE | | USE STAGE | | | | | | | END OF LIFE STAGE | | | | BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Raw material supply | Transport | Manufacturing | Transport from the gate to the site | Assembly | Use | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | De-construction demolition | Transport | Waste processing | Disposal | Reuse-Recovery-Recycling-potential |
| A1 | A2 | A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
| X | X | X | X | X | ND | ND | MNR | MNR | MNR | ND | ND | X | X | X | ND | X |

## RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 kg of dispersion-based product, group 1

| Core Indicator | Unit | A1-A3 | A4 | A5 | C1 | C2 | C3 | D |
|---|---|---|---|---|---|---|---|---|
| GWP-total | [kg $CO_2$-Eq.] | 1.32E+0 | 5.11E-2 | 1.73E-1 | 2.79E-4 | 1.24E-2 | 9.45E-1 | -3.98E-1 |
| GWP-fossil | [kg $CO_2$-Eq.] | 1.36E+0 | 5.06E-2 | 8.81E-2 | 2.66E-4 | 1.18E-2 | 4.29E-1 | -3.97E-1 |
| GWP-biogenic | [kg $CO_2$-Eq.] | -5.05E-2 | 1.48E-4 | 8.53E-2 | 1.24E-5 | 5.42E-4 | 5.15E-1 | -8.96E-4 |
| GWP-luluc | [kg $CO_2$-Eq.] | 4.52E-4 | 4.10E-4 | 6.04E-6 | 6.39E-9 | 2.79E-7 | 3.50E-5 | -2.51E-4 |
| ODP | [kg CFC11-Eq.] | 3.00E-14 | 6.08E-18 | 3.18E-16 | 2.84E-20 | 1.24E-18 | 3.02E-16 | -3.72E-15 |
| AP | [mol $H^+$-Eq.] | 4.90E-3 | 1.52E-4 | 7.29E-5 | 3.60E-6 | 3.73E-5 | 5.25E-4 | -5.26E-4 |
| EP-freshwater | [kg P-Eq.] | 2.65E-5 | 1.54E-7 | 2.68E-7 | 5.75E-11 | 2.51E-9 | 1.04E-7 | -4.62E-7 |
| EP-marine | [kg N-Eq.] | 1.03E-3 | 6.75E-5 | 1.75E-5 | 1.63E-6 | 1.72E-5 | 2.01E-4 | -1.39E-4 |
| EP-terrestrial | [mol N-Eq.] | 1.24E-2 | 7.56E-4 | 2.36E-4 | 1.79E-5 | 1.89E-4 | 2.52E-3 | -1.49E-3 |
| POCP | [kg NMVOC-Eq.] | 3.63E-3 | 1.33E-4 | 5.62E-5 | 4.91E-6 | 3.39E-5 | 5.22E-4 | -4.02E-4 |
| ADPE | [kg Sb-Eq.] | 6.50E-7 | 3.63E-9 | 6.77E-9 | 8.06E-12 | 3.52E-10 | 4.62E-9 | -6.06E-8 |
| ADPF | [MJ] | 3.30E+1 | 6.73E-1 | 3.61E-1 | 3.81E-3 | 1.66E-1 | 5.52E-1 | -6.70E+0 |
| WDP | [$m^3$ world-Eq deprived] | 4.60E-1 | 4.52E-4 | 2.10E-2 | 5.27E-7 | 2.30E-5 | 1.57E-1 | -3.70E-2 |

| Caption | GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water (user) deprivation potential |
|---|---|

## RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1 kg of dispersion-based product, group 1

| Indicator | Unit | A1-A3 | A4 | A5 | C1 | C2 | C3 | D |
|---|---|---|---|---|---|---|---|---|
| PERE | [MJ] | 4.66E+0 | 3.79E-2 | 6.43E-1 | 1.20E-5 | 5.25E-4 | 9.36E-2 | -1.32E+0 |
| PERM | [MJ] | 5.85E-1 | 0.00E+0 | -5.85E-1 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 |
| PERT | [MJ] | 5.25E+0 | 3.79E-2 | 5.83E-2 | 1.20E-5 | 5.25E-4 | 9.36E-2 | -1.32E+0 |
| PENRE | [MJ] | 1.78E+1 | 6.74E-1 | 1.31E+0 | 3.81E-3 | 1.67E-1 | 1.49E+1 | -6.70E+0 |
| PENRM | [MJ] | 1.53E+1 | 0.00E+0 | -9.53E-1 | 0.00E+0 | 0.00E+0 | -1.43E+1 | 0.00E+0 |
| PENRT | [MJ] | 3.30E+1 | 6.74E-1 | 3.62E-1 | 3.81E-3 | 1.67E-1 | 5.52E-1 | -6.70E+0 |
| SM | [kg] | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 |
| RSF | [MJ] | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 |
| NRSF | [MJ] | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 |
| FW | [$m^3$] | 1.19E-2 | 4.38E-5 | 5.03E-4 | 2.16E-8 | 9.41E-7 | 3.70E-3 | -1.53E-3 |

| Caption | PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water |
|---|---|

## RESULTS OF THE LCA – WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: 1 kg of dispersion-based product, group 1

| Indicator | Unit | A1-A3 | A4 | A5 | C1 | C2 | C3 | D |
|---|---|---|---|---|---|---|---|---|
| HWD | [kg] | 8.74E-9 | 3.14E-8 | 1.23E-10 | 3.70E-13 | 1.62E-11 | 1.77E-9 | -2.66E-9 |
| NHWD | [kg] | 1.30E-2 | 1.03E-4 | 2.35E-3 | 3.90E-7 | 1.70E-5 | 1.36E-1 | -2.94E-3 |
| RWD | [kg] | 6.56E-4 | 8.34E-7 | 8.31E-6 | 4.09E-9 | 1.79E-7 | 2.51E-5 | -4.51E-4 |
| CRU | [kg] | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 |
| MFR | [kg] | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 |
| MER | [kg] | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 |
| EEE | [MJ] | 0.00E+0 | 0.00E+0 | 2.77E-1 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 |
| EET | [MJ] | 0.00E+0 | 0.00E+0 | 5.01E-1 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 |

| Caption | HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy |
|---|---|

## RESULTS OF THE LCA – additional impact categories according to EN 15804+A2-optional: 1 kg of dispersion-based product, group 1

| Indicator | Unit | A1-A3 | A4 | A5 | C1 | C2 | C3 | D |
|---|---|---|---|---|---|---|---|---|
| PM | [Disease Incidence] | ND | ND | ND | ND | ND | ND | ND |
| IRP | [kBq U235-Eq.] | ND | ND | ND | ND | ND | ND | ND |
| ETP-fw | [CTUe] | ND | ND | ND | ND | ND | ND | ND |
| HTP-c | [CTUh] | ND | ND | ND | ND | ND | ND | ND |
| HTP-nc | [CTUh] | ND | ND | ND | ND | ND | ND | ND |
| SQP | [-] | ND | ND | ND | ND | ND | ND | ND |

| Caption | PM = Potential incidence of disease due to PM emissions; IR = Potential Human exposure efficiency relative to U235; ETP-fw = Potential comparative Toxic Unit for ecosystems; HTP-c = Potential comparative Toxic Unit for humans (cancerogenic); HTP-nc = Potential comparative Toxic Unit for humans (not cancerogenic); SQP = Potential soil quality index |
|---|---|

Potential Human exposure efficiency relative to U235, 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 radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, radon and (from) some construction materials is also not measured by this indicator.

ADP minerals & metals, ADP fossil, WDP, ETF-fw, HTP-c, HTP-nc, SQP, 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 experience with the indicator.

**Additional environmental impact indicators** (suggested by *EN15804*, table 4) are not declared in the EPD. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high and as there is limited experience with the indicator (see ILCD classification in *EN 15804*, table 5). For this reason, results based on these indicators are not considered suitable for a decision-making process and are thus not declared in the EPD.

## 6. LCA: Interpretation

The majority of impacts are associated with the production phase (A1-A3). The most significant contribution to the production phase impacts is the upstream production of raw materials as the main driver. Another contributor in the production phase, in the category of Photochemical ozone formation (POCP), is the plastic used as a packaging material. Emissions associated with the manufacturing of products also have some influence on Ozone Depletion Potential (ODP) in the production phase. In all EPDs, $CO_2$ is the most important contributor to Global Warming Potential (GWP). For the Acidification Potential (AP), NOx and $SO_2$ contribute the largest share.
The majority of life cycle energy consumption takes place during the production phase (A1-A3). Significant contributions to Primary Energy Demand – Non-renewable (PENRT) come from the energy resources used in the production of raw materials. The largest contributor to Primary Energy Demand – Renewable (PERT) impacts comes from the consumption of renewable energy resources required for the generation and supply of electricity. It should be noted that Primary Energy Demand – Renewable (PERT) generally represents a small percentage of the production phase primary energy demand with the bulk of the demand coming from non-renewable energy resources.
Transportation to the construction site (A4) and the installation process (A5) make a low contribution to all impacts. Climate change from land-use change is the only indicator influenced by transport processes, due to the diesel production used as fuel because part of this diesel has been produced from bio-based raw materials.
The installation phase influence mainly climate change indicators, due to the impact related to the incineration processes used for packaging waste treatment and residual product treatment (1 % of the total mass).
The end-of-life phases influence climate change indicators, due to the thermal treatment process of the dispersion-based product occurring in the C3 module.

## 7. Requisite evidence

**VOC**
Special tests and evidence have not been carried out or provided within the framework of drawing up this Model EPD. Some member states require special documentation on VOC emissions into indoor air for specific areas of application. This documentation, as well as documentation for voluntary VOC labelling, has to be provided separately and is specific for the product in question.

Evidence pertaining to VOC emissions shall show
- either an attestation of compliance with,
- or documentation of test data that are required in any of the existing regulations or in any of the existing voluntary labelling programs for low-emitting products, as far as these

(1) include limits for the parameters TVOC, TSVOC, carcinogens, formaldehyde, acetaldehyde, LCI limits for individual substances (including but not limited to the European list of harmonized LCIs), and the R-value;
(2) base their test methods on *EN 16516*;
(3) perform testing and apply the limits after 28 days of storage in a ventilated test chamber, under the conditions specified in *EN 16516*; some regulations and programs also have limits after 3 days, on top of the 28 days limits;

(4) express the test results as air concentrations in the European Reference Room, as specified in *EN 16516*.

Examples of such regulations are the *Belgian Royal Decree C-2014/24239*, or the *German AgBB/* ABG. Examples of such voluntary labelling programs are *EMICODE*, *Blue Angel* or *Indoor Air Comfort*.

Relevant test results shall be produced either by an *ISO 17025* accredited commercial test lab or by a qualified internal test lab of the manufacturer.
Examples for the applied limits after 28 days of storage in a ventilated test chamber are:

- TVOC: 1000 µg/m³
- TSVOC: 100 µg/m³
- Each carcinogen: 1 µg/m³
- Formaldehyde: 100 µg/m³
- LCI: different per substance involved
- R-value: 1 (meaning that, in total, 100 % of the combined LCI values must not be exceeded).

Informative Annexes (2 tables):
Table 1 shown below is an overview of the most relevant regulations and specifications as of October 2021, as regards requirements after 3 days of storage in a ventilated test chamber.
Table 2 provides an overview of the most relevant regulations and specifications as of October 2021, as regards requirements after 28 days of storage in a ventilated test chamber. Some details may be missing in the table due to lack of space. Values given represent maximum values/limits.

| | TVOC µg/m³ | Sum of carcinogens. C1A,CA2 µg/m³ | Formaldehyde µg/m³ | Acetaldehyde µg/m³ | Sum of Form- and Acetaldehyde |
|---|---|---|---|---|---|
| German AgBB/ABG regulation | 10 000 | 10 | -/- | -/- | -/- |
| Belgian regulation | 10 000 | 10 | -/- | -/- | -/- |
| EMICODE EC1 | 1 000 | 10 | 50 | 50 | 50 ppb |
| EMICODE EC1 *PLUS* | 750 | 10 | 50 | 50 | 50 ppb |

| | TVOC µg/m³ | TSVOC µg/m³ | Each carcinogen C1A,CA2 µg/m³ | Formalde-hyde µg/m³ | Acetalde-hyde µg/m³ | LCI | R value | Specials | Sum of non-LCI & non-identified µg/m³ |
|---|---|---|---|---|---|---|---|---|---|
| Belgian regulation | 1000 | 100 | 1 | 100 | 200 | Belgian list | 1 | Toluene 300 µg/m³ | -/- |
| French regulations class A+ | 1000 | -/- | -/- | 10 | 200 | -/- | -/- | List of 8 VOCs, 4 CMR | -/- |
| French regulations class A | 1500 | -/- | -/- | 60 | 300 | -/- | -/- | List of 8 VOCs, 4 CMR | -/- |
| French regulations class B | 2000 | -/- | -/- | 120 | 400 | -/- | -/- | List of 8 VOCs, 4 CMR | -/- |
| French regulations class C | >2000 | -/- | -/- | >120 | >400 | -/- | -/- | List of 8 VOCs, 4 CMR | -/- |
| German DIBt/AgBB regulation | 1000 | 100 | 1 | 100 | 300 | German AgBB list | 1 | -/- | 100 |
| EMICODE EC1 | 100 | 50 | 1 | (after 3 days) | (after 3 days) | -/- | -/- | -/- | -/- |
| EMICODE EC1 *PLUS* | 60 | 40 | 1 | (after 3 days) | (after 3 days) | German AgBB list | 1 | -/- | 40 |
| Finnish M1, sealants | 20 | -/- | 1 | 10 | 300 | EU LCI list | -/- | Ammonia, odour | -/- |
| Finnish M1, adhesives | 200 µg/m²h | -/- | 5 µg/m²h | 50 µg/m²h | 300 | EU LCI list | -/- | Ammonia, odour | -/- |

## 8. References

**EN 1062-3**
EN 1062-3:2008-04, Paints and varnishes - Coating materials and coating systems for exterior masonry and concrete - Part 3: Determination of liquid water permeability

**EN 1062-6**
EN 1062-6:2002-10, Paints and varnishes - Coating materials and coating systems for exterior masonry

and concrete - Part 6: Determination of carbon dioxide permeability

**EN 1504-2**
EN 1504-2:2004-10, Products and systems for the protection and repair of concrete structures - Definitions, requirements, quality control and evaluation of conformity - Part 2: Surface protection systems for concrete

**EN 1542**
EN 1542:1999-07, Products and systems for the protection and repair of concrete structures - Test methods - Measurement of bond strength by pull-off

**EN ISO 7783-1/-2**
EN ISO 7783-1/-2:2019-02, Paints and varnishes - Determination of water-vapour transmission properties - Cup method

**EN 12004**
EN12004:2012, Adhesives for ceramic tiles

**EN 12004-2**
EN 12004-2:2017, Adhesives for ceramic tiles - Part 2: Test methods

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

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

**EN 16516**
EN 16516:2017
Construction products - Assessment of release of dangerous substances - Determination of emissions into indoor air

**EN ISO 17025**
EN ISO 17025: 2018-03
General requirements for the competence of testing and calibration laboratories

**EN ISO 17178**
EN ISO 17178:2020, Adhesives - Adhesives for bonding parquet to subfloor - Test methods and minimum requirements

**EN ISO 22636**
EN ISO 22636:2020, Adhesives - Adhesives for floor coverings - Requirements for mechanical and electrical performance

**EAD 030352-00-0503**
EAD 030352-00-0503:2019-01, Watertight covering kits for wet room floors and or walls Part 1: Liquid Applied Coverings with or without wearing surface Part 2: Kits based on flexible sheets Part 3: Kits based on inherently watertight boards

**(EU) No 528/2012**
Biocidal Products Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products (current consolidated version: 2021-06)

**2000/532/EC**
Commission decision dated 3 May 2000 replacing decision 94/3/EC on a waste directory in accordance with Article 1 a) of Council Directive 75/442/EEC on waste and Council decision 94/904/EC on a directory of hazardous waste in terms of Article 1, paragraph 4 of Directive 91/689/EEC on hazardous waste

**Belgian Royal Decree C-2014/24239**
Belgisch Staatsblad 8 MEI 2014, p. 60603. — Koninklijk besluit tot vaststelling van de drempelniveaus voor de emissies naar het binnenmilieu van bouwproducten voor bepaalde geoogde gebruiken

**Blue Angel**
Environmental label organised by the federal government of Germany www.blauer-engel.de

**Candidate list**
Candidate List of substances of very high concern for Authorisation, published in accordance with Article 59(10) of the REACH Regulation, ECHA, www.echa.europa.eu/candidate-list-table

**CPR**
CPR Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC

**Decopaint Directive**
Directive 2004/42/CE of the European Parliament and the council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC

**EMICODE**
EMICODE, GEV – Gemeinschaft Emissionskontrollierte Verlegewerkstoffe, Klebstoffe und Bauprodukte e. V. (pub.).www.emicode.de

**GaBi 10 software & documentation**
Data base for Life Cycle Engineering LBP, University of Stuttgart and Sphera, documentation of GaBi 10 data sets http://documentation.gabi-software.com/, 2020

**German AgBB**
Committee for Health-related Evaluation of Building Products: health-related evaluation of emissions of volatile organic compounds (VOC and SVOC) from building products; status: June 2012 www.umweltbundesamt.de/produkte/bauprodukte/agbb.htm

**IBU 2021**
Institut Bauen und Umwelt e.V.: General Instructions for the EPD programme of Institut Bauen und Umwelt e.V. EPD programme. Version 2.0. Berlin: Institut Bauen und Umwelt e.V., 2021
www.ibu-epd.com

**Indoor Air Comfort**
Product certification by Eurofins, Hamburg, Germany www.eurofins.com .

**PCR Part A**
Product Category Rules for Building-Related Products and Services, Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Project report, Version 1.1, Institut Bauen und Umwelt e.V., 2021-01

**PCR Part B**
Product Category Rules for Construction Products. Part B: Dispersion adhesives and primers for floor coverings, Version 1.7, 2019.

**REACH**
Directive (EG) No. 1907/2006 of the European Parliament and of the Council dated 18 December 2006 on the registration, evaluation, approval and restriction of chemical substances (REACH), for establishing a European Agency for chemical substances, for amending Directive 1999/45/EC and for annulment of Directive (EEC) No. 793/93 of the Council, Directive (EC) No. 1488/94 of the Commission, Guideline 76/769/EEC of the Council and Guidelines 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC of the Commission.

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# Declaration of conformity for products with Model EPDs

The Association of Deutsche Bauchemie e.V., of which Hermann Otto GmbH is a member, has developed so-called Model Environmental Product Declarations (Model EPDs) and had them independently verified by the Institut Bauen und Umwelt e.V. (IBU).

These IBU verified Model EPDs have been made publicly available by Deutsch Bauchemie and IBU.

Based on the product formulations it was checked if our products were covered by the Model EPDs.

This Declaration confirms that the product

is covered by the attached Model EPD

This means that the Life Cycle Assessment data and the remaining content of the attached Model EPD apply to the above mentioned product and may thus be used for the evaluation of the sustainability of buildings where the product is applied.

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ISO 9001, ISO 14001
Certified Integrated Quality and Environmental Management System
www.tuv-sud.com/ms-cert

OTTO CHEMIE
SEALING & BONDING

# ENVIRONMENTAL PRODUCT DECLARATION

as per *ISO 14025* and *EN 15804+A2*

| | |
|---|---|
| Owner of the Declaration | DBC, EFCC, FEICA, IVK |
| Programme holder | Institut Bauen und Umwelt e.V. (IBU) |
| Publisher | Institut Bauen und Umwelt e.V. (IBU) |
| Declaration number | EPD-DBC-20220146-IBF1-EN |
| Issue date | 08.06.2022 |
| Valid to | 07.06.2027 |

## Dispersion-based products, group 1

DBC - Deutsche Bauchemie e.V.

EFCC - European Federation for Construction Chemicals

FEICA - Association of the European Adhesive and Sealant Industry

IVK - Industrieverband Klebstoffe e.V.

Institut Bauen und Umwelt e.V.

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

ECO PLATFORM EPD VERIFIED



# 1. General Information

DBC - Deutsche Bauchemie e.V.
EFCC - European Federation for Construction Chemicals
FEICA - Association of the European Adhesive and Sealant Industry
IVK - Industrieverband Klebstoffe e.V.

Dispersion-based products, group 1

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IVK, Völklingerstr. 4, D-40219 Düsseldorf

**Declaration number**
EPD-DBC-20220146-IBF1-EN

**Declared product / declared unit**
1 kg / 1 kg; density 1,000 - 1,500 kg/m³

**This declaration is based on the product category rules:**
Dispersion adhesives and primers for floor coverings, 01.2019
(PCR checked and approved by the SVR)

**Scope:**
This verified EPD entitles the holder to bear the symbol of the Institut Bauen und Umwelt e.V. It exclusively applies to products produced in Europe and applies to a period of five years from the date of issue. This EPD may be used by members of DBC, EFCC, FEICA and IVK and their members provided it has been proven that the respective product can be represented by this EPD. For this purpose, a guideline is available at the secretariats of the four associations. The members of the associations are listed on their respective websites.

**Issue date**
08.06.2022

**Valid to**
07.06.2027

The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

The EPD was created according to the specifications of *EN 15804+A2*. In the following, the standard will be simplified as *EN 15804*.

**Verification**

| |
|---|
| The standard *EN 15804* serves as the core PCR |
| Independent verification of the declaration and data according to *ISO 14025:2011* |
| ☐ internally ☒ externally |

Dipl. Ing. Hans Peters
(chairman of Institut Bauen und Umwelt e.V.)

Dr. Alexander Röder
(Managing Director Institut Bauen und Umwelt e.V.))

Matthias Schulz
(Independent verifier)

# 2. Product

## 2.1 Product description/Product definition

This EPD comprises dispersion-based products with a Volatile Organic Compound (VOC) content ≤1 % (VOC definition according to *Decopaint Directive*). The products typically consist of organic binding agents based on synthetic and/or natural resins, mineral fillers such as chalk as well as water and smaller volumes of auxiliaries (thickening agents, defoaming agents, surface-active agents, preservatives etc.). They dry physically through evaporation of the water contained therein. They comply with manifold, often specific, functions in the construction, furnishing and repair of buildings. Using dispersion-based products decisively improves the fitness for use of structures and extends their life expectancy. The product displaying the highest environmental impacts within the class of dispersion-based products considered was used as a representative product for calculating the Life Cycle Assessment results (worst-case approach).

For the placing on the market in the European Union/European Free Trade Association (EU/EFTA) with the exception of Switzerland) products falling under the Regulation (EU) No 305/2011 (*CPR*) need a Declaration of Performance taking into consideration either the relevant harmonised European standard or

the European Technical Assessment and the CE marking. For the application and use of the products the respective national provisions apply.

### 2.2 Application

Dispersion-based products are used for the following applications:

**Module 1: Dispersion adhesives, fixatives, precoatings and primers for floor coverings and parquet flooring**
Adhesives for, e.g. tufted carpets with various backings, woven textile coverings, fibre-bonded and natural fibre coverings, resilient coverings (PVC, rubber, PVC-free luxury vinyl tiles), linoleum, insulating bases and underlays, parquet, laminate and wood blocks on surfaces ready for laying. The products are suitable for normal wear in residential and commercial areas, also on heated floor constructions.

**Module 2: Dispersion-based tile adhesive**
Products for bonding ceramic tiles and paving as well as natural stone for internal and external installations on walls, floors and ceilings

**Module 3: Dispersion-based adhesives and sealants**
As structural adhesives and sealants: ·structural and repair adhesives, dispersion filler compounds, joint sealants

**Module 4: Dispersion-based products for waterproofing of buildings**
Products for waterproofing floors and/or walls in wet rooms inside buildings

**Module 5: Dispersion-based primers and bonding agents for concrete and floor screeds**
Products to improve the adhesion of e.g. self-levelling compounds or repair mortars on absorbent cement and calcium sulphate screeds, concrete, dry construction boards

**Module 6: Dispersion-based products for surface protection of concrete**
To increase the durability of concrete and reinforced steel structures as well as for new concrete and for maintenance and repair work (for areas without vehicle traffic)

**Module 7: Dispersion-based primers and barrier coatings**
Products to protect a substrate from e.g. the immersion of water, thus preventing degradation, corrosion or damage

### 2.3 Technical Data

The density of the products is between 1,00 and 1,50 g/cm³, other relevant technical data can be found in the manufacturer’s technical documentation.

**Module 1: Dispersion adhesives, fixatives, precoatings and primers for floor coverings and parquet flooring**
Dispersion adhesives for floor coverings have to comply with the requirements of the *EN ISO 22636*. The mechanical requirements of *EN ISO 22636* don’t apply to fixatives; their strengths are lower in accordance with their specifications. The performance characteristics of precoatings and primers are subject to the manufacturer's technical documentation/declaration of performance. Dispersion adhesives for parquet: The test procedures and requirements of the *EN ISO 17178* have to be fulfilled.

**Module 2: Dispersion-based tile adhesive**
The requirements on essential characteristics according to *EN 12004*, must be maintained. These are:
Tensile adhesion strength after dry storage (*EN 12004-2*)
-Tensile adhesion strength after water immersion (*EN 12004-2*)
-Tensile adhesion strength after heat ageing (*EN 12004*)
-Tensile adhesion strength after freeze/thaw cycles (*EN 12004-2*)
-Open time: Tensile strength (*EN 12004-2*)
Further essential characteristics in accordance with the manufacturer's technical documentation

**Module 3: Dispersion-based adhesives and sealants**
Performance characteristics in accordance with the manufacturer's technical documentation/declaration of performance

**Module 4: Dispersion-based products for waterproofing of buildings**
The minimum requirement of *EAD 030352-00-0503* - Liquid applied watertight covering kits for wet room floors and/or walls- must be maintained. The essential characteristics are to be specified in accordance with the European technical assessment (ETA, specification no.).

**Module 5: Dispersion-based primers and bonding agents for concrete and floor screeds**
Performance characteristics in accordance with the manufacturer's technical documentation

**Module 6: Dispersion-based products for surface protection of concrete**
The requirements on essential characteristics for all intended uses in accordance with *EN 1504-2*, Tables 1 and 5, must be maintained. These are:
- Permeability to $CO_2$ (*EN 1062-6*)
- Water vapour permeability (*EN ISO 7783-1/-2*)
- Capillary absorption and permeability to water (*EN 1062-3*)
- Adhesion strength by pull-off test (*EN 1542*)

Further essential characteristics in accordance with the manufacturer's technical documentation/declaration of performance

**Module 7: Dispersion-based primers and barrier coatings**
The requirements of the *Decopaint Directive* must be maintained.
Essential characteristics in accordance with the manufacturer's technical documentation/declaration of performance.

### 2.4 Delivery status

Liquid or pasty in containers made of plastic or metal. Typical container sizes contain 1 to 30 kg, usually 10 to 20 kg of product on pallets. For larger applications,

vats with approx. volumes of 200 kg (litres) or IBCs (intermediate bulk containers) with a capacity of 1 tonne (m³) or more are also used. A plastic container was modelled for the Life Cycle Assessment.

### 2.5 Base materials/Ancillary materials

Dispersion-based products usually comprise at least one synthetic resin dispersion, natural or synthetic resins dispersed in water, mineral fillers (e.g. chalk) and/or pigments. Auxiliaries such as thickening agents, defoaming agents, surface-active and dispersing agents as well as preservatives are used to fine-tune the product features. **Typically**, the products covered by this EPD contain the following range of base materials and auxiliaries (% by mass):

- Synthetic polymer dispersion (solids portion): 5 - 65
- Natural resins, natural resin derivatives: 0 - 25
- Mineral fillers: 0 - 60
- Pigments: 0 - 35
- Water: 15 - 95
- Auxiliaries: 1 - 5
- Thickening agents: < 3
- Dispersing agents/Emulsifying agents: < 2
- Wetting agent: 2
- Other: 0 - 2
- VOC according to *Decopaint Directive*: <1 % **(mandatory)**

These ranges are average values and the composition of products complying with the EPD can deviate from these concentration levels in individual cases. More detailed information is available in the respective manufacturer's documentation (e.g. product data sheets).

*Note: For companies to declare their products within the scope of this EPD it is not sufficient to simply comply with the product composition shown above. The application of this EPD is only possible for member companies of DBC, EFCC, FEICA, and IVK member associations and only for specific formulations with a total score below the declared maximum score for a product group according to the associated guidance document.*

**1. substances from the "Candidate List of Substances of Very High Concern for Authorisation" (SVHC)**

If this product contains substances listed in the *candidate list* (latest version) exceeding 0.1 percentage by mass, the relevant information can be found in the safety data sheet of the relevant product covered by this model EPD.

**2. CMR substances in categories 1A and 1B**

If this product contains other carcinogenic, mutagenic, reprotoxic (CMR) substances in categories 1A or 1B which are not on the *candidate list*, exceeding 0.1 percentage by mass, the relevant information can be found in the safety data sheet of the relevant product covered by this model EPD.

**3. Biocide products added to the construction product**

If this construction product contains biocide products, the active substances, information on the concentration and/or concentration range, the product type together with information on their hazardous properties are listed in the safety data sheet of the respective product.

### 2.6 Manufacture

Dispersion-based products are usually mixed discontinuously in batch mode, i.e. in individual batches or a series of individual batches, and filled into the delivery containers.

### 2.7 Environment and health during manufacturing

As a general rule, no particular environmental or health protection measures other than those specified by law are necessary.

### 2.8 Product processing/Installation

Dispersion based products are processed on site using suitable tools, usually by hand. The products are applied by trowelling/knife-coating, painting, rolling or spraying. Precautions for safe handling and storage (e.g. air exchange, exhaust ventilation, personal protective measures, conditions for safe storage) must be observed in accordance with the information on the safety data sheet.

Depending on the application and product specifications, between 50 and 1,500 g/m² are applied.

### 2.9 Packaging

A detailed description of packaging is provided in section 2.4. Empty containers and clean foils can be recycled.

### 2.10 Condition of use

During the use phase, dispersion-based products are existent as hardened film. They are long-lasting products which protect our buildings in the form of adhesives, primers, coatings or sealants as well as make an essential contribution towards their appearance, function and sustainability.

### 2.11 Environment and health during use

**Option 1 – Products for applications outside indoor areas with permanent stays by people**

No risks are known for water, air and soil if the products are used as designated.

**Option 2 – Products for applications inside indoor areas with permanent stays by people**

When used in indoor areas with permanent stays by people, evidence of the emission performance of construction products in contact with indoor air must be submitted according to national requirements (see chapter 7). No further influences by emissions on the environment and health are known.

### 2.12 Reference service life

Dispersion-based products fulfill manifold, often specific, functions in the construction or refurbishment of building structures. They decisively improve the usability of building structures and significantly extend their original service lives. The anticipated reference service life depends on the specific installation situation and the exposure associated with the product. It can be influenced by weathering as well as mechanical or chemical load.

### 2.13 Extraordinary effects

**Fire**

In terms of the volumes applied, dispersion based products have no or only a marginal influence on the fire performance characteristics of the building structure in which they have been installed.

**Water**
Dispersion-based products are water-resistant only to a certain degree and their strength can deteriorate when exposed to water for longer periods (of time); detaching from the surface is possible in a worst-case scenario. The components of dispersion-based products are not hazardous to water or only slightly hazardous to water. Owing to the overall low volumes of dispersion-based products used on buildings, no relevant contribution towards environmental damage can be anticipated by buildings featuring dispersion-based products in the event of extraordinary exposure to water.

**Mechanical destruction**
The mechanical destruction of dispersion-based products does not lead to any decomposition products which are harmful to the environment or health.

### 2.14 Re-use phase
According to present knowledge, no environmentally hazardous effects in terms of landfilling are to be generally anticipated through dismantling and recycling components to which dispersion-based products have been applied and on which they have dried.

### 2.15 Disposal
The low amounts of a dispersion-based product applied to a construction product will not interfere with the disposal/recycling of this.
Hardened product residue mechanically removed from substrates must be disposed of as commercial/construction waste. The following waste codes according to the European List of Waste (*2000/532/EC*) can apply:
**Hardened product residue:**
080112 Paint and varnish waste with the exception of that covered by 08 01 11
080410 Adhesive and sealant compound waste with the exception of that covered by 08 04 09

### 2.16 Further information
More information is available on the manufacturer's product or safety data sheets and is available on the manufacturer's websites or on request. Valuable technical information is also available on the associations' websites.

## 3. LCA: Calculation rules

### 3.1 Declared Unit
This EPD refers to the declared unit of 1 kg of dispersion-based product, group 1; applied into the building with a density of 1,000 - 1,500 kg/m³ in accordance with the *IBU PCR* part B for dispersion adhesives and primers for floor coverings.
The results of the Life Cycle Assessment provided in this declaration have been selected from the product with the highest environmental impact (worst-case scenario).
Depending on the application, a corresponding conversion factor such as the density to convert volumetric use to mass must be taken into consideration.

The Declaration type is according to *EN 15804*: Cradle to gate with options, modules C1–C3, and module D (A1–A3, C, D) and additional modules (A4-A5).

**Declared unit**

| Name | Value | Unit |
|---|---|---|
| Declared unit | 1 | kg |
| Gross density | 1,000-1,500 | kg/m^3 |

### 3.2 System boundary
Modules A1, A2 and A3 are taken into consideration in the LCA:
- A1 Production of preliminary products
- A2 Transport to the plant
- A3 Production incl. provision of energy, production of packaging as well as auxiliaries and consumables and waste treatment
- A4 Transport to site
- A5 Installation, product applied into the building during A5 phase operations and packaging disposal.

The end of life for the packaging material considered is described below:
-Incineration, for materials like plastic and wood.
-C1-C2-C3-D
The building deconstruction (demolition process) takes place in the C1 module which considers energy production and consumption in terms of diesel and all the emissions connected with the fuel-burning process to run the machines. After the demolition, the product is transported to the end-of-life processing (C2 module) where all the impacts related to the transport processes are considered. For precautionary principle and as a worst-case scenario, thermal treatment is the only end of life scenario considered. This is modelled by the incineration process (module C3) where the product ends its life cycle.
Module D accounts for potential benefits that are beyond the defined system boundaries. Credits are generated during the incineration of wastes and related electricity produced that are occurring in the A5 module.

### 3.3 Estimates and assumptions
For this EPD formulation and production data defined and collected by FEICA were considered. Production waste was assumed to be disposed of by incineration without credits as a worst-case.
An average of plastic containers and wooden pallets was considered in the LCA.

### 3.4 Cut-off criteria
All raw materials submitted for the formulations and production data were taken into consideration.
The manufacture of machinery, plant and other infrastructure required for the production of the products under review was not taken into consideration in the LCA.
Transport of packaging materials is excluded.

### 3.5 Background data
Data from the *GaBi* database SP40 (2020) was used as background data.

### 3.6 Data quality

Representative products were applied for this EPD and the product in the group displaying the highest environmental impact was selected for calculating the LCA results. The background datasets used are less than 4 years old.
Production data and packaging are based on details provided by the manufacturer. The formulation used for evaluation refers to a specific product.
The data quality of the background data is considered to be good.

### 3.7 Period under review

Representative formulations are valid for 2021.

### 3.8 Allocation

Mass allocation has been applied when primary data have been used and implemented into the LCA model.

### 3.9 Comparability

Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to *EN 15804* and the building context, respectively the product-specific characteristics of performance, are taken into account.

The *GaBi* database SP40 (2020) was used.

## 4. LCA: Scenarios and additional technical information

**Characteristic product properties**
**Information on biogenic Carbon**
The packaging material contains biogenic carbon content which is presented below.

**Information on describing the biogenic Carbon Content at factory gate**

| Name | Value | Unit |
|---|---|---|
| Biogenic Carbon Content in product | - | kg C |
| Biogenic Carbon Content in accompanying packaging | 0.016 | kg C |

For the preparation of building life cycle assessments, it must be taken into account that in module A5 (installation in the building) the biogenic amount of $CO_2$ (0.016 kg C *3.67 = 0.059 kg $CO_2$-eq.) of the packaging bound in module A1-A3 is mathematically booked out.

**Transport to the building site (A4)**

| Name | Value | Unit |
|---|---|---|
| Transport distance | 1000 | km |
| Gross weight | 34 - 40 | t |
| Payload capacity | 27 | t |

**Installation into the building (A5)**

| Name | Value | Unit |
|---|---|---|
| Other resources for packaging material | 0.067 | kg |
| Material loss | 0.01 | kg |

Material loss regards the amount of product not used during the application phase into the building. This amount is 1% of the product, impacts related to the production of this part are charged to the A5 module. This percentage is considered as waste to disposal and impacts of its end of life have been considered in the LCA model and declared in A5.

**End of life (C1-C3)**

| Name | Value | Unit |
|---|---|---|
| Collected as mixed construction waste | 1 | kg |
| Incineration | 1 | kg |

# 5. LCA: Results

## DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; ND = MODULE OR INDICATOR NOT DECLARED; MNR = MODULE NOT RELEVANT)

| PRODUCT STAGE | | | CONSTRUCTION PROCESS STAGE | | USE STAGE | | | | | | | END OF LIFE STAGE | | | | BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Raw material supply | Transport | Manufacturing | Transport from the gate to the site | Assembly | Use | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | De-construction demolition | Transport | Waste processing | Disposal | Reuse-Recovery-Recycling-potential |
| A1 | A2 | A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
| X | X | X | X | X | ND | ND | MNR | MNR | MNR | ND | ND | X | X | X | ND | X |

## RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 kg of dispersion-based product, group 1

| Core Indicator | Unit | A1-A3 | A4 | A5 | C1 | C2 | C3 | D |
|---|---|---|---|---|---|---|---|---|
| GWP-total | [kg $CO_2$-Eq.] | 1.32E+0 | 5.11E-2 | 1.73E-1 | 2.79E-4 | 1.24E-2 | 9.45E-1 | -3.98E-1 |
| GWP-fossil | [kg $CO_2$-Eq.] | 1.36E+0 | 5.06E-2 | 8.81E-2 | 2.66E-4 | 1.18E-2 | 4.29E-1 | -3.97E-1 |
| GWP-biogenic | [kg $CO_2$-Eq.] | -5.05E-2 | 1.48E-4 | 8.53E-2 | 1.24E-5 | 5.42E-4 | 5.15E-1 | -8.96E-4 |
| GWP-luluc | [kg $CO_2$-Eq.] | 4.52E-4 | 4.10E-4 | 6.04E-6 | 6.39E-9 | 2.79E-7 | 3.50E-5 | -2.51E-4 |
| ODP | [kg CFC11-Eq.] | 3.00E-14 | 6.08E-18 | 3.18E-16 | 2.84E-20 | 1.24E-18 | 3.02E-16 | -3.72E-15 |
| AP | [mol $H^+$-Eq.] | 4.90E-3 | 1.52E-4 | 7.29E-5 | 3.60E-6 | 3.73E-5 | 5.25E-4 | -5.26E-4 |
| EP-freshwater | [kg P-Eq.] | 2.65E-5 | 1.54E-7 | 2.68E-7 | 5.75E-11 | 2.51E-9 | 1.04E-7 | -4.62E-7 |
| EP-marine | [kg N-Eq.] | 1.03E-3 | 6.75E-5 | 1.75E-5 | 1.63E-6 | 1.72E-5 | 2.01E-4 | -1.39E-4 |
| EP-terrestrial | [mol N-Eq.] | 1.24E-2 | 7.56E-4 | 2.36E-4 | 1.79E-5 | 1.89E-4 | 2.52E-3 | -1.49E-3 |
| POCP | [kg NMVOC-Eq.] | 3.63E-3 | 1.33E-4 | 5.62E-5 | 4.91E-6 | 3.39E-5 | 5.22E-4 | -4.02E-4 |
| ADPE | [kg Sb-Eq.] | 6.50E-7 | 3.63E-9 | 6.77E-9 | 8.06E-12 | 3.52E-10 | 4.62E-9 | -6.06E-8 |
| ADPF | [MJ] | 3.30E+1 | 6.73E-1 | 3.61E-1 | 3.81E-3 | 1.66E-1 | 5.52E-1 | -6.70E+0 |
| WDP | [$m^3$ world-Eq deprived] | 4.60E-1 | 4.52E-4 | 2.10E-2 | 5.27E-7 | 2.30E-5 | 1.57E-1 | -3.70E-2 |

| Caption | GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water (user) deprivation potential |
|---|---|

## RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1 kg of dispersion-based product, group 1

| Indicator | Unit | A1-A3 | A4 | A5 | C1 | C2 | C3 | D |
|---|---|---|---|---|---|---|---|---|
| PERE | [MJ] | 4.66E+0 | 3.79E-2 | 6.43E-1 | 1.20E-5 | 5.25E-4 | 9.36E-2 | -1.32E+0 |
| PERM | [MJ] | 5.85E-1 | 0.00E+0 | -5.85E-1 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 |
| PERT | [MJ] | 5.25E+0 | 3.79E-2 | 5.83E-2 | 1.20E-5 | 5.25E-4 | 9.36E-2 | -1.32E+0 |
| PENRE | [MJ] | 1.78E+1 | 6.74E-1 | 1.31E+0 | 3.81E-3 | 1.67E-1 | 1.49E+1 | -6.70E+0 |
| PENRM | [MJ] | 1.53E+1 | 0.00E+0 | -9.53E-1 | 0.00E+0 | 0.00E+0 | -1.43E+1 | 0.00E+0 |
| PENRT | [MJ] | 3.30E+1 | 6.74E-1 | 3.62E-1 | 3.81E-3 | 1.67E-1 | 5.52E-1 | -6.70E+0 |
| SM | [kg] | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 |
| RSF | [MJ] | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 |
| NRSF | [MJ] | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 |
| FW | [$m^3$] | 1.19E-2 | 4.38E-5 | 5.03E-4 | 2.16E-8 | 9.41E-7 | 3.70E-3 | -1.53E-3 |

| Caption | PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water |
|---|---|

## RESULTS OF THE LCA – WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: 1 kg of dispersion-based product, group 1

| Indicator | Unit | A1-A3 | A4 | A5 | C1 | C2 | C3 | D |
|---|---|---|---|---|---|---|---|---|
| HWD | [kg] | 8.74E-9 | 3.14E-8 | 1.23E-10 | 3.70E-13 | 1.62E-11 | 1.77E-9 | -2.66E-9 |
| NHWD | [kg] | 1.30E-2 | 1.03E-4 | 2.35E-3 | 3.90E-7 | 1.70E-5 | 1.36E-1 | -2.94E-3 |
| RWD | [kg] | 6.56E-4 | 8.34E-7 | 8.31E-6 | 4.09E-9 | 1.79E-7 | 2.51E-5 | -4.51E-4 |
| CRU | [kg] | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 |
| MFR | [kg] | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 |
| MER | [kg] | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 |
| EEE | [MJ] | 0.00E+0 | 0.00E+0 | 2.77E-1 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 |
| EET | [MJ] | 0.00E+0 | 0.00E+0 | 5.01E-1 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 |

| Caption | HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy |
|---|---|

## RESULTS OF THE LCA – additional impact categories according to EN 15804+A2-optional: 1 kg of dispersion-based product, group 1

| Indicator | Unit | A1-A3 | A4 | A5 | C1 | C2 | C3 | D |
|---|---|---|---|---|---|---|---|---|
| PM | [Disease Incidence] | ND | ND | ND | ND | ND | ND | ND |
| IRP | [kBq U235-Eq.] | ND | ND | ND | ND | ND | ND | ND |
| ETP-fw | [CTUe] | ND | ND | ND | ND | ND | ND | ND |
| HTP-c | [CTUh] | ND | ND | ND | ND | ND | ND | ND |
| HTP-nc | [CTUh] | ND | ND | ND | ND | ND | ND | ND |
| SQP | [-] | ND | ND | ND | ND | ND | ND | ND |

| Caption | PM = Potential incidence of disease due to PM emissions; IR = Potential Human exposure efficiency relative to U235; ETP-fw = Potential comparative Toxic Unit for ecosystems; HTP-c = Potential comparative Toxic Unit for humans (cancerogenic); HTP-nc = Potential comparative Toxic Unit for humans (not cancerogenic); SQP = Potential soil quality index |
|---|---|

Potential Human exposure efficiency relative to U235, 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 radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, radon and (from) some construction materials is also not measured by this indicator.

ADP minerals & metals, ADP fossil, WDP, ETF-fw, HTP-c, HTP-nc, SQP, 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 experience with the indicator.

**Additional environmental impact indicators** (suggested by *EN15804*, table 4) are not declared in the EPD. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high and as there is limited experience with the indicator (see ILCD classification in *EN 15804*, table 5). For this reason, results based on these indicators are not considered suitable for a decision-making process and are thus not declared in the EPD.

## 6. LCA: Interpretation

The majority of impacts are associated with the production phase (A1-A3). The most significant contribution to the production phase impacts is the upstream production of raw materials as the main driver. Another contributor in the production phase, in the category of Photochemical ozone formation (POCP), is the plastic used as a packaging material. Emissions associated with the manufacturing of products also have some influence on Ozone Depletion Potential (ODP) in the production phase. In all EPDs, $CO_2$ is the most important contributor to Global Warming Potential (GWP). For the Acidification Potential (AP), NOx and $SO_2$ contribute the largest share.
The majority of life cycle energy consumption takes place during the production phase (A1-A3). Significant contributions to Primary Energy Demand – Non-renewable (PENRT) come from the energy resources used in the production of raw materials. The largest contributor to Primary Energy Demand – Renewable (PERT) impacts comes from the consumption of renewable energy resources required for the generation and supply of electricity. It should be noted that Primary Energy Demand – Renewable (PERT) generally represents a small percentage of the production phase primary energy demand with the bulk of the demand coming from non-renewable energy resources.
Transportation to the construction site (A4) and the installation process (A5) make a low contribution to all impacts. Climate change from land-use change is the only indicator influenced by transport processes, due to the diesel production used as fuel because part of this diesel has been produced from bio-based raw materials.
The installation phase influence mainly climate change indicators, due to the impact related to the incineration processes used for packaging waste treatment and residual product treatment (1 % of the total mass).
The end-of-life phases influence climate change indicators, due to the thermal treatment process of the dispersion-based product occurring in the C3 module.

## 7. Requisite evidence

**VOC**
Special tests and evidence have not been carried out or provided within the framework of drawing up this Model EPD. Some member states require special documentation on VOC emissions into indoor air for specific areas of application. This documentation, as well as documentation for voluntary VOC labelling, has to be provided separately and is specific for the product in question.

Evidence pertaining to VOC emissions shall show
- either an attestation of compliance with,
- or documentation of test data that are required in any of the existing regulations or in any of the existing voluntary labelling programs for low-emitting products, as far as these

(1) include limits for the parameters TVOC, TSVOC, carcinogens, formaldehyde, acetaldehyde, LCI limits for individual substances (including but not limited to the European list of harmonized LCIs), and the R-value;
(2) base their test methods on *EN 16516*;
(3) perform testing and apply the limits after 28 days of storage in a ventilated test chamber, under the conditions specified in *EN 16516*; some regulations and programs also have limits after 3 days, on top of the 28 days limits;

(4) express the test results as air concentrations in the European Reference Room, as specified in *EN 16516*.

Examples of such regulations are the *Belgian Royal Decree C-2014/24239*, or the *German AgBB/* ABG. Examples of such voluntary labelling programs are *EMICODE*, *Blue Angel* or *Indoor Air Comfort*.

Relevant test results shall be produced either by an *ISO 17025* accredited commercial test lab or by a qualified internal test lab of the manufacturer.
Examples for the applied limits after 28 days of storage in a ventilated test chamber are:

- TVOC: 1000 µg/m³
- TSVOC: 100 µg/m³
- Each carcinogen: 1 µg/m³
- Formaldehyde: 100 µg/m³
- LCI: different per substance involved
- R-value: 1 (meaning that, in total, 100 % of the combined LCI values must not be exceeded).

Informative Annexes (2 tables):
Table 1 shown below is an overview of the most relevant regulations and specifications as of October 2021, as regards requirements after 3 days of storage in a ventilated test chamber.
Table 2 provides an overview of the most relevant regulations and specifications as of October 2021, as regards requirements after 28 days of storage in a ventilated test chamber. Some details may be missing in the table due to lack of space. Values given represent maximum values/limits.

| | TVOC µg/m³ | Sum of carcinogens. C1A,CA2 µg/m³ | Formaldehyde µg/m³ | Acetaldehyde µg/m³ | Sum of Form- and Acetaldehyde |
|---|---|---|---|---|---|
| German AgBB/ABG regulation | 10 000 | 10 | -/- | -/- | -/- |
| Belgian regulation | 10 000 | 10 | -/- | -/- | -/- |
| EMICODE EC1 | 1 000 | 10 | 50 | 50 | 50 ppb |
| EMICODE EC1 *PLUS* | 750 | 10 | 50 | 50 | 50 ppb |

| | TVOC µg/m³ | TSVOC µg/m³ | Each carcinogen C1A,CA2 µg/m³ | Formalde-hyde µg/m³ | Acetalde-hyde µg/m³ | LCI | R value | Specials | Sum of non-LCI & non-identified µg/m³ |
|---|---|---|---|---|---|---|---|---|---|
| Belgian regulation | 1000 | 100 | 1 | 100 | 200 | Belgian list | 1 | Toluene 300 µg/m³ | -/- |
| French regulations class A+ | 1000 | -/- | -/- | 10 | 200 | -/- | -/- | List of 8 VOCs, 4 CMR | -/- |
| French regulations class A | 1500 | -/- | -/- | 60 | 300 | -/- | -/- | List of 8 VOCs, 4 CMR | -/- |
| French regulations class B | 2000 | -/- | -/- | 120 | 400 | -/- | -/- | List of 8 VOCs, 4 CMR | -/- |
| French regulations class C | >2000 | -/- | -/- | >120 | >400 | -/- | -/- | List of 8 VOCs, 4 CMR | -/- |
| German DIBt/AgBB regulation | 1000 | 100 | 1 | 100 | 300 | German AgBB list | 1 | -/- | 100 |
| EMICODE EC1 | 100 | 50 | 1 | (after 3 days) | (after 3 days) | -/- | -/- | -/- | -/- |
| EMICODE EC1 *PLUS* | 60 | 40 | 1 | (after 3 days) | (after 3 days) | German AgBB list | 1 | -/- | 40 |
| Finnish M1, sealants | 20 | -/- | 1 | 10 | 300 | EU LCI list | -/- | Ammonia, odour | -/- |
| Finnish M1, adhesives | 200 µg/m²h | -/- | 5 µg/m²h | 50 µg/m²h | 300 | EU LCI list | -/- | Ammonia, odour | -/- |

## 8. References

**EN 1062-3**
EN 1062-3:2008-04, Paints and varnishes - Coating materials and coating systems for exterior masonry and concrete - Part 3: Determination of liquid water permeability

**EN 1062-6**
EN 1062-6:2002-10, Paints and varnishes - Coating materials and coating systems for exterior masonry

and concrete - Part 6: Determination of carbon dioxide permeability

**EN 1504-2**
EN 1504-2:2004-10, Products and systems for the protection and repair of concrete structures - Definitions, requirements, quality control and evaluation of conformity - Part 2: Surface protection systems for concrete

**EN 1542**
EN 1542:1999-07, Products and systems for the protection and repair of concrete structures - Test methods - Measurement of bond strength by pull-off

**EN ISO 7783-1/-2**
EN ISO 7783-1/-2:2019-02, Paints and varnishes - Determination of water-vapour transmission properties - Cup method

**EN 12004**
EN12004:2012, Adhesives for ceramic tiles

**EN 12004-2**
EN 12004-2:2017, Adhesives for ceramic tiles - Part 2: Test methods

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

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

**EN 16516**
EN 16516:2017
Construction products - Assessment of release of dangerous substances - Determination of emissions into indoor air

**EN ISO 17025**
EN ISO 17025: 2018-03
General requirements for the competence of testing and calibration laboratories

**EN ISO 17178**
EN ISO 17178:2020, Adhesives - Adhesives for bonding parquet to subfloor - Test methods and minimum requirements

**EN ISO 22636**
EN ISO 22636:2020, Adhesives - Adhesives for floor coverings - Requirements for mechanical and electrical performance

**EAD 030352-00-0503**
EAD 030352-00-0503:2019-01, Watertight covering kits for wet room floors and or walls Part 1: Liquid Applied Coverings with or without wearing surface Part 2: Kits based on flexible sheets Part 3: Kits based on inherently watertight boards

**(EU) No 528/2012**
Biocidal Products Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products (current consolidated version: 2021-06)

**2000/532/EC**
Commission decision dated 3 May 2000 replacing decision 94/3/EC on a waste directory in accordance with Article 1 a) of Council Directive 75/442/EEC on waste and Council decision 94/904/EC on a directory of hazardous waste in terms of Article 1, paragraph 4 of Directive 91/689/EEC on hazardous waste

**Belgian Royal Decree C-2014/24239**
Belgisch Staatsblad 8 MEI 2014, p. 60603. — Koninklijk besluit tot vaststelling van de drempelniveaus voor de emissies naar het binnenmilieu van bouwproducten voor bepaalde geoogde gebruiken

**Blue Angel**
Environmental label organised by the federal government of Germany www.blauer-engel.de

**Candidate list**
Candidate List of substances of very high concern for Authorisation, published in accordance with Article 59(10) of the REACH Regulation, ECHA, www.echa.europa.eu/candidate-list-table

**CPR**
CPR Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC

**Decopaint Directive**
Directive 2004/42/CE of the European Parliament and the council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC

**EMICODE**
EMICODE, GEV – Gemeinschaft Emissionskontrollierte Verlegewerkstoffe, Klebstoffe und Bauprodukte e. V. (pub.).www.emicode.de

**GaBi 10 software & documentation**
Data base for Life Cycle Engineering LBP, University of Stuttgart and Sphera, documentation of GaBi 10 data sets http://documentation.gabi-software.com/, 2020

**German AgBB**
Committee for Health-related Evaluation of Building Products: health-related evaluation of emissions of volatile organic compounds (VOC and SVOC) from building products; status: June 2012 www.umweltbundesamt.de/produkte/bauprodukte/agbb.htm

**IBU 2021**
Institut Bauen und Umwelt e.V.: General Instructions for the EPD programme of Institut Bauen und Umwelt e.V. EPD programme. Version 2.0. Berlin: Institut Bauen und Umwelt e.V., 2021
www.ibu-epd.com

**Indoor Air Comfort**
Product certification by Eurofins, Hamburg, Germany www.eurofins.com .

**PCR Part A**
Product Category Rules for Building-Related Products and Services, Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Project report, Version 1.1, Institut Bauen und Umwelt e.V., 2021-01

**PCR Part B**
Product Category Rules for Construction Products. Part B: Dispersion adhesives and primers for floor coverings, Version 1.7, 2019.

**REACH**
Directive (EG) No. 1907/2006 of the European Parliament and of the Council dated 18 December 2006 on the registration, evaluation, approval and restriction of chemical substances (REACH), for establishing a European Agency for chemical substances, for amending Directive 1999/45/EC and for annulment of Directive (EEC) No. 793/93 of the Council, Directive (EC) No. 1488/94 of the Commission, Guideline 76/769/EEC of the Council and Guidelines 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC of the Commission.

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# OTTOSEAL®
# A 220 Turbo

**Nachhaltigkeitsdatenblatt**

## Prüfungen/Zulassungen




- Französische VOC-Emissionsklasse A+

- Umweltproduktdeklaration (EPD)

Deklarationsnummer: EPD-DBC-20220146-IBF1-EN

## Gebäudezertifizierungssysteme

**QNG - Qualitätssiegel Nachhaltiges Gebäude**

**Version 1.3**

| | |
|---|---|
| **Kriterium** | Schadstoffvermeidung in Baumaterialien |
| **Übersichtstabelle** | 4. Kleb- und Dichtstoffe - Zeile 4.1 |
| **Bauproduktgruppe** | Bauseitig verarbeitete Kleb- und Dichtstoffe (Acrylate und Silikone) in Innenräumen |
| **Anforderungen** | Produktdokumentation und Deklaration enthaltener SVHC > 0,1 % und Chlorparaffine ≤ 0,1 % und Deklaration biozider Wirkstoffe in Silikonen |
| **Einstufung** | **Erfüllt die Anforderungen, da Deklaration enthaltener SVHC > 0,1 % und Chlorparaffine ≤ 0,1 % und Deklaration biozider Wirkstoffe in Silikonen.** |



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OTTO CHEMIE
DICHTEN & KLEBEN

**DGNB – Deutsche Gesellschaft für Nachhaltiges Bauen**

**Version 2023**

| | | |
|---|---|---|
| **Kriterium** | ENV 1.2 Risiken für die lokale Umwelt | |
| **Kriterienmatrix** | Zeile 11 | |
| **Produkttyp** | Dichtungsmassen, Dichtstoffe, Klebstoffe für punkt- und linienförmige Verklebungen von Bauteilen im Innnenraum:<br>- mechanisch belastete Fugen<br>- Sockelleisten<br>- Türschienen<br>- Stützenkleber (Doppel- oder Hohlboden)<br>- Lüftungskanäle<br><br>Gemeint sind Acrylklebstoffe/-kleber, Silikondichtstoffe, PU-Kleber und silanmodifizierte Polymere (SMP) | |
| **Anforderungen** | Qualitätsstufe 1 (niedrig) | GISCODE PU10, PU20, RS10, DA20, DSE20, DSA20, DSO20 oder DH20 und Bonuspunkte SVHC ≤ 0,1 % |
| | Qualitätsstufe 2 | GISCODE PU10, PU20, RS10, DA20, DSE20, DSA20, DSO20 oder DH20 und Bonuspunkte SVHC ≤ 0,1 % |
| | Qualitätsstufe 3 | GISCODE PU10, PU20, RS10, DA20, DSE20, DSA20, DSO20 oder DH20 und EMICODE® EC 1$^{PLUS}$ und Bonuspunkte SVHC ≤ 0,1 % |
| | Qualitätsstufe 4 (hoch) | GISCODE PU10, PU20, RS10, DA20, DSE20, DSA20, DSO20 oder DH20 und EMICODE® EC 1$^{PLUS}$ und Bonuspunkte SVHC ≤ 0,1 % |
| **Einstufung** | **Erfüllt die Anforderungen an Qualitätsstufe 2, da GISCODE DA20 und SVHC ≤ 0,1 %.** | |

**DGNB – Deutsche Gesellschaft für Nachhaltiges Bauen**

**Version 2023**

| | | |
|---|---|---|
| **Kriterium** | ENV 1.2 Risiken für die lokale Umwelt | |
| **Kriterienmatrix** | Zeile 13 | |
| **Produkttyp** | Klebstoffe für die Herstellung der Luftdichtheit an der Fassade innen und außen: z. B. PU, PU-Hybrid, MS-Polymer, SMP, Acrylat, Silikon. | |
| **Anforderungen** | Qualitätsstufe 1 (niedrig) | < 0,1 % halogenierte Treibmittel und Bonuspunkte SVHC ≤ 0,1 % |
| | Qualitätsstufe 2 | < 0,1 % halogenierte Treibmittel und Bonuspunkte SVHC ≤ 0,1 % |
| | Qualitätsstufe 3 | Chlorparaffine (SCCPs + MCCPs + LCCPs) < 0,1 % und halogenierte Treibmittel < 0,1 % und EMICODE® EC 1$^{PLUS}$ oder VOC < 1 % und Bonuspunkte SVHC ≤ 0,1 % |
| | Qualitätsstufe 4 (hoch) | Chlorparaffine (SCCPs + MCCPs + LCCPs) < 0,1 % und halogenierte Treibmittel < 0,1 % und EMICODE® EC 1$^{PLUS}$ oder VOC < 1 % und Bonuspunkte SVHC ≤ 0,1 % |
| **Einstufung** | **Erfüllt die Anforderungen an Qualitätsstufe 4, da Chlorparaffine (SCCPs + MCCPs + LCCPs) < 0,1 % und halogenierte Treibmittel < 0,1 % und VOC < 1 % und SVHC ≤ 0,1 %.** | |



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OTTO CHEMIE
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**DGNB – Deutsche Gesellschaft für Nachhaltiges Bauen**

**Version 2018**

| | | |
|---|---|---|
| **Kriterium** | ENV 1.2 Risiken für die lokale Umwelt | |
| **Kriterienmatrix** | Zeile 12 | |
| **Produkttyp** | Dichtungsmassen, Dichtstoffe, Klebstoffe für punkt- und linienförmige Verklebungen von Bauteilen im Innenraum und Lüftungskanälen im Gebäudeinneren. Gemeint sind Acrylatdichtstoffe/-kleber, Silikondichtstoffe und SMP-(Hybrid-Dichtstoffe). | |
| **Anforderungen** | Qualitätsstufe 1 (niedrig) | – |
| | Qualitätsstufe 2 | Keine im SDB deklarierten Chlorparaffine |
| | Qualitätsstufe 3 | Chlorparaffine < 0,1 % |
| | Qualitätsstufe 4 (hoch) | Chlorparaffine < 0,1 %, Lösemittel < 1 % und KWS-Weichmacher < 0,1 % |
| **Einstufung** | **Erfüllt die Anforderungen an Qualitätsstufe 4, da Chlorparaffine < 0,1 %, Lösemittel < 1 % und KWS-Weichmacher < 0,1 %.** | |

**DGNB – Deutsche Gesellschaft für Nachhaltiges Bauen**

**Version 2018**

| | | |
|---|---|---|
| **Kriterium** | ENV 1.2 Risiken für die lokale Umwelt | |
| **Kriterienmatrix** | Zeile 13 | |
| **Produkttyp** | Klebstoff für die Herstellung der Luftdichtheit an der Fassade innen und außen: z. B. PU, PU-Hybrid, MS-Polymer, SMP o. ä. | |
| **Anforderungen** | Qualitätsstufe 1 (niedrig) | < 0,1 % halogenierte Treibmittel |
| | Qualitätsstufe 2 | < 0,1 % halogenierte Treibmittel |
| | Qualitätsstufe 3 | Chlorparaffine < 0,1 % und halogenierte Treibmittel < 0,1 % und EMICODE® EC 1/EC 1 PLUS oder VOC < 1 % |
| | Qualitätsstufe 4 (hoch) | Chlorparaffine < 0,1 % und halogenierte Treibmittel < 0,1 % und EMICODE® EC 1/EC 1 PLUS oder VOC < 1 % |
| **Einstufung** | **Erfüllt die Anforderungen an Qualitätsstufe 4, da Chlorparaffine < 0,1 % und halogenierte Treibmittel < 0,1 % und VOC < 1 %.** | |



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OTTO CHEMIE
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**BNB – Bewertungssystem Nachhaltiges Bauen**

**Version 2015**

| | | |
|---|---|---|
| **Kriterium** | 1.1.6 Risiken für die lokale Umwelt | |
| **Übersichtstabelle** | 6. Kleb- und Dichtstoffe – Zeile 8 | |
| **Bauprodukttyp** | Kleb- und Dichtstoffe aus PU, SMP (silanmodifizierte Polymere), Acrylat (einschließlich Dispersionsklebstoffe) oder Silikon für punkt- und linienförmige Verklebungen und Abdichtungen im Innenraum inkl. TGA. | |
| **Anforderungen** | Qualitätsniveau 1 (niedrig) | Dokumentation, Deklaration enthaltener SVHC > 0,1 % und Deklaration biozider Wirkstoffe (sofern eingesetzt). |
| | Qualitätsniveau 2 | Deklaration biozider Wirkstoffe (sofern eingesetzt) und Deklaration enthaltener SVHC > 0,1 % und Chlorparaffine < 0,1 %.<br>Für PU-Klebstoffe gilt zusätzlich: GISCODE PU10 oder PU20 und TCEP < 0,1 %. |
| | Qualitätsniveau 3 | Deklaration biozider Wirkstoffe (sofern eingesetzt) und Deklaration enthaltener SVHC > 0,1 % und Chlorparaffine < 0,1 %.<br>Für PU-Klebstoffe gilt zusätzlich: GISCODE PU10 oder PU20 und TCEP < 0,1 %. |
| | Qualitätsniveau 4 | Keine amin- oder oximvernetzenden Silikone.<br>Zusätzlich gilt: RAL-UZ 123 oder EMICODE® EC 1/EC 1 PLUS und Chlorparaffine < 0,1 % und Deklaration biozider Wirkstoffe (sofern eingesetzt) und Deklaration enthaltener SVHC > 0,1 %.<br>Für PU-Klebstoffe gilt zusätzlich: TCEP < 0,1 %. |
| | Qualitätsniveau 5 (hoch) | Keine amin- oder oximvernetzenden Silikone.<br>Zusätzlich gilt: RAL-UZ 123 oder EMICODE® EC 1/EC 1 PLUS und Chlorparaffine < 0,1 % und Deklaration biozider Wirkstoffe (sofern eingesetzt) und Deklaration enthaltener SVHC > 0,1 %.<br>Für PU-Klebstoffe gilt zusätzlich: TCEP < 0,1 %. |
| **Einstufung** | **Erfüllt die Anforderungen an Qualitätsniveau 3, da Deklaration biozider Wirkstoffe (sofern eingesetzt) und Deklaration enthaltener SVHC > 0,1 % und Chlorparaffine < 0,1 %.** | |

**Dokumentations-unterlagen**

Alle aufgeführten Dokumente stehen auf www.otto-chemie.de zum Download bereit

1. Technisches Datenblatt
2. Sicherheitsdatenblatt
3. Nachhaltigkeitsdatenblatt
4. Prüfzeugnisse
5. Umweltproduktdeklaration

Diese Angaben basieren auf unserem Wissen zum Zeitpunkt der Erstellung (siehe unten). Die aktuelle Version ist auf unserer Website unter www.otto-chemie.de einsehbar. Darüber hinaus gelten die Angaben in den produktbegleitenden Dokumenten.



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OTTO CHEMIE
DICHTEN & KLEBEN

**Gemeinschaft Emissionskontrollierte Verlegewerkstoffe, Klebstoffe und Bauprodukte e.V.**

GEV EMICODE®

## Lizenzerteilung zur Führung des EMICODE

| | |
|---|---|
| Lizenzierungs-Nummer: | 21491/10.10.13 |
| Für den Artikel | OTTOSEAL® A 220 Turbo |
| der Firma | Hermann Otto GmbH |
| wird auf Antrag vom | 25.08.2025 |

unter Bezugnahme auf die Einstufung gemäß den nach § 10 der GEV-Zeichensatzung festgelegten Richtlinien

namens der Gemeinschaft Emissionskontrollierte Verlegewerkstoffe, Klebstoffe und Bauprodukte e.V. für den oben genannten Artikel nach § 5 Abs. 4 der GEV-Zeichensatzung die Lizenz zur Führung des GEV-Zeichens

GEV-EMICODE® EC 1 PLUS sehr emissionsarm

erteilt. Damit erfüllt dieser Artikel die rückseitig aufgeführten Kriterien.
Die Firma ist ordentliches Mitglied der GEV.

**OM098 26.08.2025**
gültig bis 26.08.2030

Der Geschäftsführer
Gemeinschaft Emissionskontrollierte Verlegewerkstoffe,
Klebstoffe und Bauprodukte e.V.
Völklinger Straße 4 · D-40219 Düsseldorf

## Hinweise zu den Voraussetzungen über die Vergabe der Lizenz für den EMICODE

Das gemäß vorseitiger Lizenz eingestufte Produkt hat nach der Satzung und den Richtlinien des Technischen Beirats der GEV u.a. den folgenden Kriterien zu genügen:

- Das Produkt entspricht allen gesetzlichen Bestimmungen, insbesondere denen des Chemikalienrechtes und seiner Verordnungen.
- Das Produkt ist nach der Definition der TRGS 610 lösemittelfrei, sofern es sich nicht um ein Oberflächenprodukt handelt. Soweit es einer Produktgruppe nach GISCODE zuzuordnen ist, wird diese angegeben.
- Für das Produkt wird ein Sicherheitsdatenblatt nach lokalem Recht in der jeweils aktuellen Fassung erstellt.
- Krebserregende, erbgutverändernde oder fruchtschädigende Stoffe der Kategorien 1A und 1B werden dem Produkt bei der Herstellung nicht aktiv zugesetzt (Ausnahmeregelungen siehe Kapitel 3.1.2.2 der GEV-Einstufungskriterien).
- Die Prüfung des Produktes erfolgt nach der definierten „GEV-Prüfmethode“. Die VOC-Bestimmung wird dabei in einer Prüfkammer nach dem Tenax-Thermodesorptions-Verfahren mit nachgeschalteter GC/MS-Analyse durchgeführt.
- Die Einstufung in EMICODE-Klassen erfolgt entsprechend den nachstehenden Bezeichnungen und TVOC/TSVOC-Konzentrationsbereichen. Zur Produktkennzeichnung ist die zutreffende EMICODE-Klasse zu verwenden:

### 1) Verlegewerkstoffe, Klebstoffe und Bauprodukte

| Parameter | EC 1 PLUS | EC 1 | EC 2 |
|---|---|---|---|
| | max. zulässige Konzentration [µg/m³] | | |
| TVOC nach 3 Tagen | ≤ 750 | ≤ 1000 | ≤ 3000 |
| TVOC nach 28 Tagen | ≤ 60 | ≤ 100 | ≤ 300 |
| TSVOC nach 28 Tagen | ≤ 40 | ≤ 50 | ≤ 100 |
| R-Wert basierend auf AgBB-NIK-Werten nach 28 Tagen | ≤ 1 | ≤ 1 | - |
| Summe der nicht bewertbaren VOC | ≤ 40 | - | - |
| Formaldehyd nach 3 Tagen | ≤ 50 | ≤ 50 | ≤ 50 |
| Formaldehyd nach 28 Tagen | ≤ 10 | ≤ 10 | ≤ 10 |
| Acetaldehyd nach 3 Tagen | ≤ 50 | ≤ 50 | ≤ 50 |
| Summe von Form- und Acetaldehyd | ≤ 0,05 ppm | ≤ 0,05 ppm | ≤ 0,05 ppm |
| Summe von flüchtigen K1A/K1B-Stoffen nach 3 Tagen | < 10 | < 10 | < 10 |
| Jeder flüchtige K1A/K1B-Stoff nach 28 Tagen | < 1 | < 1 | < 1 |

### 2) Oberflächenbehandlungsmittel für Parkett, mineralische Böden und elastische Bodenbeläge

| Parameter | EC 1 PLUS | EC 1 | EC 2 |
|---|---|---|---|
| | max. zulässige Konzentration [µg/m³] | | |
| Summe TVOC + TSVOC nach 28 Tagen | ≤ 100<br>davon max.<br>40 SVOC | ≤ 150<br>davon max.<br>50 SVOC | ≤ 400<br>davon max.<br>100 SVOC |
| R-Wert basierend auf AgBB-NIK-Werten nach 28 Tagen | ≤ 1 | ≤ 1 | - |
| Summe der nicht bewertbaren VOC | ≤ 40 | - | - |
| Formaldehyd nach 3 Tagen | ≤ 50 | ≤ 50 | ≤ 50 |
| Formaldehyd nach 28 Tagen | ≤ 10 | ≤ 10 | ≤ 10 |
| Acetaldehyd nach 3 Tagen | ≤ 50 | ≤ 50 | ≤ 50 |
| Summe von Form- und Acetaldehyd | ≤ 0,05 ppm | ≤ 0,05 ppm | ≤ 0,05 ppm |
| Summe von flüchtigen K1A/K1B-Stoffen nach 3 Tagen | < 10 | < 10 | < 10 |
| Jeder flüchtige K1A/K1B-Stoff nach 28 Tagen | < 1 | < 1 | < 1 |