

SUSTAINABILITY DATA SHEET 11.02.03-EN



AKRINOL Flex

Flexible adhesive for ceramics

1. Description

AKRINOL Flex is a multi-purpose construction adhesive for interior and exterior use based on cement and polymer binders. It is suitable for fixing ceramic tiles, clinker, glass and other mosaics to all types of wall surfaces (fine lime, lime-cement and cement plasters, plasterboard and fibre-cement boards, aerated concrete, water-repellent chipboard, etc.) and floor surfaces (concrete, cement screeds). It is used for fixing ceramic floors in buildings with underfloor heating, for fixing new ceramics to old ceramic coverings, as well as for fixing ceramic floors in swimming pools. classification according to EN 12004: C2TES1.

2. Emission data relevant for building certification in accordance with DGNB

2.1. Comparison with limit values for AgBB/ABG:

Parameters	Test after 3 days		Test after 28 days		Compliance
	Concentration $\mu\text{g}/\text{m}^3$	Limit Value $\mu\text{g}/\text{m}^3$	Concentration $\mu\text{g}/\text{m}^3$	Limit Value $\mu\text{g}/\text{m}^3$	
TVOC with SVOCs with NIK/LCI, w/o acetic acid	100	≤ 1000	5,7	≤ 60	PASS / QS4
Acetic acid	< 5	≤ 2000	< 5	≤ 140	PASS / QS4
TSVOC w/o SVOCs with NIK/LCI	< 5	-	< 5	≤ 50	PASS / QS4
R –value (dimensionless)	1,0	-	0,05	≤ 1	PASS / QS4
Sum of VOC without NIK/LCI	< 5	-	< 5	≤ 40	PASS / QS4
Total carcinogens	< 1	≤ 10	-	-	PASS / QS4
Any individual carcinogens	-	-	< 1	≤ 1	PASS / QS4
Formaldehyde (ppm)	-	-	$< 0,005$	$\leq 0,05$	PASS / QS4
Other aldehydes (ppm)	-	-	0,0077	$\leq 0,05$	PASS / QS4

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Based on emissions testing (in accordance with ISO 16000 series and DE-UZ-113 criteria), and the absence of substances classified as CMR (Cat. 1A/1B), SVHCs under REACH, heavy metals, and other hazardous ingredients as listed in the DGNB criteria ENV 1.2, this product qualifies for the highest quality level Q4 under the DGNB certification system. It supports optimal indoor air quality and human health protection in accordance with sustainable building standards.

3. Emission data relevant for building certification in accordance with LEED

3.1. Comparison with limit values for LEED v4.1 BETA

Parameters	Test after 28 days		
	Concentration $\mu\text{g}/\text{m}^3$	Limit Value $\mu\text{g}/\text{m}^3$	Compliance
TVOC	5,7	≤ 1000	PASS
Sum of VOC without NIK/LCI	<5	≤ 100	PASS
Formaldehyde	<3	≤ 10	PASS
R-Value (dimensionless)	0,05	≤ 1	PASS

Based emissions test results in accordance with ISO 16000 series, this product meets the requirements for low-emitting materials under LEED v4.1 (EQ Credit: Low-Emitting Materials).

4. Emission data relevant for building certification in accordance to BREAM

4.1. Comparison with limit values for BREAM NOR

Parameters	Concentration mg/m^3	Basic Level mg/m^3	Exemplary Level mg/m^3	Compliance
Formaldehyde 28 days	<0,003	$\leq 0,06$	$\leq 0,01$	PASS / Exemplary Level
TVOC (EN16516) 28 days	<0,005	$\leq 0,3$	$\leq 0,3$	PASS / Exemplary Level
TSVOC 28 days	<0,005	-	$\leq 0,1$	PASS / Exemplary Level
Total carcinogens 28 days	<0,001	$\leq 0,001$	$\leq 0,001$	PASS / Exemplary Level

This product meets the stringent requirements for low-emitting materials under BREEAM NOR New Construction (Hea 02 and Hea 09), based on emissions testing and compliance with the applicable European standards (e.g., AgBB, EN 16516). Due to the verified performance, the product qualifies for the Exemplary Level criteria, contributing additional credits within the BREEAM NOR assessment.

4.2. Comparison with limit values for BREAM International

Parameters	Concentration mg/m^3	Basic Level mg/m^3	Exemplary Level mg/m^3	Compliance
Formaldehyde 28 days	<0,003	$\leq 0,06$	$\leq 0,01$	PASS / Exemplary Level
TVOC (EN16516) 28 days	<0,005	≤ 1	$\leq 0,3$	PASS / Exemplary Level
TSVOC 28 days	<0,005	-	$\leq 0,1$	PASS / Exemplary Level
Total carcinogens 28 days	<0,001	$\leq 0,001$	$\leq 0,001$	PASS / Exemplary Level

This product meets the stringent requirements for low-emitting materials under BREEAM International New Construction (Hea 02 and Hea 09), based on emissions testing and compliance with the applicable European standards (e.g., AgBB, EN 16516). Due to the verified performance the product qualifies for the Exemplary Level criteria, contributing additional credits within the BREEAM International assessment.

5. VOC content in accordance with EN ISO 11890-2:2014

This product is not classified within the scope of the regulation requiring the determination of VOC content according to EN ISO 11890-2:2014.

6. Additional performances:

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7. Material Ingredients Disclosure Statement

7.1. Ingredient Inventory

This product contains the following primary ingredients, disclosed to a threshold of 0.1% (1,000 ppm):

- Portland cement (<40%)
- Polymer powder of vinyl acetate and ethylene (<35%)
- Quarz sand (<55%)
- Additives (rheology modifiers, hardener, Cr reducer) <5%

7.2. Hazard Assessment (per GHS / REACH)

This product does not contain any substances that are:

A: REACH Regulation – Substances of Very High Concern (SVHC)

- This product does not contain any substances currently listed on the REACH Candidate List of Substances of Very High Concern (SVHC) (as published by ECHA), in concentrations greater than 0.1% (w/w).

B: CMR Substances (Carcinogenic, Mutagenic, Reprotoxic)

- Formaldehyde: The product does not contain formaldehyde classified as Carcinogenic, Mutagenic, or Reprotoxic (CMR) Category 1A or 1B under the EU CLP Regulation (EC No 1272/2008).
- Other CMR Substances: The product does not contain any other substances classified as Carcinogenic, Mutagenic, or Reprotoxic (CMR) Category 1A or 1B under the EU CLP Regulation (EC No 1272/2008).

C: Heavy Metals

- This product is free from intentionally added heavy metals, including but not limited to lead (Pb), cadmium (Cd), mercury (Hg), arsenic (As), antimony (Sb), selenium (Se), and hexavalent chromium (Cr⁶⁺).
- These metals are regulated under REACH Annex XVII, the RoHS Directive (2011/65/EU), and identified as priority hazardous substances under various environmental frameworks.

D: Volatile Organic Compounds (VOC)

- The product complies with low-emitting material requirements under LEED v4.1, BREEAM Hea 02/Hea 09, and DGNB Criteria ENV 1.2, based on:

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- VOC content testing (ISO 11890-2),
 - VOC emissions testing (ISO 16000 series),
 - Compliance with AgBB / EU LCI reference values.
- Formaldehyde emissions are below 10 µg/m³ (28-day), in line with the most restrictive thresholds.

E: Living Building Challenge (LBC) “Red List” Compliance

- This product does not contain any substances listed on the Living Building Challenge (LBC) “Red List”, which includes:
 - PVC and related vinyl polymers,
 - Halogenated flame retardants (e.g., PBDEs, TBBPA),
 - Per- and polyfluoroalkyl substances (PFAS),
 - Bisphenol A (BPA) and related analogues,
 - Phthalates,
 - Heavy metals as noted above.
- The Red List encompasses substances of concern for their carcinogenicity, endocrine disruption, bio-accumulation, and persistence in the environment.

F: Endocrine Disrupting Chemicals (EDCs)

- The product is free from intentionally added known or suspected endocrine-disrupting chemicals, including nonylphenol ethoxylates, BPA, and certain phthalates, in line with precautionary principles promoted by DGNB and LBC.

8. Documentation available for this product:

- MSDS AKRINOL Flex
- TDS AKRINOL Flex
- Declaration of performance AKRINOL Flex
- EUROFINS Report 392-2025-00092401_A_EN

9. Management systems

- Quality Management: ISO9001:2015
- Environment Management: ISO14001:2015
- Occupational Health and Safety Management: ISO45001:2018
- Energy Management: ISO50001:2018
- Responsible Care: CEFIC

The information provided is based on the best available data from raw material suppliers and product formulation records.

To the manufacturer's knowledge, this product does not pose significant health risks under normal conditions of use in indoor environments.

The manufacturer is committed to transparency and sustainable product development.

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