

The flooring installation product classified with an EMICODE® has to comply with the classification criteria as issued by the Technical Council of the GEV:

- In general, an EMICODE® labelled product is solvent free. Solvents in this meaning are defined as Volatile Organic Compounds (VOC) with a boiling point < 200°C under normal conditions (20°C, 1013 hPa). As an exemption for technical needs, only products for the surface treatment of parquet, mineral floors and resilient floor coverings may contain solvents as film building agent.
- A safety data sheet has to be set up. It is recommended to state the EMICODE® - classification in the safety data sheet under Point 15, e.g. "EMICODE® EC 1 – very low emission".
- Substances that have been identified under REACH as carcinogenic, mutagenic or toxic to reproduction ("CMR substances" of categories 1A and 1B) shall not be used. Emissions of all volatile organic carcinogenic substances of categories 1A and 1B shall not exceed a total limit value of 10 µg/m³ after 3 days and any such individual VOC shall not exceed 1 µg/m³ after 28 days.
- Products which are classified in categories 1, 2 or 3 according to European Hazardous Substances Regulation with regard to acute toxic properties (CLP: Part 3: 3.1 acute toxicity) are excluded from the EMICODE®.
- Methyl Ethyl Ketoxim (MEKO) and Methyl Isobutyl Ketoxim (MIBKO) as well as Acetone oxime must not be added or released during curing for reasons of occupational safety and odour.
- Testing has to be performed in accordance to the "GEV-testing method". These tests shall be performed by a laboratory accredited for this type of tests according to ISO 17025. The documentation of test results is operated by the producer according to intra-company rules. A list of recommended laboratories is published on www.emicode.com.
- Products of the same mixture (preparation) but different trademark (article name) require an EMICODE® license for each article but only one emission test. In this case the license is granted based on the test of the previously tested and EMICODE® licensed product.
- Changes to the mixture or alterations that have no relevance in terms of emissions do not require another test.
- Classification into EMICODE® classes is carried out according to the product group after compliance with all requirements of the following tables. The appropriate EMICODE® class shall be used for product labelling.

Product group 1: Flooring installation products, Adhesives, Construction Products

- *Liquid products*
Precoats, primers, barrier or damp barriers, ready-to-use thin fluid fixations or adhesives, anti-slip coatings for self-laying floor coverings, rolled fixatives, spray adhesives, screw locking adhesives, wood glues, dispersion based additives for mineral tile mortars and levelling compounds, dispersion based bonding courses (e.g. for bonded screeds), cement based waterproofing slurries, liquid sealants, liquid membranes, reactive surface sealants, binders for synthetic resin screed, casting resins, water based conductive coatings, reactive unfilled primers
- *Powdery products*
Cement and calcium sulfate based levelling compounds, cement based and other mineral tile mortars (thin bed and medium bed mortars), mortars for brickwork, cement and calcium sulfate based screed mortars and screed binding materials, powdery and liquid screed admixtures, powdery adhesives (other than tile adhesives), cement based composite waterproofing slurries and coatings, powdery bonding courses (e.g. for bonded screeds), filling and levelling primers, quick cements
- *Pasty products*
Adhesives for floor coverings, parquet, or ready-to-use adhesives for ceramic tiles, assembly adhesives and other pasty adhesives, pasty fixatives for floor coverings, dispersion based or reactive resin-based levelling compounds, sealants under tiles based on dispersions or reactive resins, joint grouts based on dispersions or reactive resins, self-levelling synthetic resin coatings for floors, synthetic resin rollable coatings and topcoats for floors, reactive filled primers
- *Ready-to-use products that do not require chemical curing or physical drying*
Underlays (e.g. footfall damping underlays, self-adhesive underlays), adhesive tapes, installation panels, wall panels, decoupling panels, damping panels, planar sealing tapes and collars for small surfaces (e.g. for window, façade, in wet areas), sealing membranes for large surfaces (e.g. for walls and floor in wet areas), vapour retarder under the roof
- *Joint sealants, joint insulations, joint sealing tapes*
Joint sealants based on dispersions or reactive resins, assembly and insulation foams, compressed sealant tapes according to DIN 18542 and foam sealing tapes

| $\mu\text{g}/\text{m}^3$ | EC 1 ^{PLUS} | EC 1 | EC 2 |
|--|----------------------|------------|------------|
| TVOC after 3 days | ≤ 750 | ≤ 1000 | ≤ 3000 |
| TVOC after 28 days | ≤ 60 | ≤ 100 | ≤ 300 |
| TSVOC after 28 days | ≤ 40 | ≤ 50 | ≤ 100 |
| R value based on German AgBB LCI (NIK) after 28 days | ≤ 1 | - | - |
| Sum of non-assessable VOC | ≤ 40 | - | - |
| formaldehyde after 3 days | ≤ 50 | ≤ 50 | ≤ 50 |
| acetaldehyde after 3 days | ≤ 50 | ≤ 50 | ≤ 50 |
| Sum of form- and acetaldehyde | ≤ 0.05 ppm | ≤ 0.05 ppm | ≤ 0.05 ppm |
| Sum of C1A/C1B VOCs after 3 days | ≤ 10 | ≤ 10 | ≤ 10 |
| Any C1A/C1B VOC after 28 days | ≤ 1 | ≤ 1 | ≤ 1 |

Product group 2: Products for floor surface treatments

- Water based parquet lacquers/coatings, water-based parquet primers and joint fillers for parquet, parquet oils, water-based UV lacquers for parquet, UV-curing lacquers (100 % solid) for parquet
- Water based lacquers and finishes and oils for mineral floorings
- Water based lacquers and primers for resilient floorings, water-based UV lacquers for resilient floorings, UV-curing lacquers (100 % solid) for resilient floorings

| $\mu\text{g}/\text{m}^3$ | EC 1 ^{PLUS} | EC 1 | EC 2 |
|--|------------------------------------|------------------------------------|--|
| Sum of TVOC + TSVOC after 28 days | ≤ 100 thereof max. 40 SVOC | ≤ 150 thereof max. 50 SVOC | ≤ 400 thereof max. 100 SVOC |
| R value based on German AgBB LCI (NIK) after 28 days | ≤ 1 | - | - |
| Sum of non-assessable VOC | ≤ 40 | - | - |
| Formaldehyde after 3 days | ≤ 50 | ≤ 50 | ≤ 50 |
| Acetaldehyde after 3 days | ≤ 50 | ≤ 50 | ≤ 50 |
| Sum of form- and acetaldehyde | ≤ 0.05 ppm | ≤ 0.05 ppm | ≤ 0.05 ppm |
| Sum of volatile C1A/C1B after 3 days | ≤ 10 | ≤ 10 | ≤ 10 |
| Any volatile C1A/C1B after 28 days | ≤ 1 | ≤ 1 | ≤ 1 |

TVOC = Total volatile organic compounds

TSVOC = Total semi-volatile organic compounds

C1A-, C1B-VOC = volatile substances of CMR categories 1A and 1B

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