

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

Association for the Control of Emissions from Products
for Flooring Installation, Adhesives and Building Materials

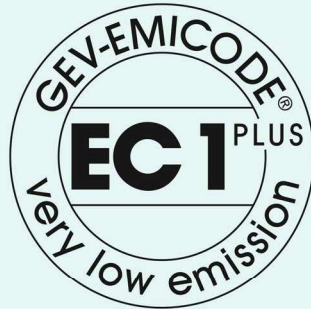


Awarding of licence for the use of EMICODE

Licence Number: 4817/10.10.13
For the product OTTOSEAL® S 100
Of company Hermann Otto GmbH
Due to application date October 16, 2013

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

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



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

GEV membership number OM 098

A handwritten signature in blue ink, appearing to read 'D. J. ...'.

October 16, 2013
valid until October 16, 2018

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

Requirement guidelines for the awarding of the EMICODE licence

The flooring installation material mentioned in the front side licence has to meet with the following criteria in accordance with the constitution and guidelines of the Technical Advisory Board of the GEV and others:

- The product meets all the legal requirements, especially the chemical law and its specifications.
- The product is solvent free due to occupational health. Only in case of a wood flooring coating it might contain low content of solvents.
- A safety data sheet (MSDS) according to local law in its respectively valid version is to be established for the product.
- Carcinogenic, mutagenic, reprotoxic substances as well as those substances under suspicion to cause such defects are not permitted to be used in the manufacturing of this product.
- The testing of the product is in accordance with the defined GEV test method. Afterwards the definition of VOC is conducted in a test chamber by using the Tenax thermodesorption procedures with GC/MS analysis.
- The classification into the EMICODE classes is performed according to the following listed and described criteria and TVOC concentration groups. For product labelling the matching EMICODE class is to be used.

| GEV product matrix | EMICODE | | |
|---|--|--|---|
| | EC 1 ^{PLUS} | EC 1 | EC 2 |
| | TVOC/TSVOC _{28d} in µg/m ³ | | |
| 1. Liquid products | | | |
| 1.1 Primers (floor and wall) | | | |
| 1.2 Ready to use thin fixations and adhesives | | | |
| 1.3 Damp proof primers or barrier primers | | | |
| 1.4 Liquid sealants, pasty surface sealants | | | |
| 2. Mineral products | | | |
| 2.1 Cement and calcium sulphate based levelling compounds | | | |
| 2.2 Cement based and other mineral tile mortars and joint fillers | | | |
| 2.3 Waterproofing slurries | | | |
| 2.4 Screeds and screed binding materials | | | |
| 3. Pasty products with high content of organic binder | After 3 days | After 3 days | After 3 days |
| 3.1 Pasty adhesives for floor coverings and parquet, ready-to-use adhesive for ceramic tiles, other adhesives | ≤ 750 TVOC; | ≤ 1000 TVOC; | ≤ 3000 TVOC; |
| 3.2 Pasty fixations for floor coverings | after 28 days | after 28 days | after 28 days |
| 3.3 Levelling compounds (based on dispersion or reactive resin) | ≤ 60 TVOC / | < 100 TVOC / | ≤ 300 TVOC / |
| 3.4 Powder based adhesives with high content of organic binder | ≤ 40 TSVOC | ≤ 50 TSVOC | ≤ 100 TSVOC |
| 4. Ready to use products which do not require chemical curing or physical drying | | | |
| 4.1 Underlays | | | |
| 4.2 Insulating underlays | | | |
| 4.3 Self-adhesive tapes and underlays | | | |
| 4.4 Installation boards, decoupling/insulation boards, wall panels | | | |
| 5. Joint sealants, joint insulations, joint sealing tapes | | | |
| 5.1 Joint sealants (based on dispersion or reactive resins), repair fillers | | | |
| 5.2 Joint insulations, expanding foams | | | |
| 5.3 Pre-compressed or foam plastic joint sealing tapes | | | |
| 5.4 Sealing membranes, tapes, sleeves for small surfaces | | | |
| 5.5 Sealing membranes for large surfaces | | | |
| 6. Surface coating for wood floorings | | | |
| 6.1 Waterborne wood floor coatings | ≤ 100 Σ TVOC, TVOC, TSVOC thereof max. 40 SVOC | ≤ 150 Σ TVOC, TVOC, TSVOC thereof max. 50 SVOC | ≤ 450 Σ TVOC, TVOC, TSVOC thereof max. 100 SVOC |