

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

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

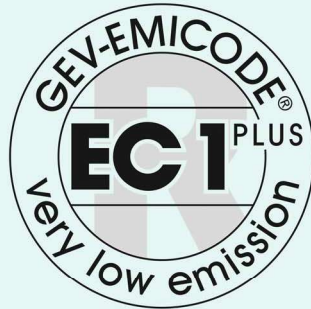


Awarding of licence for the use of EMICODE

Licence Number: 3987/24.02.97
For the product Casco Thermoplan 3652
Due to application date October 17, 2012

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 008

October 19, 2012
valid until October 19, 2017

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

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			
1.2 Ready to use liquid fixations and adhesives (e.g. rolled fixations, spray adhesives)			
1.3 Damp proof primers			
1.4 Liquid sealants			
2. Powder based products			
2.1 Levelling compound based on cement or gypsum			
2.2 Tile mortars and joint fillers			
2.3 Waterproofing slurries based on cement			
3. Pasty products with high content of organic binder			
3.1 Adhesives for floor coverings, wood floorings and ceramic tiles			
3.2 Fixations for floor coverings			
3.3 Levelling compounds (water based or reactive)			
3.4 Powder based adhesives with high content of organic binder			
4. Ready to use products which do not require chemical curing or physical drying	After 3 days	After 3 days	After 3 days
4.1 Underlays for flooring installation	≤ 750 TVOC;	≤ 1000 TVOC;	≤ 3000 TVOC;
4.2 Sound adsorbing underlays	after 28 days	after 28 days	after 28 days
4.3 Self adhesive tapes and membranes	≤ 60 TVOC /	< 100 TVOC /	≤ 300 TVOC /
4.4 Installation-/ decoupling boards	≤ 40 TSVOC	≤ 50 TSVOC	≤ 100 TSVOC
5. Joint sealants, joint insulations, joint sealing tapes			
5.1 Joint sealants (water based or reactive)			
5.2 Joint insulations			
5.3 Pre-compressed joint sealing tapes			
5.4 Sealing membranes (for window or facade)			
6. Surface coating for wood floorings			
6.1 Waterborne wood floor coatings	Not available	≤ 150 Σ TVVOC, TVOC, TSVOC	≤ 450 Σ TVVOC, TVOC, TSVOC