

Technical Construction File

File No.: GFTTCF0220-CPR

Type of Equipment:	Garage Floor Tiles
Model No.:	400*400*18mm,400*400*20,400*400*25,400*400*30,400*400*40,500*500*50,500*500*60
Issued Date:	2023-02-20
Brand Name/Trade mark:	---
Directive(S)	Regulation (EU) No 305/2011 - Construction Products
standard(s):	EN 14041:2018



Presented by

Hubei VNH Technology Co. Ltd
#9 Hongqi Road, Hengdian Street, Huangpi District, Wuhan City,
Hubei Province, China

Regulation (EU) No 305/2011 Annex I			
Clause	Requirement-Test	Result-Remark	Verdict
1	Mechanical resistance and stability		P
	<p>The construction works must be designed and built in such a way that the loadings that are liable to act on it during their constructions and use will not lead to any of the following:</p> <p>(a) collapse of the whole or part of the work; (b) major deformations to an inadmissible degree; (c) damage to other parts of the works or to fittings or installed equipment as a result of major deformation of the load-bearing construction; (d) damage by an event to an extent disproportionate to the original cause.</p>	These requirements have been complied with.	P
2	Safety in case of fire		N
	<p>The construction works must be designed and built in such a way that in the event of an outbreak of fire:</p> <p>(a) the load-bearing capacity of the construction can be assumed for a specific period of time; (b) the generation and spread of fire and smoke within the construction works are limited; (c) the spread of fire to neighbouring construction works is limited; (d) occupants can leave the construction works or be rescued by other means; (e) the safety of rescue teams is taken into consideration.</p>	Not applicable	N
3	Hygiene, health and the environment		P
	<p>The construction works must be designed and built in such a way that they will, throughout their life cycle, not be a threat to the hygiene or health and safety of workers, occupants or neighbours, nor have an exceedingly high impact, over their entire life cycle, on the environmental quality or on the climate during their construction, use and demolition, in particular as a result of any of the following:</p> <p>(a) the giving-off of toxic gas; (b) the emissions of dangerous substances, volatile organic compounds (VOC), greenhouse gases or dangerous particles into indoor or outdoor air; (c) the emission of dangerous radiation; (d) the release of dangerous substances into ground water, marine waters, surface waters or soil; (e) the release of dangerous substances into drinking water or substances which have an otherwise negative impact on drinking water; (f) faulty discharge of waste water, emission of flue gases or faulty disposal of solid or liquid waste;</p>	These requirements have been complied with.	P

Regulation (EU) No 305/2011 Annex I			
Clause	Requirement-Test	Result-Remark	Verdict
	(g) dampness in parts of the construction works or on surfaces within the construction works.		
4	Safety and accessibility in use		P
	The construction works must be designed and built in such a way that they do not present unacceptable risks of accidents or damage in service or in operation such as slipping, falling, collision, burns, electrocution, injury from explosion and burglaries. In particular, construction works must be designed and built taking into consideration accessibility and use for disabled persons.	These requirements have been complied with.	P
5	Protection against noise		N
	The construction works must be designed and built in such a way that noise perceived by the occupants or people nearby is kept to a level that will not threaten their health and will allow them to sleep, rest and work in satisfactory conditions.	Not applicable	N
6	Energy economy and heat retention		N
	The construction works and its heating, cooling and ventilation installations must be designed and built in such a way that the amount of energy required in use shall be low, when account is taken of the occupants and of the climatic conditions of the location. Construction works must also be energy-efficient, using as little energy as possible during their construction and dismantling.	Not applicable	N
7	Sustainable use of natural resources		P
	The construction works must be designed, built and demolished in such a way that the use of natural resources is sustainable and in particular ensure the following: (a) reuse or recyclability of the construction works, their materials and parts after demolition; (b) durability of the construction works; (c) use of environmentally compatible raw and secondary materials in the construction works.	These requirements have been complied with.	P

Test Property	Test Method	Test Principle / Requirements	Test Result												
Reaction to fire	EN 14041:2018 Clause 4.1	<p>If a claim for reaction to fire performance is made, the floor covering (except as provided for below) shall be tested and classified according to the requirements of EN 13501-1:2002 and the resulting class and subclass (as appropriate to the class itself) shall be declared.</p> <p>If it is decided to make no claim for reaction to fire performance, i.e. it is decided to place a product or family of products on the market as Class Ffl, no testing is required for this product of family of products.</p> <p>The products listed in Tables 1, 2 and 3, in the end uses identified in the tables, are classified without further testing (CWFT) in the classes shown and do not require testing in respect of these end uses and classes.</p> <p><small>Table 2 – Classes of reaction to fire for textile floor coverings, classified without further testing</small></p> <table border="1"> <thead> <tr> <th>Floor covering type¹</th> <th>EN product standard</th> <th>Class² Floorings</th> </tr> </thead> <tbody> <tr> <td>Non-FR machine-made wall-to-wall pile carpets and pile carpet tiles²</td> <td>EN 1307</td> <td>E_s</td> </tr> <tr> <td>Non-FR needled textile floor coverings without pile²</td> <td>EN 1470</td> <td>E_s</td> </tr> <tr> <td>Non-FR needled textile floor coverings with pile²</td> <td>EN 13297</td> <td>E_s</td> </tr> </tbody> </table>	Floor covering type ¹	EN product standard	Class ² Floorings	Non-FR machine-made wall-to-wall pile carpets and pile carpet tiles ²	EN 1307	E _s	Non-FR needled textile floor coverings without pile ²	EN 1470	E _s	Non-FR needled textile floor coverings with pile ²	EN 13297	E _s	Pass.
Floor covering type ¹	EN product standard	Class ² Floorings													
Non-FR machine-made wall-to-wall pile carpets and pile carpet tiles ²	EN 1307	E _s													
Non-FR needled textile floor coverings without pile ²	EN 1470	E _s													
Non-FR needled textile floor coverings with pile ²	EN 13297	E _s													
Content of pentachlorophenol (PCP)	EN 14041:2018 Clause 4.2	Resilient, textile and laminate floor coverings shall not contain PCP or a derivative thereof as a component in the production process of the product or of its raw materials. In cases where verification is required, if the content is less than 5 ppm in the parts of the product affected by treatment, this requirement shall be considered to be met. For laminate floor coverings the method CEN/TR 14823, for textile floor coverings the method CEN/TS 14494 shall be used. For resilient floor coverings verification is not required.	Pass.												
Formaldehyde emission	EN 14041:2018 Clause 4.3	When formaldehyde-containing materials have been added to the product as a part of the production process, the product shall be tested and classified into one of two classes: E1 or E2, as specified in Table 4 and Table 5.	Pass.												

Test Property	Test Method	Test Principle / Requirements	Test Result																								
		<p style="text-align: center;">Table 4 – Formaldehyde class E1</p> <table border="1"> <thead> <tr> <th></th> <th>Test method</th> <th>Requirement</th> </tr> </thead> <tbody> <tr> <td>Initial type testing^a</td> <td>ENV 717-1</td> <td>Release ≤ 0,124 mg/m³</td> </tr> <tr> <td rowspan="2">Factory production control</td> <td>ENV 717-1</td> <td>Release ≤ 0,124 mg/m³</td> </tr> <tr> <td>EN 717-2</td> <td>Release ≤ 3,5 mg/m²h</td> </tr> </tbody> </table> <p>^a For established products, initial type testing may also be done on the basis of existing data with EN 717-2 testing, either from factory production control or from external inspection.</p> <p style="text-align: center;">Table 5 – Formaldehyde class E2</p> <table border="1"> <thead> <tr> <th></th> <th>Test method</th> <th>Requirement</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Initial type testing</td> <td>ENV 717-1</td> <td>Release > 0,124 mg/m³</td> </tr> <tr> <td>EN 717-2</td> <td>Release > 3,5 mg/m²h to ≤ 8 mg/m²h</td> </tr> <tr> <td rowspan="2">Factory production control</td> <td>ENV 717-1</td> <td>Release > 0,124 mg/m³</td> </tr> <tr> <td>EN 717-2</td> <td>Release > 3,5 mg/m²h to ≤ 8 mg/m²h</td> </tr> </tbody> </table>		Test method	Requirement	Initial type testing ^a	ENV 717-1	Release ≤ 0,124 mg/m ³	Factory production control	ENV 717-1	Release ≤ 0,124 mg/m ³	EN 717-2	Release ≤ 3,5 mg/m ² h		Test method	Requirement	Initial type testing	ENV 717-1	Release > 0,124 mg/m ³	EN 717-2	Release > 3,5 mg/m ² h to ≤ 8 mg/m ² h	Factory production control	ENV 717-1	Release > 0,124 mg/m ³	EN 717-2	Release > 3,5 mg/m ² h to ≤ 8 mg/m ² h	
	Test method	Requirement																									
Initial type testing ^a	ENV 717-1	Release ≤ 0,124 mg/m ³																									
Factory production control	ENV 717-1	Release ≤ 0,124 mg/m ³																									
	EN 717-2	Release ≤ 3,5 mg/m ² h																									
	Test method	Requirement																									
Initial type testing	ENV 717-1	Release > 0,124 mg/m ³																									
	EN 717-2	Release > 3,5 mg/m ² h to ≤ 8 mg/m ² h																									
Factory production control	ENV 717-1	Release > 0,124 mg/m ³																									
	EN 717-2	Release > 3,5 mg/m ² h to ≤ 8 mg/m ² h																									
Water-tightness	EN 14041:2018 Clause 4.4	<p>Where required, resilient floor coverings shall meet the requirements of EN 13553. Cover the supporting base with the indicator paper. Place the test specimen on the indicator paper with the use surface side upwards. Place the box over the test specimen and press the support towards the box to ensure watertightness (see A.2.2 and Figure A.2). Fill the box with water to a level of 200 mm. 10 mm above the upper surface of the test specimen. This water level is maintained for 24 h. 1 h after which the water is drained off. The moisture indicator and the test specimen are examined for any signs of water penetrating the specimen.</p>	Pass.																								
Slip resistance	EN 14041:2018 Clause 4.5	<p>If a claim for slip resistance is made, the floor covering intended to be used in dry and non-contaminated conditions shall have a dynamic coefficient of friction of ≥ 0,30 when tested ex-factory under dry conditions in accordance with EN 13893 and shall be declared as technical class DS. Although such floors may be subjected to occasional spillage and wet cleaning, the manufacturer does not guarantee the performance under these conditions. If no claim for slip resistance is made, the floor coverings for which no performance has been determined shall be declared as technical class NPd.</p>	Pass.																								
Electrical behaviour (static electricity)	EN 14041:2018 Clause 4.6	The body voltage, measured in accordance with EN 1815 for resilient and laminate floor coverings or ISO 6356 for textile floor coverings, shall not exceed 2,0 kV when tested at 23 °C ±	Pass.																								

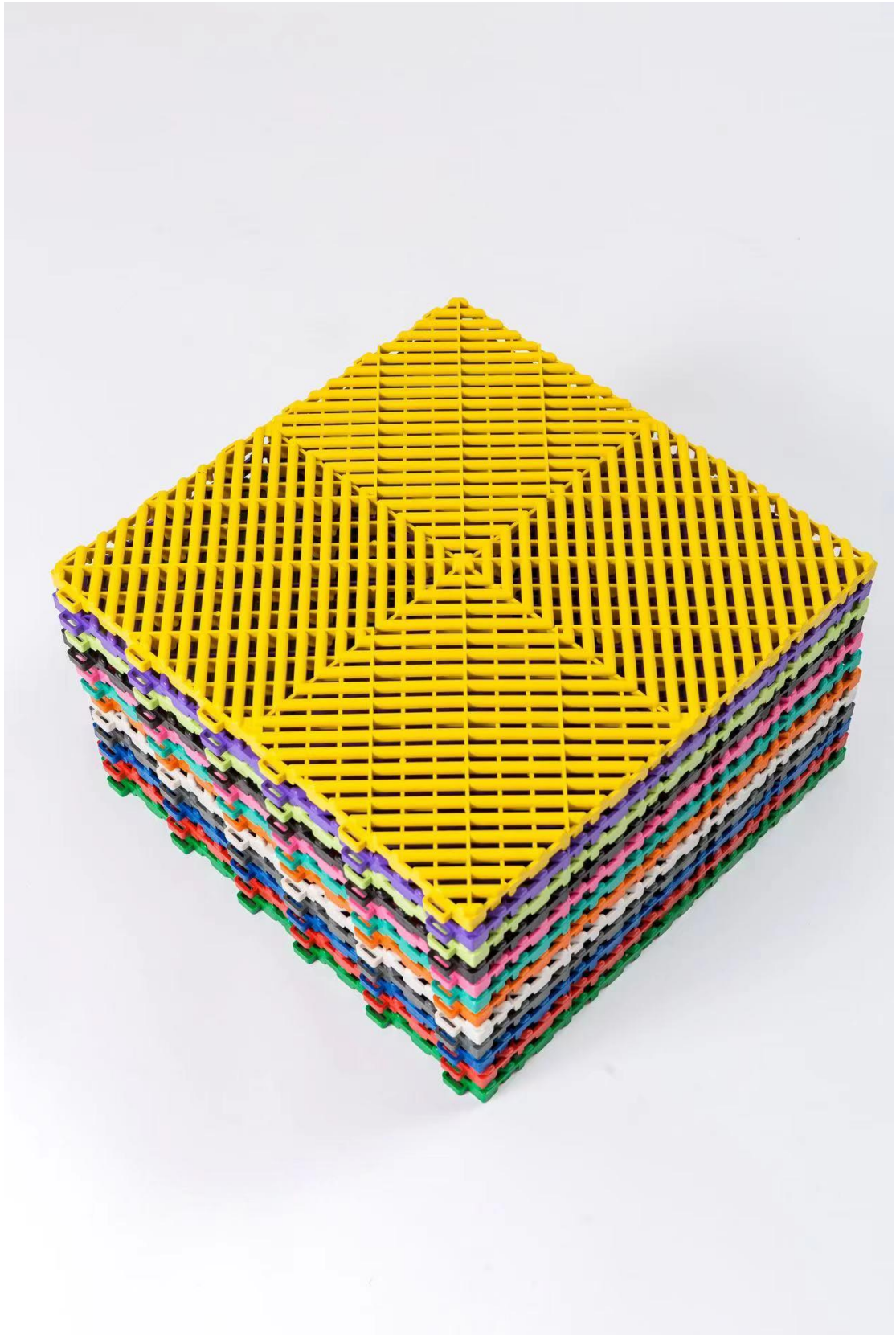
Test Property	Test Method	Test Principle / Requirements	Test Result
		<p>1 °C and (25 ± 2) % relative humidity after conditioning the test specimens in the same atmosphere for seven days.</p> <p>-Static dissipative floor coverings: The vertical resistance, measured in accordance with EN 1081 for resilient and laminate floor coverings or ISO 10965 for textile floor coverings, shall not exceed 10⁹ Ω.</p> <p>-Conductive floor coverings: The vertical resistance, measured in accordance with EN 1081 for resilient and laminate floor coverings or ISO 10965 for textile floor coverings, shall not exceed 10⁶ Ω.</p>	
Thermal conductivity	EN 14041:2018 Clause 4.7	When floor coverings are to be installed over an under-floor heating system the design thermal conductivity values given in EN 12524 shall be assumed for design calculation purposes. Alternatively, the thermal resistance measured in accordance with EN 12667 may be used.	Pass.
Marking and labelling	EN 14041:2018 Clause 6	<p>Products which conform to the requirements of this document shall be clearly and indelibly marked by the manufacturer either on their package or on an adhesive label with the following information:</p> <p>a) the number and the year of this European Standard, i.e. EN 14041:2018; b) the manufacturer's or supplier's identification; c) the product name and batch number (possibly in code form).</p>	Pass.

Annex : Technical Information

(1) Product Photos



A.1



A.2