



**TEST REPORT**  
**EN 13162:2012+A1:2015**

**Thermal insulation products for buildings - Factory made mineral wool (MW) products - Specification**

Report Number.....: CTG2507242478J-SR74AK

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Testing location.....: Shenzhen CTG Testing Co., LTD

Date of issue 2025-07-24

**Applicant**

name.....: Jinan Hexi Environmental Engineering Co., Ltd.

Address.....: No. 149-1, East-West Street, Liuwangsi Village, Diaozhen Street, Zhangqiu District, Jinan City, Shandong Province

**Test specification:**

Standard.....: EN 13162:2012+A1:2015

**Test item**

Description.....: Sandwich wall panel

Model and/or type reference.....: Hexi01

Trademark .....: /

Additional model number : Hexi02

The difference lies in the thickness (16mm/20mm/25mm) and surface carving pattern

Date of Sample Received 2025-07-14

Testing Period 2025-07-14~2025-07-24

Manufacturer .....: Jinan Hexi Environmental Engineering Co., Ltd.

Address .....: No. 149-1, East-West Street, Liuwangsi Village, Diaozhen Street, Zhangqiu District, Jinan City, Shandong Province



<b>EN 13162:2012+A1:2015</b>			
<b>Thermal insulation products for buildings - Factory made mineral wool (MW) products - Specification</b>			
Clause	Requirements - Test	Result - Remark	Verdict
4	<b>Requirements</b>		<b>P</b>
4.1	<b>General</b>		<b>P</b>
	Product properties shall be assessed in accordance with Clause 5. To comply with this standard, products shall meet the requirements of 4.2, and the requirements of 4.3 as appropriate.		<b>P</b>
4.2	<b>For all applications</b>		<b>P</b>
4.2.1	<b>Thermal resistance and thermal conductivity</b>		<b>P</b>
	Thermal resistance and thermal conductivity shall be based upon measurements carried out in accordance with EN 12667 or EN 12939 for thick products.		<b>P</b>
4.2.2	<b>Length and width</b>		<b>P</b>
	Length, l, and width, b, shall be determined in accordance with EN 822. No test result shall deviate from the nominal values by more than the following: ± 2 % for length, ± 1, 5 % for width.		<b>P</b>
4.2.3	<b>Thickness</b>		<b>P</b>
	Thickness, d, shall be determined in accordance with EN 823. The load shall be 50 Pa except for products with a level of compressive stress or compressive strength of 10 kPa or greater (see 4.3.3), where the load shall be 250 Pa. No test result shall deviate from the nominal thickness, dN, by more than the tolerances given in Table 1 for the declared level or class.		<b>P</b>
4.2.4	<b>Squareness</b>		<b>P</b>
	Squareness shall be determined in accordance with EN 824. The deviation from squareness on length and width, Sb, of boards and slabs shall not exceed 5 mm/m.		<b>P</b>
4.2.5	<b>Flatness</b>		<b>P</b>
	Flatness shall be determined in accordance with EN 825. The deviation from flatness, Smax, of boards and slabs, shall not exceed 6 mm.		<b>P</b>
4.2.6	<b>Reaction to fire of the product as placed on the market</b>		<b>P</b>
	Reaction to fire classification of the product, as placed on the market, shall be determined in accordance with EN 13501-1 and the mounting and fixing rules given in EN 15715.		<b>P</b>



			P
4.2.7	Durability characteristics		P
4.2.7.1	General		P
4.2.7.2	Durability of reaction to fire of the product as placed on the market against ageing/ degradation		P
4.2.7.3	Durability of thermal resistance and thermal conductivity against ageing/ degradation		P
4.3	For specific applications		P
4.3.1	General		P
	If there is no requirement for a property described in 4.3 for a product in use, then the property does not need to be determined and declared by the manufacturer.		P
4.3.2	Dimensional stability		P
	Dimensional stability under specified temperature or under specified temperature and humidity conditions shall be determined in accordance with EN 1604. The test shall be carried out for the conditions given in Table 2. The relative changes in length, and width, and the relative reduction in thickness, shall not exceed the values given in Table 2 for the declared level.		P
4.3.3	Compressive stress or compressive strength		P
	Compressive stress at 10 % deformation, or the compressive strength, (Jm, shall be determined in accordance with EN 826.		P
4.3.4	Tensile strength perpendicular to faces		P
	Tensile strength perpendicular to faces, shall be determined in accordance with EN 1607.		P
4.3.5	Point load		P
	Point load, at 5 mm deformation shall be determined in accordance with EN 12430 and declared in levels with steps of 50 N. No test result shall be less than the declared level.		P
4.3.6	Compressive creep		P
	Compressive creep, and total thickness reduction, shall be determined after at least one hundred and twenty two days of testing at a declared compressive stress, given in steps of at least 1 kPa, and the results shall be extrapolated thirty times, corresponding to ten years, to obtain the declared level in accordance with EN 1606. Compressive creep shall be declared in levels, i2, and total thickness reduction shall be declared in levels, i1, with steps of 0,1 mm at the declared stress. No test result shall exceed the declared level at the declared stress.		P
4.3.7	Water absorption		P



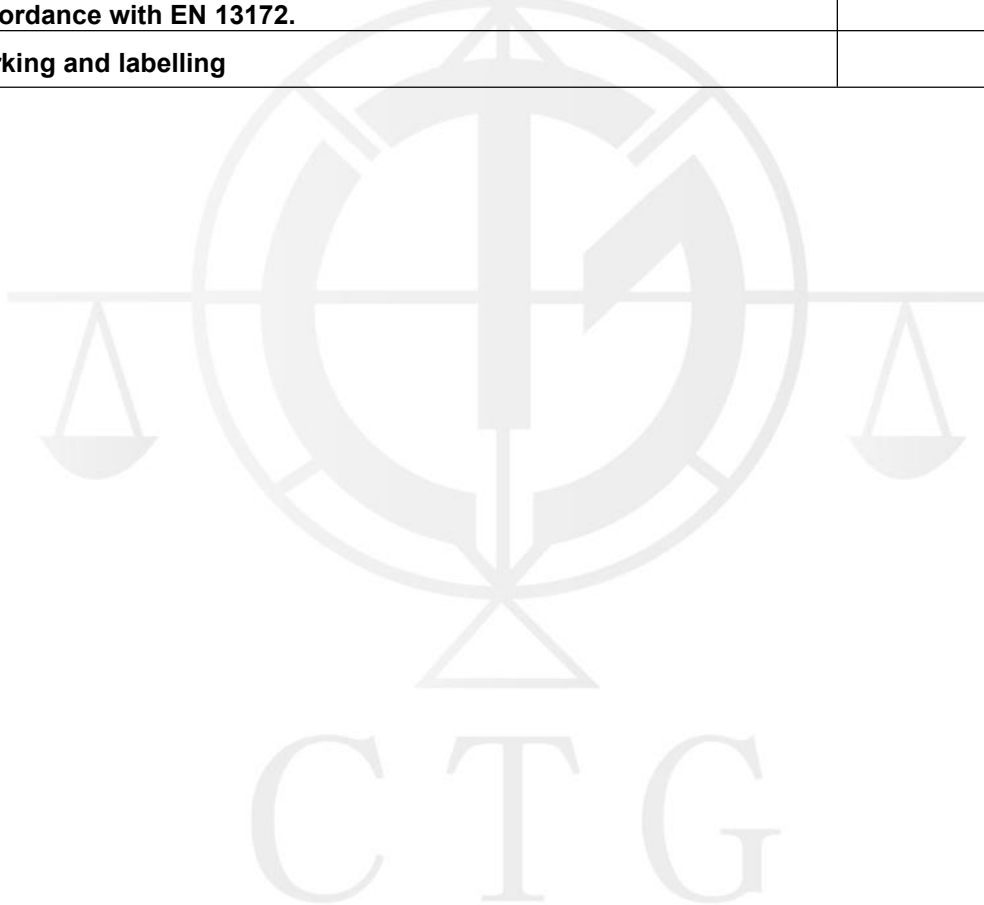
4.3.7.1	Short term water absorption		P
4.3.7.2	Long term water absorption		P
4.3.8	Water vapour transmission		P
	Water vapour transmission properties shall be determined in accordance with EN 12086, and declared as the water vapour diffusion resistance factor, $\mu$ , for homogeneous products and as the water vapour resistance, Z, for faced or non-homogeneous products. No test result of $\mu$ shall be greater than the declared value and no test result of Z shall be less than the declared value.		P
4.3.9	Dynamic stiffness		P
	Dynamic stiffness, shall be determined in accordance with EN 29052-1, without preloading. The value of dynamic stiffness shall be declared in levels with steps of 1 MN/m <sup>3</sup> . No test result shall exceed the declared level.		P
4.3.10	Compressibility		P
4.3.10.1	General		P
4.3.10.2	Thickness		P
4.3.10.3	Thickness		P
4.3.10.4	Compressibility		P
4.3.10.5	Long term thickness reduction		P
4.3.11	Sound absorption		P
	Sound absorption coefficient shall be determined in accordance with EN ISO 354. The sound absorption characteristics shall be calculated in accordance with EN ISO 11654 using the values for the practical sound absorption coefficient, $a_p$ , at the frequencies: 125 Hz, 250 Hz, 500 Hz, 1 000 Hz, 2 000 Hz and 4 000 Hz and the single number value for the weighted sound absorption coefficient.		P
4.3.12	Air flow resistivity		P
	Air flow resistivity, shall be determined in accordance with EN 29053. The value of air flow resistivity shall be declared in levels with steps of 1 kPa-s/m <sup>2</sup> . No test result shall be lower than the declared value.		P
4.3.13	Release of dangerous substances		P
	In the absence of European harmonized test methods, verification and declaration on release/content should be done taking into account national provisions in the place of use.		P
4.3.14	Reaction to fire of the product in standardized assemblies simulating end-use applications		P



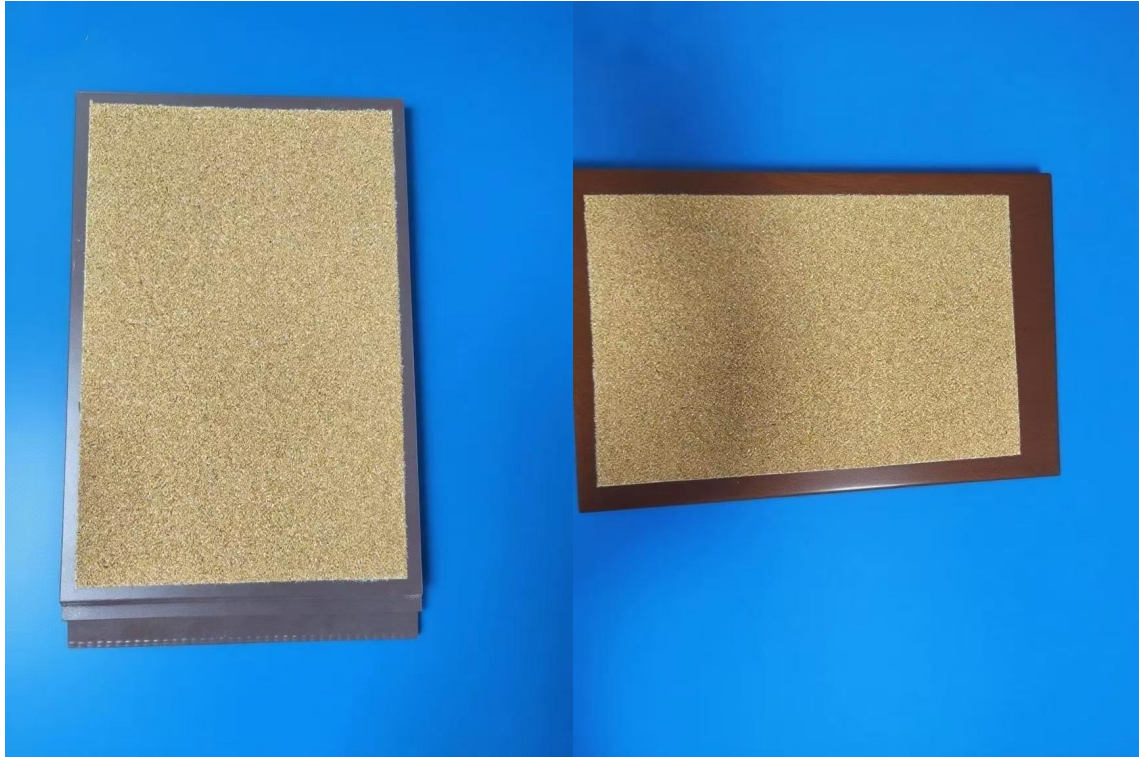
	<b>Reaction to fire classification of products in standardized assemblies simulating end-use applications excluding pipe insulation, shall be determined in accordance with EN 13501-1 and the Mounting and Fixing rules given in EN 15715.</b>		<b>P</b>
<b>4.3.15</b>	<b>Continuous glowing combustion</b>		<b>P</b>
	<b>A test method is under development and the standard will be amended when this is available.</b>		<b>P</b>
<b>4.3.16</b>	<b>Shear strength</b>		<b>P</b>
	<b>Shear strength, shall be determined in accordance with EN 12090. If the shear stress is declared, no test result shall be less than the declared value.</b>		<b>P</b>
<b>4.3.17</b>	<b>Bending strength</b>		<b>P</b>
	<b>Bending strength, shall be determined in accordance with EN 12089. If the bending strength is declared, no test result shall be less than the declared level</b>		<b>P</b>
<b>5</b>	<b>Test methods</b>		<b>P</b>
<b>5.1</b>	<b>Sampling</b>		<b>P</b>
	<b>Test specimens shall be taken from the same sample with a total area not less than 1 m<sup>2</sup> and sufficient to cover the needed tests. The shorter side of the sample shall not be less than 300 mm or full size of the product whichever is the smaller.</b>		<b>P</b>
<b>5.2</b>	<b>Conditioning</b>		<b>P</b>
	<b>No special conditioning of the test specimens is needed unless otherwise specified in the test standard. In case of dispute, the test specimens shall be stored at (23 ± 2) °C and (50 ± 5) % relative humidity for at least 6 h prior to testing. For FPC no special conditioning of the test specimens is needed.</b>		<b>P</b>
<b>5.3</b>	<b>Testing</b>		<b>P</b>
<b>5.3.1</b>	<b>General</b>		<b>P</b>
<b>5.3.2</b>	<b>Thermal resistance and thermal conductivity</b>		<b>P</b>
<b>6</b>	<b>Designation code</b>		<b>P</b>
	<b>A designation code for the product shall be given by the manufacturer.</b>		<b>P</b>
<b>7</b>	<b>Assessment and Verification of the Constancy of Performance (AVCP)</b>		<b>P</b>
<b>7.1</b>	<b>General</b>		<b>P</b>
	<b>The manufacturer or his authorized representative shall be responsible for the conformity of his product with the requirements of this European Standard. The Assessment and Verification of</b>		<b>P</b>



	<b>Constancy of Performance (AVCP) shall be carried out in accordance with EN 13172 and shall be based on Product Type Determination (PTO), Factory Production Control (FPC) by the manufacturer, including product assessment and tests on samples taken at the factory.</b>		
7.2	<b>Product Type Determination (PTD)</b>		<b>P</b>
	<b>All characteristics defined in 4.2 and those in 4.3 if declared, shall be subject to Product Type Determination (PTO) in accordance with Annex B.</b>		<b>P</b>
7.3	<b>Factory Production Control (FPC)</b>		<b>P</b>
	<b>The minimum frequencies of tests in the factory production control (FPC) shall be in accordance with Annex B. When indirect testing is used, the correlation to direct testing shall be established in accordance with EN 13172.</b>		<b>P</b>
8	<b>Marking and labelling</b>		<b>P</b>



**Sample Photo**



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