

APPLICATION FOR CONSTRUCTION PRODUCTS

On Behalf of

Hebei Jingzhi Wire Mesh Industry Co., Limited

fiberglass mesh

Model: 160g


**Prepared For : Hebei Jingzhi Wire Mesh Industry Co., Limited
Xutuan Industrial Park, Anping County, Hebei
Province, P.R. China**

**Prepared By : Beide (Shenzhen) Product Service Limited
6F, Bldg E, Hourui 3rd Ind Zone, Xixiang,
Bao'an Dist, Shenzhen, China**

Date of Test : May 25-Jun. 04, 2018

Date of Report : Jun. 04, 2018

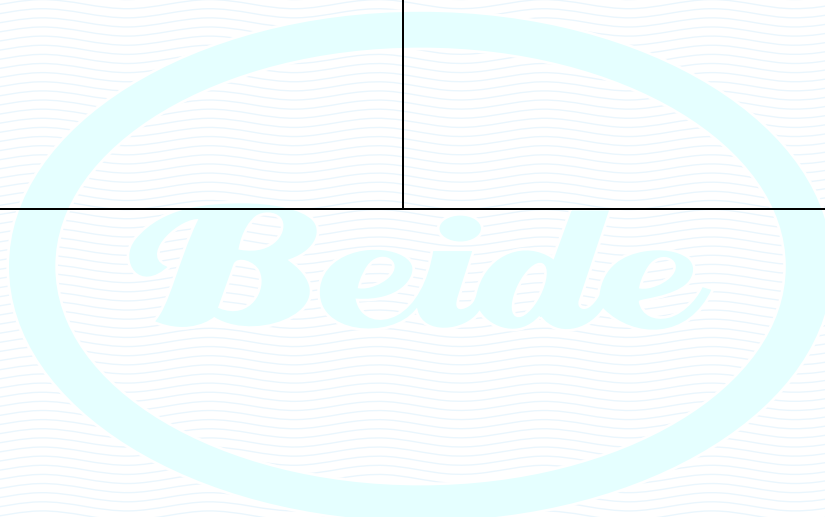
Report Number : B-S180517603

TEST Report EN 13167 Thermal insulation products for buildings — Factory made cellular glass (CG) products — Specification	
Testing laboratory	Beide (Shenzhen) Product Service Limited
Address	6F, Bldg E, Hourui 3rd Ind Zone, Xixiang, Bao'an Dist, Shenzhen, China
Report body	Beide (Shenzhen) Product Service Limited
Address	6F, Bldg E, Hourui 3rd Ind Zone, Xixiang, Bao'an Dist, Shenzhen, China
Applicant	Hebei Jingzhi Wire Mesh Industry Co., Limited
Address	Xutuan Industrial Park, Anping County, Hebei Province, P.R. China
Client No.	03186508
Standard	EN 13167:2012+A1:2015
Result	Compliance with EN 13167:2012+A1:2015
Procedure deviation	N.A.
Non-standard	N.A.
Type of verdict object	fiberglass mesh
Rating	N.A
Trademark	
Model/type reference	160g
Manufacturer	Hebei Jingzhi Wire Mesh Industry Co., Limited
Address	Xutuan Industrial Park, Anping County, Hebei Province, P.R. China

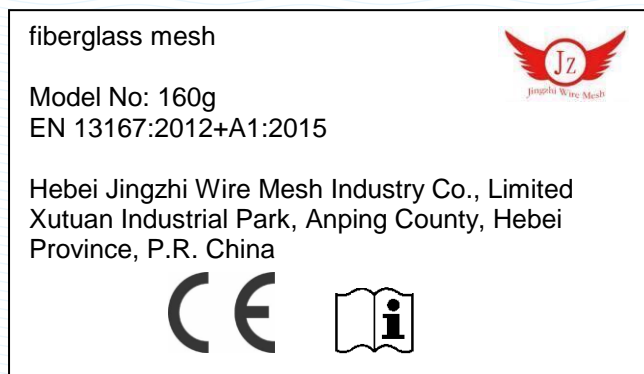
Possible case verdicts :	
Case does not apply to the verdict object	: N (.A.)
Verdict object does meet the requirement	: P(ass)
Verdict object does not meet the requirement ...	: F(ail)
Name and address of the testing laboratory:	
<p><u>Beide (Shenzhen) Product Service Limited</u> <u>6F, Bldg E, Hourui 3rd Ind Zone, Xixiang,</u> <u>Bao'an Dist, Shenzhen, China</u></p>	
Reported by :	<p><i>Rocky</i> _____ Signature / Rocky</p> <p>_____ Date Jun. 04, 2018</p>
Checked by :	<p><i>Apollo</i> _____ Signature / Apollo</p> <p>_____ Date Jun. 04, 2018</p>
Approved by :	<p><i>Bruce</i> _____ Signature / Bruce</p> <p>_____ Date Jun. 05, 2018</p>



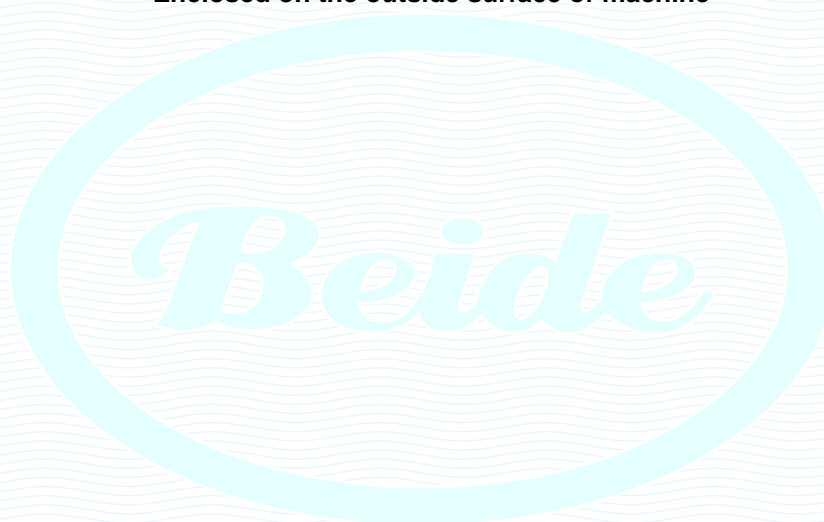
General remarks:	
<p>"(see remark #)" refers to a remark appended to the report.</p> <p>"(see appended table)" refers to a table appended to the report.</p> <p>Throughout this report a comma is used as the decimal separator.</p> <p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced except in full without the written approval of the testing laboratory.</p>	<p>Attached with:</p> <p>APPENDIX A: Photo-documentation</p>



Artwork of Marking Label



Enclosed on the outside surface of machine



EN 13167			
Clause	Requirement – Test	Result - Remark	Verdict
4	Requirements		P
4.1	General		P
	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.		P
4.2	For all applications		P
4.2.1	Thermal resistance and thermal conductivity		P
	Thermal resistance and thermal conductivity shall be based upon measurements carried out in accordance with EN 12667 or EN 12939 for thick products.		P
	The thermal resistance and thermal conductivity shall be determined in accordance with Annex A and declared by the manufacturer according to the following:		P
	— the reference mean temperature shall be 10 °C;		P
	— the measured values shall be expressed with three significant figures;		P
	— for products of uniform thickness, the declared thermal resistance, R_D , shall always be declared. The thermal conductivity, λ_D , shall be declared where possible. Where appropriate, for products of nonuniform thickness (i.e. for sloped and tapered products) only the thermal conductivity, λ_D , shall be declared;		P
	— the declared thermal resistance, R_D , and thermal conductivity, λ_D , shall be given as limit values representing at least 90 % of the production, determined with a confidence level of 90 %;		P
	— the statistical value of thermal conductivity, $\lambda_{90/90}$, shall be rounded upwards to the nearest 0,001 W/(m · K) and declared as λ_D in levels with steps of 0,001 W/(m · K);		P
	— the declared thermal resistance, R_D , shall be calculated from the nominal thickness, d_N , and the corresponding thermal conductivity, $\lambda_{90/90}$, unless measured directly;		P

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Clause	Requirement – Test	Result - Remark	Verdict
	— the statistical value of thermal resistance, $R_{90/90}$, when calculated from the nominal thickness, d_N , and the corresponding thermal conductivity, $\lambda_{90/90}$, shall be rounded downwards to the nearest $0,05 \text{ m}^2 \cdot \text{K/W}$, and declared as RD in levels with steps of $0,05 \text{ m}^2 \cdot \text{K/W}$;		P
	— the statistical value of thermal resistance, $R_{90/90}$, for those products for which only the thermal resistance is measured directly, shall be rounded downwards to the nearest $0,05 \text{ m}^2 \cdot \text{K/W}$, and declared as RD in levels with steps of $0,05 \text{ m}^2 \cdot \text{K/W}$;		P
4.2.2	Length and width		P
	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:		P
	— Slabs or unfaced board: $\pm 2 \text{ mm}$ for length and width		P
	— Faced board: $\pm 5 \text{ mm}$ for length $\pm 2 \text{ mm}$ for width		P
4.2.3	Thickness		P
	Thickness, d , shall be determined in accordance with EN 823. The load shall be 250 Pa . No test result shall deviate from the nominal thickness, d_N , by more than $\pm 2 \text{ mm}$.		P
4.2.4	Squareness		P
	Squareness shall be determined in accordance with EN 824. The deviation from squareness on length and width, S_b , of boards and slabs shall not exceed 5 mm/m . The deviation from squareness on thickness, S_d , shall not exceed 2 mm .		P
4.2.5	Flatness		P
	Flatness shall be determined in accordance with EN 825. The deviation from flatness, S_{max} , of boards and slabs, shall not exceed 2 mm .		P
4.2.6	Reaction to fire of the product as placed on the market		P
	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.		P

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Clause	Requirement – Test	Result - Remark	Verdict
4.2.7	Durability characteristics		P
4.2.7.1	General		P
	The appropriate durability characteristics have been considered and are covered in 4.2.7.2 and 4.2.7.3 and where appropriate in 4.3.8 on compressive creep.		P
4.2.7.2	Durability of reaction to fire of the product as placed on the market against ageing/ degradation		P
	The reaction to fire performance of CG products as declared by 4.2.6 does not change with time.		P
4.2.7.3	Durability of thermal resistance and thermal conductivity against ageing/ degradation		P
	The thermal conductivity of CG products does not change with time. This is covered and considered for declaration by 4.2.1 thermal conductivity, and any change in thickness is covered by at least one of the 4.3.2 dimensional stability tests, as relevant.		P
4.3	For specific applications		N
4.3.1	General		N
	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.		N
4.3.2	Dimensional stability		N
	Dimensional stability under specified conditions shall be carried out for the conditions given in Table 1.		N
4.3.3	Compressive strength		N
	Compressive strength, σ_m , shall be determined in accordance with EN 826:1996, Annex A. No test result for the compressive strength shall be less than the value, given in Table 2, for the declared level:		N
4.3.4	Bending strength		N
	Bending strength, σ_b , shall be determined in accordance with EN 12089. No test result shall be less than the value, given in Table 3, for the declared level:		N
4.3.5	Point load		N

EN 13167			
Clause	Requirement – Test	Result - Remark	Verdict
	Deformation under a point load of 1000 N, P_d , shall be determined in accordance with EN 12430. No test result shall exceed the value, given in Table 4, for the declared value.		N
4.3.6	Tensile strength parallel to faces		N
	Tensile strength parallel to faces, σ_t , shall be determined in accordance with EN 1608. The value of tensile strength parallel to faces shall be declared in levels, TP, with steps of 50 kPa. No test result shall be less than the declared level.		N
4.3.7	Tensile strength perpendicular to faces		N
	Tensile strength perpendicular to faces, σ_{mt} , shall be determined in accordance with EN 1607. No test result shall be less than the declared level, TR, chosen from the following values: 100 kPa; 150 kPa; 200 kPa; 250 kPa; 300 kPa; 350 kPa; 400 kPa; 500 kPa; 600 kPa; 700 kPa.		N
4.3.8	Compressive creep		N
	Compressive creep, X_{ct} , and total thickness reduction, X_t , shall be determined after at least one hundred and twenty two days of testing at a declared compressive stress, σ_c , 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, i_2 , and total thickness reduction shall be declared in levels, i_1 , with steps of 0,1 mm at the declared stress. No test result shall exceed the declared level at the declared stress.		N
4.3.9	Water absorption		N
4.3.9.1	Short term water absorption		N
	Short term water absorption by partial immersion, W_p , shall be determined in accordance with EN 1609. No test result shall exceed 0,5 kg/m ² .		N
4.3.9.2	Long term water absorption		N
	Long term water absorption by partial immersion, W_p , shall be determined in accordance with EN 12087. No test result shall exceed 0,5 kg/m ² .		N
4.3.10	Water vapour transmission		N

EN 13167			
Clause	Requirement – Test	Result - Remark	Verdict
	Water vapour transmission properties shall be determined in accordance with EN 12086, and declared as the water vapour diffusion resistance factor, μ , for homogeneous products and as the water vapour resistance, Z , for faced or non-homogeneous products. No test result of μ shall be less than 40 000. No test result of Z shall be less than the declared value.		N
4.3.11	Sound absorption		N
	The 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, α_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, α_w .		N
4.3.12	Release of dangerous substances		N
4.3.13	Reaction to fire of the product in standardized assemblies simulating end-use applications		N
	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		N
4.3.14	Continuous glowing combustion		N
5	Test methods		P
5.1	Sampling		P
	Test specimens shall be taken from the same sample with a total area not less than 1 m ² 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.		P
5.2	Conditioning		P
	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.		P

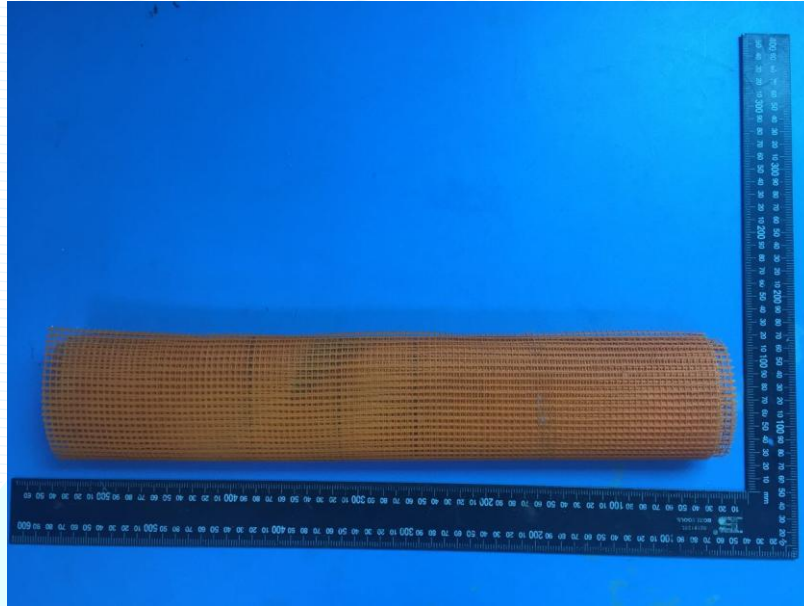
EN 13167			
Clause	Requirement – Test	Result - Remark	Verdict
5.3	Testing		P
5.3.1	General		P
	Table 5 gives the dimensions of the test specimens, the minimum number of measurements required to get one test result and any specific conditions which are necessary.		P
	The test may be performed on the unfaced/uncoated product, if the facing/coating is known to have no relevance to the test result.		P
5.3.2	Thermal resistance and thermal conductivity		P
	Thermal resistance and thermal conductivity shall be determined in accordance with EN 12667 or EN 12939 for thick products and under the following conditions:		P
	— at a mean temperature of $(10 \pm 0,30) \text{ }^{\circ}\text{C}$;		P
	— after conditioning in accordance with 5.2.		P
6	Designation code		P
	A designation code for the product shall be given by the manufacturer. The following shall be included except when there is no requirement for a property described in 4.3.		P

EN 13167			
Clause	Requirement – Test	Result - Remark	Verdict
	<ul style="list-style-type: none"> — The cellular glass abbreviated term CG — This document number EN 13167 — Dimensional stability at specified temperature DS(70) — Dimensional stability under specified temperature and humidity conditions DS(23,90) or DS(70,90) — Compressive strength CS(Y)i — Bending strength BSi — Point load PL(P)i — Tensile strength parallel to faces TPi — Tensile strength perpendicular to faces TRI — Compressive creep CC(i1/i2,y) σ — Short term water absorption WS — Long term water absorption WL(P) — Water vapour transmission or resistance MU_i or Z_i — Practical sound absorption coefficient AP_i — Weighted sound absorption coefficient AW_i 		P
	<p>Where “i” shall be used to indicate the relevant class or level or the declared value and for compressive creep the term “σ” shall be used to indicate the compressive stress, “y” shall indicate the number of years.</p>		P

7	Assessment and Verification of the Constancy of Performance (AVCP)		P
7.1	General		P
	<p>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 Constancy of Performance (AVCP) shall be carried out in accordance with EN 13172 and shall be based on Product Type Determination (PTD), Factory Production Control (FPC) by the manufacturer, including product assessment and tests on samples taken at the factory.</p>		P

EN 13167			
Clause	Requirement – Test	Result - Remark	Verdict
7.2	Product Type Determination (PTD)		P
	All characteristics defined in 4.2 and those in 4.3 if declared, shall be subject to Product Type Determination (PTD) in accordance with Annex B.		P
	For the relevant characteristics, PTD on products corresponding also to EN 14305 may be used for the purpose of PTD and Declaration of Performance (DoP) according to this standard.		P
7.3	Factory Production Control (FPC)		P
	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.		P
	For the relevant characteristics, FPC on products corresponding also to EN 14305 may be used for the purpose of FPC and DoP according to this standard."		P
8	Marking and labelling		P
	Products conforming to this standard shall be marked clearly, either on the product or on the label or on the packaging, with the following information:		P
	— product name or other identifying characteristic;	fiberglass mesh	P
	— name or identifying mark and address of the manufacturer or his authorised representative;	Hebei Jingzhi Wire Mesh Industry Co., Limited Xutuan Industrial Park, Anping County, Hebei Province, P.R. China	P
	— shift or time of production or traceability code;		P
	— reaction to fire class of the product as placed on the market. This classification shall be in accordance with 4.2.6.		P

APPENDIX A
Photo-documentation



160g