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SHANDONG YURUI INTERNATIONAL TRADE CO., LTD CROSS OF BIN RIVER ROAD AND SU RIVER NORTH STREET, LANSHAN DISTRICT, LINYI, SHANDONG, CHINA

The following sample(s) was/ were submitted and identified on behalf of the client as:

Sample Name	GNESIUM OXIDE BOARD	
Sample Number	CM160100059	
SGS Ref. No.	H-CP-5612-15068	
Test Required	13501-1:2007+A1:2009 Fire classification	of construction products and
	ling elements-Part 1: Classification usin	g data from reaction to fire tests,
	s A1	
Product specification	1	
Date of Receipt	05, 2016	
Test Period	05, 2016 to Jan. 21, 2016	
Test result(s)	further details, please refer to the followin ********* To be continued********	g page(s)

Signed for SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

Em Stury

Erin Huang Authorized signatory



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I. Test conducted

This test is conducted as per EN 13501-1:2007+A1:2009 Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests. And the test methods as following:

- 1. EN ISO 1182-2010, Reaction to fire tests for building products Non-combustibility test;
- 2. EN ISO 1716-2010, Reaction to fire tests for building products Determination of the heat of combustion.
- II. Details of classified product

Color	White

III. Test results

Test method	Parameter	Number of tests	Results
	∆ T/K		16.2
EN ISO 1182	∆ m/%	5	43.7
	t _f /s		0
	PCS/ MJ/kg ^a		0
	PCS/ MJ/kg ^b	3	
EN ISO 1716	PCS/ MJ/m ^{2 c}	3	
	PCS/ MJ/kg ^d		

Note:

- Δ T temperature rise [K]
- Δ m mass loss [%]
- $t_{\rm f}-$ duration of sustained flaming [s]
- PCS gross calorific potential [MJ/kg or MJ/m²]

******** To be continued********



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IV. Classification

This classification has been carried out in accordance with EN 13501-1:2007+A1:2009.

Conclusion: The product, MAGNESIUM OXIDE BOARD, classification is as following,

Reaction to fire classification: A1

Remark: The classes with their corresponding fire performance are given in annex A.

STATEMENT: The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

WARNING:

This classification report does not represent type approval or certification of the product.

The test laboratory has, therefore, play no part in sampling the product for the test, although it holds appropriate references to the manufacturer's factory production control that is aimed to be relevant to the samples tested and that will provide for their traceability.

Note: The test was performed by SGS other internal laboratory.

Statement: Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. ******* To be continued*******



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Annex A

Classes of reaction to fire performance for construction products excluding floorings and linear pipe thermal insulation products

Class	Test method(s	;)	Classification criteria	Additional classification
EN ISO 1182 ^a		Ind	⊿ <i>T</i> ≤30 [°] C, and ⊿ <i>m</i> ≤50%, and t _í =0(i.e. no sustained flaming)	-
A1	EN ISO 1716		PCS≤2.0MJ/kg ^a and PCS≤2.0MJ/kg ^{bc} and PCS≤1.4MJ/m ^{2 d} and PCS≤2.0MJ/kg ^e	-
	EN ISO 1182 ^a or		⊿ <i>T</i> ≤50℃, and ⊿ <i>m</i> ≤50%, and t _f ≤20 s	-
A2	EN ISO 1716	and	PCS≤3.0MJ/kg ^a and PCS≤4.0MJ/m ^{2 b} and PCS≤4.0MJ/m ^{2 d} and PCS≤3.0MJ/kg ^e	-
	EN 13823		<i>FIGRA</i> ≤120W/s and <i>LFS</i> <edge and<br="" of="" specimen=""><i>THR</i>_{600s}≤7.5MJ</edge>	Smoke production ^f and Flaming droplets/particles ^g
в	EN 13823 and EN ISO 11925-2 ⁱ Exposure =30s		FIGRA≤120W/s and LFS <edge and<br="" of="" specimen="">THR_{600s}≤7.5MJ</edge>	Smoke production ^f and Flaming droplets/particles ^g
			<i>F</i> s≤150mm within 60 s	

******** To be continued*******



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Class	Test method(s)	Classification criteria	Additional classification
C EN 13823 and EN ISO 11925-2 ⁱ Exposure=30s		FIGRA≤250W/s and LFS <edge and<br="" of="" specimen="">THR_{600s}≤15MJ</edge>	Smoke production ^f and
		<i>F</i> s≤150mm within 60 s	Flaming droplets/particles ^g
	EN 13823 and	FIGRA≤750W/s	Smoke production ^f and
D	EN ISO 11925-2 ⁱ Exposure=30s	<i>F</i> s≤150mm within 60 s	Flaming droplets/particles ^g
E	EN ISO 11925-2 ⁱ Exposure =15s	<i>F</i> s≤150mm within 20 s	Flaming droplets/particles ^h
F	No performance determin	ed	
^c Altern	natively, any external non-su	component of non-homogeneous prod Ibstantial component having a PCS ≤ 2	2,0 MJ/m ² , provided that the
^c Altern produ THR ₆₀ ^d For an ^e For th ^f In the system modifi s1 = S s1 or s ^g d0 = N d1 = r	natively, any external non-su tot satisfies the following crit $_{00s} \le 4,0$ MJ, and s1, and d0 my internal non-substantial of the product as a whole. I ast phase of the developm m have been introduced, the ication of the limit values an SMOGRA $\le 30m^2/s^2$ and TS s2 No flaming droplets/ particle	ibstantial component having a PCS \leq 2 eria of EN 13823: FIGRA \leq 20 W/s, an	2,0 MJ/m ² , provided that the ad LFS < edge of specimen, and acts. s of the smoke measurement ation. This may result in a the smoke production. f/s^2 and TSP _{600s} ≤ 200m ² ; s3 = not
^c Altern produ THR ₆₀ ^d For an ^e For th ^f In the system modifi s1 = S s1 or s ^g d0 = N d1 = r d2 = r Ignitio ^h Pass	natively, any external non-su- lect satisfies the following crit $_{00s} \le 4,0$ MJ, and s1, and d0 ny internal non-substantial of the product as a whole. Iast phase of the developm m have been introduced, the ication of the limit values an SMOGRA $\le 30m^2/s^2$ and TS s2 No flaming droplets/ particles not flaming droplets/ particles	Ibstantial component having a PCS ≤ 2 eria of EN 13823: FIGRA ≤ 20 W/s, and component of non-homogeneous produ- ent of the test procedure, modifications a effect of which needs further investig- id/or parameters for the evaluation of the P _{600s} $\leq 50m^2$; s2 = SMOGRA $\leq 180m^2$ as in EN 13823 within 600 s; s persisting longer than 10 s in EN 138 1925-2 results in a d2 classification. no classification);	2,0 MJ/m ² , provided that the ad LFS < edge of specimen, and acts. s of the smoke measurement ation. This may result in a the smoke production. f/s^2 and TSP _{600s} ≤ 200m ² ; s3 = not



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Sample photo:



******** End of report *******

