

Applicant: Gent-Year Metal Foundry Limited

Address: 9/F., Shing Shun Building, No. 43, Castle Peak Road, Yuen Long, N.T., Hong Kong

Testing Sample: GY-K EN877 product, Composition: Cast iron pipe and 88° SINGLE BRANCH pipe fittings with a red external coating

Cast pipes and fittings:

Manufacturer: Wuan City Kun Yu Metal Products Co., Ltd

Address: North of Zhongyingjing Village, Shangtuancheng Town, Wu'an City, Handan City, Hebei Province, China

Cast iron Pipe:

- 1) Cast iron Pipe, Product code: ENP043000, Size: DN100X3000;
- 2) Cast iron Pipe, Product code: ENP023000, Size: DN50X3000;

Pipe fitting:

88° SINGLE BRANCH pipe fitting, Product code: ENT0402, Size: DN100X50

Coating:

Manufacturer: Jiangsu Jinhua Heavy-duty Coatings Co., LTD.

Address: No.205 Fenglin South Road, Wujin National Hi-tech Industrial Zone, Changzhou City, Jiangsu Province, P. R. China

Coating:

- 1) External coating of cast iron pipe, Product code: ZPGuard2543, Dry film thickness: 60-70um, density: 1.2676 g/cm³, Color: Red
- 2) Internal coating of cast iron pipe, Product code: ZPGuard2530H, Dry film thickness: 130um, Color: Yellow
- 3) Coating of pipe fittings: Product code: ZPGuard2550, Dry film thickness: 60um, density: 1.5041 g/cm³, Color: Red

Standards: EN 877:2021 & EN 13501-1:2018 & EN ISO 1716 & EN 13823

Testing Lab: SGS (the lab is recognized by CNAS with number L0599)

Date of Issue: 2024-03-29

Test Data:

Test Items	Certificate ID Code	Test results	Requirements of EN 13501-1 A2
EN ISO 1716:2018	SHFS2403000286FF (Customer ID Code: 3742)	Coating 1 ZPGuard2543: 1.7 MJ/m ² Coating 3 ZPGuard2550: 1.6 MJ/m ²	PCS≤4.0MJ/m ² ^b ^b For any external non-substantial component of non-homogeneous products
EN 13823:2020+A1:2022	SHFS2403000287FF (Customer ID Code: 3743)	FIGRA _{0.2MJ} =10.1 W/s THR _{600s} =1.5 MJ LFS< edge of specimen	FIGRA _{0.2MJ} ≤120W/s THR _{600s} ≤7.5MJ LFS< edge of specimen
		SMOGRA=0 m ² /s ² TSP _{600s} =27.1 m ²	s1: SMOGRA≤30m ² /s ² TSP _{600s} ≤100m ²
		No flaming droplets or particles within 600s	d0: No flaming droplets or particles within 600s
EN 13501-1:2018 Classification of reaction to fire	SHFS2403000285FF (Customer ID Code: 3741)	Reaction to fire classification: A1-s1,d0	

Conclusion: the test results indicate to meet with the requirements of EN 13501-1:2018 A1. The requirements of EN 13501-1:2018 class A1 are given in EN 13501-1:2018 Table 1. Superscript c: any external non-substantial component having a PCS≤2.0MJ/m², provided that the product satisfies the following criteria of EN 13823: FIGRA≤20W/s, and LFS<edge of specimen, and THR_{600s}≤4.0MJ, and s1, and d0.

Certificate search:

- Click www.fire-test.com (English)
- Select "Search for Certification"
 - Fill the Certificate ID Code (SHFS2403000285FF) and Customer ID Code (3741)
 - Fill the Certificate ID Code (SHFS2403000285FF) and applicant name (Gent-Year Metal Foundry Limited)
- Submit with confirmation, you may get the search information.



Scan for information
SHFS2403000285FF

Value-added services:


WeChat Official Accounts

You can scan the QR code below to follow our WeChat Official/Public Accounts to learn more about the relevant standards and regulations for fire retardant testing of rail transit vehicles or building materials, moreover, and you can also ask for supporting, search for report or certificate information, standards sharing and downloads on the WeChat Official/Public Accounts. Join us!

EN 13501-1:2018

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

1. EN 13501-1:2018

EN 13501-1:2018 Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests.

2. Scope - EN 13501-1:2018

Products are considered in relation to their end use application.

- construction products, excluding floorings and linear pipe thermal insulation products.
- Floorings;
- Linear pipe thermal insulation products.

3. Classification criteria for construction products, excluding floorings (see Table 1)

Table 1 – 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
A1	EN ISO 1182 ^a and	$\Delta T \leq 30^{\circ}\text{C}$; and $\Delta m \leq 50\%$; and $t_f = 0$ (i.e. no sustained flaming)	-
	EN ISO 1716	$\text{PCS} \leq 2.0 \text{ MJ/kg}^a$ and $\text{PCS} \leq 2.0 \text{ MJ/kg}^{b,c}$ and $\text{PCS} \leq 1.4 \text{ MJ/m}^2^d$ and $\text{PCS} \leq 2.0 \text{ MJ/kg}^e$	-
A2	EN ISO 1182 ^a or	$\Delta T \leq 50^{\circ}\text{C}$; and $\Delta m \leq 50\%$; and $t_f \leq 20\text{s}$	-
	EN ISO 1716 and	$\text{PCS} \leq 3.0 \text{ MJ/kg}^a$ and $\text{PCS} \leq 4.0 \text{ MJ/m}^2^b$ and $\text{PCS} \leq 4.0 \text{ MJ/m}^2^d$ and $\text{PCS} \leq 3.0 \text{ MJ/kg}^e$	
	EN 13823	$\text{FIGAR}_{0.2 \text{ MJ}} \leq 120 \text{ W/s}$ and $\text{LFS} < \text{edge of specimen}$ and $\text{THR}_{600\text{S}} \leq 7.5 \text{ MJ}$	Smoke production ^f and Flaming droplets /particles ^g

B	EN 13823 and	FIGRA _{0.2MJ} ≤ 120 W/s and LFS < edge of specimen and THR _{600s} ≤ 7.5 MJ	Smoke production ^f and Flaming droplets /particles ^g
	EN ISO 11925-2 ⁱ Exposure = 30s	F _s ≤ 150mm within 60s	
C	EN 13823 and	FIGRA _{0.4MJ} ≤ 250 W/s and LFS < edge of specimen and THR _{600s} ≤ 15 MJ	Smoke production ^f and Flaming droplets /particles ^g
	EN ISO 11925-2 ⁱ Exposure=30s	F _s ≤ 150mm within 60s	
D	EN 13823 and	FIGRA _{0.4MJ} ≤ 750 W/s	Smoke production ^f and Flaming droplets /particles ^g
	EN ISO 11925-2 ⁱ Exposure=30s	F _s ≤ 150mm within 60s	
E	EN ISO 11925-2 ⁱ Exposure=15s	F _s ≤ 150mm within 20s	Flaming droplets /particles ^h
F	EN ISO 11925-2 ⁱ Exposure=15s	F _s > 150mm within 20s	

- ^a For homogeneous products and substantial components of non-homogeneous products
- ^b For any external non-substantial component of non-homogeneous products
- ^c Alternatively, any external non-substantial component having a PCS ≤ 2,0 MJ/m², provided that the product satisfies the following criteria of EN 13823: FIGRA ≤ 20 W/s, and LFS < edge of specimen, and THR_{600s} ≤ 4,0 MJ, and s1, and d0.
- ^d For any Internal non-substantial component of non-homogeneous products
- ^e For the product as a whole
- ^f **s1** = SMOGRA ≤ 30m²/s² and TSP_{600s} ≤ 50m²; **s2** = SMOGRA ≤ 180m²/s² and TSP_{600s} ≤ 200m²; **s3** = not s1 or s2
- ^g **d0** = No flaming droplets/ particles in EN 13823 within 600s
d1 = No flaming droplets/ particles persisting longer than 10s in EN 13823 within 600s
d2 = not d0 or d1
Ignition of the paper in EN ISO 11925-2 results in a d2 classification
- ^h Pass = no ignition of the paper (no classification);
Fail = ignition of the paper (**d2** classification)
- ⁱ Under conditions of surface flame attack and, if appropriate to the end-use application of the product, edge flame attack.

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Gent-Year Metal Foundry Limited

9/F., Shing Shun Building, No. 43, Castle Peak Road, Yuen Long, N.T., Hong Kong

Sample Description : GY-K EN877 Product
Composition : Composition: Cast iron pipe and 88° SINGLE BRANCH pipe fittings with a red external coating
Composition Description : See **Sample Details**
Others information : See **Annex B**

The above sample(s) and data/information was / were submitted and identified on behalf of the client. SGS is not responsible for the authenticity, integrity and results of the data and information and / or the validity of the conclusion. Results apply only to the sample as received.

Sample Receiving Date : Mar. 18, 2024

Test Performing Date : Mar. 25, 2024 TO Mar. 27, 2024

Test Requested:

EN877:2021 & EN 13501-1:2018

Classes of reaction to fire performance for construction products excluding floorings and linear pipe thermal insulation products, Class A2.

Test Results: -- See attached sheet --

Conclusion: According to the test result, Combustion properties identified as: A1-s1,d0

Statement: The evaluation is based only on the actual value of laboratory activities, and the effect of uncertainty of laboratory activities is not included.

Signed for and on behalf of
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.



Alex MAO

Approved signatory

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Verification:
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I. Test Conducted

This test was conducted in accordance with EN877:2021 & EN 13501-1:2018 Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests. And the test methods as following:

- 1) EN ISO 1716:2018 Reaction to fire tests for products - Determination of the gross heat of combustion (calorific value), Crucible method.
- 2) EN877:2021 Cast iron pipe systems and their components for the evacuation of water from works - characteristics and test methods & EN 13823: 2020+A1:2022 Reaction to fire tests for building products - Building products excluding floorings exposed to the thermal attack by a single burning item.

II. Sample Details

Name	Area density	Thickness	Composition	Color	Layer
Coating1	0.088732kg/m ²	60~70um	ZPGuard2543	Red	External coating of cast iron pipe
Coating2		130 um	ZPGuard2530H	Yellow	Internal coating of cast iron pipe
Coating3	0.090246kg/m ²	60 um	ZPGuard2550	Red	Coating of pipe fittings

EN ISO 1716			
Specimens Size	EN ISO 1716: About 0.5g sample per test		
EN877:2021 & EN 13823			
Substrate	Gypsum plasterboard	Fixing method	Free standing
Splicing method	EN877-Annex F	Tested Face	See Photo
Mounting and fixing	Install according to EN877:2021 standard Annex F requirements		

III. Test Results

Test method	Parameter		Number of tests	Results
EN ISO 1716	PCS/ MJ/m ² ^b	Coating1	3	1.7
		Coating3	3	1.6

Note:

^a For homogeneous products and substantial components of non-homogeneous products;

^b For any external non-substantial component of non-homogeneous products;

^d For any internal non-substantial component of non-homogeneous products;

^e For the product as a whole.

-- Not applicable

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Test method	Parameter	Number of tests	Results
EN877:2021 & EN 13823: 2020+A1:2022	FIGRA0.2MJ (W/s)	3	10.1
	FIGRA0.4MJ (W/s)		10.1
	LFS < edge of specimen		Yes
	THR600s(MJ)		1.5
	SMOGRAM(m2/s2)		0
	TSP600s(m2)		27.1
	Flaming particles or droplets within 600s (Yes/No); Combustion time, if any burning time: ($\leq 10s$ / $>10s$)		No

IV. Classification and field of application

a) Reference of classification

This classification has been carried out in accordance with EN877:2021 & EN 13501-1:2018. The classes with their corresponding fire performance are given in annex A.

b) Classification

The product, in relation to its reaction to fire behaviour is classified(Quote annex A ° Alternatively, any external non-substantial component having a $PCS \leq 2,0 \text{ MJ/m}^2$, provided that the product satisfies the following criteria of EN 13823: $FIGRA \leq 20 \text{ W/s}$, and $LFS < \text{edge of specimen}$, and $THR_{600s} \leq 4,0 \text{ MJ}$, and $s1$, and $d0$.)

MEET	Class A1
Classification	A1—s1, d0

c) Field of application

This classification is valid for the following end use applications:

- Free standing
- Install according to EN877 standard Annex F requirements

This classification is valid for the following product parameters:

- Characteristics as described in section II of this test reports.



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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
A1	EN ISO 1182 ^a and		$\Delta T \leq 30^{\circ}\text{C}$, and $\Delta m \leq 50\%$, and $t_r = 0$ (i.e. no sustained flaming)	-
	EN ISO 1716		PCS $\leq 2.0 \text{ MJ/kg}$ ^a and PCS $\leq 2.0 \text{ MJ/kg}$ ^{b c} and PCS $\leq 1.4 \text{ MJ/m}^2$ ^d and PCS $\leq 2.0 \text{ MJ/kg}$ ^e	-
A2	EN ISO 1182 ^a or	and	$\Delta T \leq 50^{\circ}\text{C}$, and $\Delta m \leq 50\%$, and $t_r \leq 20 \text{ s}$	-
	EN ISO 1716		PCS $\leq 3.0 \text{ MJ/kg}$ ^a and PCS $\leq 4.0 \text{ MJ/m}^2$ ^b and PCS $\leq 4.0 \text{ MJ/m}^2$ ^d and PCS $\leq 3.0 \text{ MJ/kg}$ ^e	-
	EN 13823		FIGRA _{0,2 MJ} $\leq 120 \text{ W/s}$ and LFS < edge of specimen and THR _{600s} $\leq 7.5 \text{ MJ}$	Smoke production ^f and Flaming droplets/particles ^g
B	EN 13823 and		FIGRA _{0,2 MJ} $\leq 120 \text{ W/s}$ and LFS < edge of specimen and THR _{600s} $\leq 7.5 \text{ MJ}$	Smoke production ^f and Flaming droplets/particles ^g
	EN ISO 11925-2 ⁱ Exposure = 30s		within 60s Fs $\leq 150 \text{ mm}$	
C	EN 13823 and		FIGRA _{0,4 MJ} $\leq 250 \text{ W/s}$ and LFS < edge of specimen and THR _{600s} $\leq 15 \text{ MJ}$	Smoke production ^f and Flaming droplets/particles ^g
	EN ISO 11925-2 ⁱ Exposure = 30s		Fs $\leq 150 \text{ mm}$ within 60 s	
D	EN 13823 and		FIGRA _{0,4 MJ} $\leq 750 \text{ W/s}$	Smoke production ^f and Flaming droplets/particles ^g
	EN ISO 11925-2 ⁱ Exposure = 30s		Fs $\leq 150 \text{ mm}$ within 60 s	



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Testing Center Fire Technology Service Laboratory.

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Class	Test method(s)	Classification criteria	Additional classification
E	EN ISO 11925-2 ⁱ Exposure =15s	Fs≤150mm within 20 s	Flaming droplets/particles ^h
F	EN ISO 11925-2 ⁱ Exposure = 15s	Fs>150mm within 20 s	

^a For homogeneous products and substantial components of non-homogeneous products.

^b For any external non-substantial component of non-homogeneous products.

^c Alternatively, any external non-substantial component having a PCS ≤ 2,0 MJ/m², provided that the product satisfies the following criteria of EN 13823: FIGRA ≤ 20 W/s, and LFS < edge of specimen, and THR_{600s} ≤ 4,0 MJ, and s1, and d0.

^d For any internal non-substantial component of non-homogeneous products.

^e For the product as a whole.

^f s1 = SMOGRA ≤ 30m²/s² and TSP_{600s} ≤ 50m²; s2 = SMOGRA ≤ 180m²/s² and TSP_{600s} ≤ 200m²; s3 = not s1 or s2

^g d0 = No flaming droplets/ particles in EN 13823 within 600 s;
d1 = no flaming droplets/ particles persisting longer than 10 s in EN 13823 within 600 s;
d2 = not d0 or d1.

Ignition of the paper in EN ISO 11925-2 results in a d2 classification.

^h Pass = no ignition of the paper (no classification);
Fail = ignition of the paper (d2 classification).

ⁱ Under conditions of surface flame attack and, if appropriate to the end-use application of the product, edge flame attack.

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. Within the territory of the people's Republic of China, this report is only used for domestic customers' scientific research, teaching, internal quality control and product R & D, and does not have the role of social certification.



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Photo Appendix :



Before test(EN 13823)

After test(EN 13823)

SGS authenticate the photo on original report only

End of Report

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Annex B:

Manufacturers of cast pipes and fittings:

Company name: Wuan City Kun Yu Metal Products Co., Ltd

Address: North of Zhongyingjing Village, Shangtuancheng Town, Wu'an City, Handan City, Hebei Province, China

Cast iron Pipe:

- 1) Cast iron Pipe, Product code: ENP043000, Size: DN100X3000;
- 2) Cast iron Pipe, Product code: ENP023000, Size: DN50X3000;

pipe fitting:

- 1) 88° SINGLE BRANCH pipe fitting, Product code: ENT0402, Size: DN100X50

Coupling:

- 1) Coupling, Product code: SS04, Size: DN100;
- 2) Coupling, Product code: SS02, Size: DN50

Coating manufacturer:

Company name: Jiangsu Jinhua Heavy-duty Coatings Co., LTD.

Address: No.205 Fenglin South Road, Wujin National Hi-tech Industrial Zone, Changzhou City, Jiangsu Province, P. R. China

Coating

- 1) External coating of cast iron pipe, Product code: ZPGuard2543, Dry film thickness: 60-70um, density: 1.2676 g/cm3, color: Red
- 2) Internal coating of cast iron pipe, Product code: ZPGuard2530H, Dry film thickness: 130um, Color: Yellow
- 3) Coating of pipe fittings: Product code: ZPGuard2550, Dry film thickness: 60um, density: 1.5041 g/cm3, Color: Red

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Sample Description1 : ZPGuard2543
Sample Description2 : ZPGuard2550
End use : EN 877 Product
Others information : See **Annex B**

The above sample(s) and data/information was / were submitted and identified on behalf of the client. SGS is not responsible for the authenticity, integrity and results of the data and information and / or the validity of the conclusion. Results apply only to the sample as received.

Sample Receiving Date : Mar. 18, 2024

Test Performing Date : Mar. 25, 2024 TO Mar. 27, 2024

Test Requested: ISO 1716:2018 Reaction to fire tests for products - Determination of the gross heat of combustion (calorific value)

Test Results: -- See attached sheet --

Statement: The evaluation is based only on the actual value of laboratory activities, and the effect of uncertainty of laboratory activities is not included.

Signed for and on behalf of

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

Alex MAO

Approved signatory

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I. Test Conducted

This test was conducted in accordance with ISO 1716:2018 Reaction to fire tests for products - Determination of the gross heat of combustion (calorific value). Method used:Crucible method.

II. Sample Details

Dimensions	About 0.5g sample per test
Conditioning	Conditioning Room :Temp $23 \pm 2^{\circ}\text{C}$; Relative Humidity $50 \pm 5\%$ R.H After 48 hours of conditioning, the mass balance was reached.

III. Test Results

Name of tested component: ZPGuard2543

Test Parameter		Test Result		
		Specimen 1	Specimen 2	Specimen 3
The gross heat of combustion, Q_{PCS} (MJ/kg)		19.9	19.4	19.5
Average of gross heat of combustion	(MJ/kg)	19.6		
	(MJ/m ²)	1.7		

Name of tested component: ZPGuard2550

Test Parameter		Test Result		
		Specimen 1	Specimen 2	Specimen 3
The gross heat of combustion, Q_{PCS} (MJ/kg)		18.5	18.0	18.1
Average of gross heat of combustion	(MJ/kg)	18.2		
	(MJ/m ²)	1.6		

Note:

- 1.Water equivalent, $E=8201\text{J/K}$
- 2.Validity of test results see Annex A.



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Annex A

Table 1 Criteria for the validity of test results

Gross heat of combustion	Max. and min. of the three replicated tests	Range of validity
Q_{PCS} (MJ/kg)	≤ 0.2 MJ/kg Within 5 % of the average of the 3 results Within 10 % of the average of the 3 results	From any negative value to 3,2 MJ/kg From 3,2 MJ/kg to 20,0 MJ/kg Greater than 20,0 MJ/kg
Q_{PCS} (MJ/m ²) ^a	≤ 0.1 MJ/m ² Within 5 % of the average of the 3 results Within 10 % of the average of the 3 results	From any negative value to 4,1 MJ/m ² From 4,1 MJ/m ² to 20 MJ/m ² Greater than 20 MJ/m ²
^a For non-substantial components only.		

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. The specimen was supplied by the sponsor and SGS was not involved in any selection or sampling procedure. Within the territory of the people's Republic of China, this report is only used for domestic customers' scientific research, teaching, internal quality control and product R & D, and does not have the role of social certification.



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Photo Appendix:



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End of Report



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Testing Center Fire Technology Service Laboratory.

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Annex B

Manufacturers of cast pipes and fittings:

Company name: Wuan City Kun Yu Metal Products Co., Ltd

Address: North of Zhongyingjing Village, Shangtuancheng Town, Wu'an City, Handan City, Hebei Province, China

Cast iron Pipe:

- 1) Cast iron Pipe, Product code: ENP043000, Size: DN100X3000;
- 2) Cast iron Pipe, Product code: ENP023000, Size: DN50X3000;

pipe fitting:

- 1) 88° SINGLE BRANCH pipe fitting, Product code: ENT0402, Size: DN100X50

Coupling:

- 1) Coupling, Product code: SS04, Size: DN100;
- 2) Coupling, Product code: SS02, Size: DN50

Coating manufacturer:

Company name: Jiangsu Jinhua Heavy-duty Coatings Co., LTD.

Address: No.205 Fenglin South Road, Wujin National Hi-tech Industrial Zone, Changzhou City, Jiangsu Province, P. R. China

Coating

- 1) External coating of cast iron pipe, Product code: ZPGuard2543, Dry film thickness: 60-70um, density: 1.2676 g/cm3, color: Red
- 2) Internal coating of cast iron pipe, Product code: ZPGuard2530H, Dry film thickness: 130um, Color: Yellow
- 3) Coating of pipe fittings: Product code: ZPGuard2550, Dry film thickness: 60um, density: 1.5041 g/cm3, Color: Red

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Gent-Year Metal Foundry Limited

9/F., Shing Shun Building, No. 43, Castle Peak Road, Yuen Long, N.T., Hong Kong

Sample Description : GY-K EN877 Product

Composition : Composition: Cast iron pipe and 88° SINGLE BRANCH pipe fittings with a red external coating

Others : See **Annex A**

Name	Area density	Thickness	Composition	Color	Layer
Coating1	0.088732kg/m ²	60~70um	ZPGuard2543	Red	External coating of cast iron pipe
Coating2		130 um	ZPGuard2530H	Yellow	Internal coating of cast iron pipe
Coating3	0.090246kg/m ²	60 um	ZPGuard2550	Red	Coating of pipe fittings

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Sample Receiving Date : Mar. 18, 2024

Test Performing Date : Mar. 25, 2024 TO Mar. 27, 2024

Test Requested: EN877:2021 & EN 13823:2020+A1:2022 Reaction to fire tests for building products - Building products excluding floorings exposed to the thermal attack by a single burning item

Test Results: -- See attached sheet --

Statement: The evaluation is based only on the actual value of laboratory activities, and the effect of uncertainty of laboratory activities is not included.

Signed for and on behalf of

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



Alex MAO

Approved signatory

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I. Test Conducted

This test was conducted in accordance with EN877:2021 & EN 13823:2020+A1:2022 Reaction to fire tests for building products - Building products excluding floorings exposed to the thermal attack by a single burning item.

II. Sample Details

Conditioning	Conditioning Room :Temp $23 \pm 2^{\circ}\text{C}$; Relative Humidity $50 \pm 5\%$ R.H After 48 hours of conditioning, the mass balance was reached.
--------------	--

Installation and Fixation of Specimens:

Substrate	Gypsum plaster board	Fixing method	Free standing
Splicing method	EN877-Annex F	Tested face	See Photo
Mounting and fixing	Install according to EN877:2021 standard Annex F requirements		

III. Test Results

Test Parameter	Test 1	Test 2	Test 3	Average
FIGRA _{0.2MJ} (W/s)	9.4	12.8	8.2	10.1
FIGRA _{0.4MJ} (W/s)	9.4	12.8	8.2	10.1
LFS < edge of specimen	Yes	Yes	Yes	--
THR _{600s} (MJ)	1.4	1.6	1.4	1.5
SMOGR(m ² /s ²)	0	0	0	0
TSP _{600s} (m ²)	27.0	29.8	24.6	27.1
Flaming particles or droplets within 600s (Yes/No); Combustion time, if any burning time:($\leq 10\text{s}$ / $>10\text{s}$)	No	No	No	No
Recorded events	--	--	--	--

Note: During the test, the ambient temperature in the laboratory is 19.2°C and the humidity is 49%RH.

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.

The specimen was supplied by the sponsor and SGS was not involved in any selection or sampling procedure.

Within the territory of the people's Republic of China, this report is only used for domestic customers' scientific research, teaching, internal quality control and product R & D, and does not have the role of social certification.



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Annex A:
Manufacturers of cast pipes and fittings:

Company name: Wuan City Kun Yu Metal Products Co., Ltd

Address: North of Zhongyingjing Village, Shangtuancheng Town, Wu'an City, Handan City, Hebei Province, China

Cast iron Pipe:

- 1) Cast iron Pipe, Product code: ENP043000, Size: DN100X3000;
- 2) Cast iron Pipe, Product code: ENP023000, Size: DN50X3000;

pipe fitting:

- 1) 88° SINGLE BRANCH pipe fitting, Product code: ENT0402, Size: DN100X50

Coupling:

- 1) Coupling, Product code: SS04, Size: DN100;
- 2) Coupling, Product code: SS02, Size: DN50

Coating manufacturer:

Company name: Jiangsu Jinhua Heavy-duty Coatings Co., LTD.

Address: No.205 Fenglin South Road, Wujin National Hi-tech Industrial Zone, Changzhou City, Jiangsu Province, P. R. China

Coating

- 1) External coating of cast iron pipe, Product code: ZPGuard2543, Dry film thickness: 60-70um, density: 1.2676 g/cm3, color: Red
- 2) Internal coating of cast iron pipe, Product code: ZPGuard2530H, Dry film thickness: 130um, Color: Yellow
- 3) Coating of pipe fittings: Product code: ZPGuard2550, Dry film thickness: 60um, density: 1.5041 g/cm3, Color: Red

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