



**Best
Quality**

**Each Dream
Style**

Company profile

Each DreaM Inc. Japan, Shimamura Gou-ura 42, Ichinomiya, Aichi, 491-0121 TEL+81-586-82-5301

Representative s : Representative chairman of board, Hamamura Hideo
Representative CEO, Nakano Shougo

Date of Establishment : October 25, 2019

Business : Development, manufacture and sale of non-combustible materials
Development investment, development business, import and export sales

Developed Products : Non-combustible Next-Generation F R P (F R C) , Non-combustible insulation,
Non-combustible partition, Non-combustible steel siding

Patent : Currently patent pending both in Japan and internationally

Each DreaM's Principle

You never know when or where the great earth quake will happen. In spite of the fact that many lives survived after the great earth quake, they were killed by flames, smoke, and toxic gases of a secondary disaster. Are you aware of this fact? We want to save as many lives as possible by Each DreaM's non-combustible materials are spreading around the world.

That is the reason we have developed and are providing non-combustible materials to the world.

Development product range

BOTH-Laminate

BOTH -Cast

ISO-1182- Standard met

ISO-5660 (Cone calorimeter)-Standard met

Ministry of Land, Infrastructure and Transport

Certified-Certification number NM-5296

F☆☆☆☆

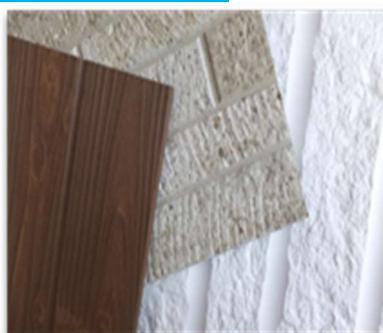
ISO-1182- Standard met

ISO-5660(Cone calorimeter)-Standard met

Ministry of Land, Infrastructure and Transport

Certified-Certification number NM-5415

Developed Products



Wholesale Products



Non-combustible Partition

Able to design any shapes as your request! Double-sided design request OK!
Bring dreams and safety to children's rooms!

Non-combustible Steel Siding

Highly insulating and lightweight, making it earthquake resistant and easy installation. Creating life-saving homes that generate no toxic gas or smoke in fire.

Basalt Fiber

Environmentally friendly materials in consideration of the SDGs. Be able to distribute high quality basalt fiber at lower prices than others.

The world first
 An overwhelming difference!
 No Smoke and Toxic substance
 in case of fire
 Excellent heat insulation.
 Non-combustible material
 that can be returned to nature.
 New development succeeded

Non-flammable is not the only advantage.

Non-flammable Next-Generation FRP (FRC) and heat insulation are Environment-friendly therefore the right materials for the age of SDGs
Poison Free

This product is comprised of inorganic substances. It is non-toxic when crushed and mixed with soil.

Re-use

Crushed Next-Generation FRP (FRC) can be reused as concrete reinforcement or as foundation material for another Next-Generation FRP (FRC).



Next-Generation FRP (FRC) crushed into 1 mm powder and baked.

Example of Usage

Marine Vessels (Rooms, Hallways, Hatch)



Air transport



Inner surface treatment of incinerator chimneys



Airplanes' Interiors



Shinkansen, trains



Public facilities



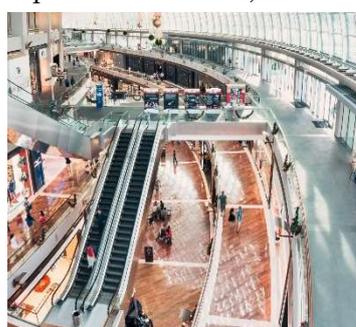
Construction

(Theme parks, homes, apartments)



Large Shopping Centers

(Fireproof food courts, kitchen area.)



Cars, Public bus,

Travelling bus



BOTH -Lam Non-combustible Next-Generation FRP(FRC)

Non-combustible Next-Generation FRP(FRC) undiluted solution

Can be applied in the same way as FRPs.



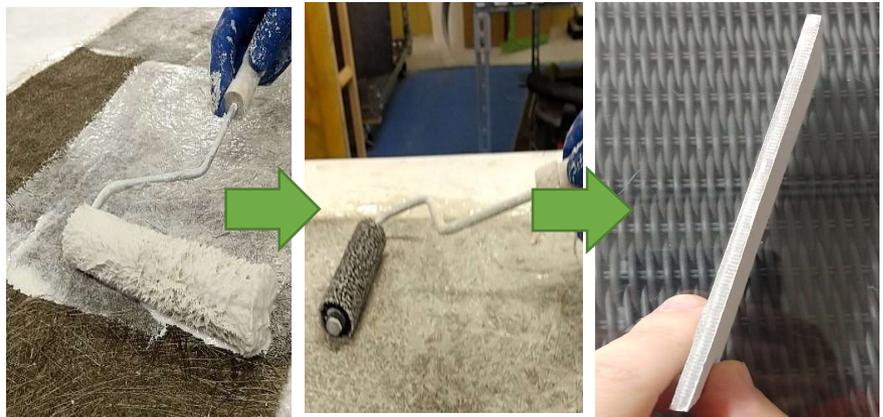
Next-Generation FRP (FRC) placed inside a furnace.

Molding Method

1) Hand lay-up method

It can be molded in the same way as the pre-existing FRPs. We recommend using basalt cloth as reinforcement for our laminated sheet.

For surface layer, we have applied basalt surfacer. For strength members, basalt cloth and basalt mats.



2) Press-mold by pre-pregs Method

Impregnate BOTH-Lam into basalt cloth and preserve in a half cured state, then manufacture laminate sheet by heat and pressure molding.

The time for the pre-pregs to form varies depending on the number of laminate sheets but, 1 (one) sheet will take about 5~10 minutes.



Press forming machine



Front



Back

Next-Generation FRP(FRC)'s Certificate from the Minister of Land , Infrastructure, and Transport

Certification

国住指第 4209 号
令和 3 年 3 月 26 日

Each Dream 株式会社
代表取締役 中野 省吾 様

Minister of Land, Infrastructure, and Transport

赤羽 一嘉



The following structural methods, etc. are, in accordance to the provisions of Article 68-25, Paragraph 1 (including the case where it is applied mutatis mutandis pursuant to Article 88, Paragraph 1 of the same Act) of the Building Standards Law, that it conforms to the provisions of Article 2, Paragraph 9 of the same Act and Article 108-2, items 1 through 3 (non-combustible material) of the Order for Enforcement of the same Act.

記

1. Certification number
NM-5269
2. Name of the approved structural method:
Non-woven glass fiber basalt fiber covered cloth contained • alumina cement mixed sodium silicate plate.
3. Details of the approved structural method etc.:
As shown in the attached sheet.

(注意) この認定書は、大切に保存しておいてください。

Non-combustible heat insulation Outstanding ISO-5660 results!

Current non-combustible materials are designed to pass the non-combustibility test, which certifies them as non-combustible if they do not burn in time.

Therefore, in a real fire, it will ignite over time and eventually burn.

EachDreaM's Next-Generation FRP (FRC) is completely different from conventional incombustible materials and is **completely incombustible!**

Test number: III C-20-0069

Client: Each DreaM Inc.

Heat generation test

Test date: 2020, August 11

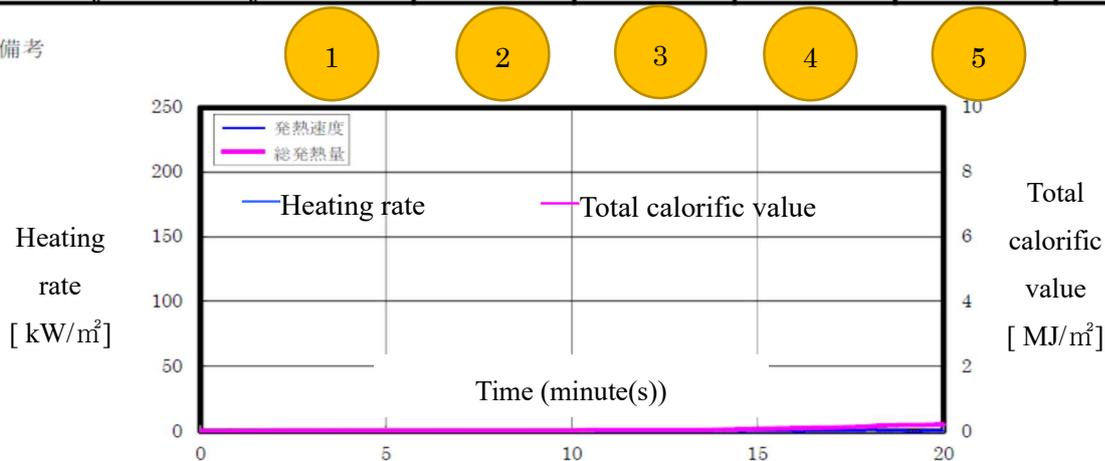
Radiation intensity: 50 kW/m²

Test duration: 20 minutes

- | |
|---|
| (1) Total calorific value [MJ/m ²] * measured value 8MJ/m ² |
| (2) Maximum heating rate [k w/m ²] |
| (3) Deformation harmful to fire resistance none * measured value None |
| (4) Time at which the maximum heating rate continuously exceeds 200kw/m ²
* measured value 10 seconds |
| (5) Ignition time [second(s)] |

Measured value	質量 Mass (g)	(1)	(2)	(3)	(4)	(5)	Notes
Test body A	151.8	0.2	1.88	None	0	No ignitions	Fig.1

備考



ISO-5660 Miraculously clearing the standard met

- ① Passed with a total calorific value of only 0.01MJ/m² instead of 8MJ/m² ⇒ 1/800th of the value!
- ② Maximum heating rate of 300kw/m² is acceptable, but 0.33kw/m² is acceptable ⇒ 1/909 value!
- ③ Not only are there no fire-hazardous deformations!
⇒ They do not produce smoke or even toxic substances!
- ④ The maximum heating rate of 200kw/m² is naturally exceeded and is allowed up to 10 seconds ⇒ 0 seconds!
- ⑤ Most non-combustible materials must be ignited, so the test is to determine the ignition time ⇒ No ignition!

Next-Generation FRP (FRC) and Cone Calorimeter Test

It has been evaluated as non-combustible from the Inflammability Test for Railway Vehicles and passed the cone calorimeter test.

The bottom report shows how this product has **passed with outstanding results.**

The bottom two are the criteria. Either can be met.

- 1) Gross calorific value is under 8MJ/m² and max heat generation rate is under 300kw/m².
- 2) Gross calorific value is over 8MJ/m² but is under 30MJ/m² and, ignition time is over 60 seconds, max heat generation rate is under 300kw/m².

Combustion Test Report of Railroad Vehicle Materials
(Cone calorie meter combustion heat generation test)

	C2020-27K
Client	Each DreaM Inc.
Manufacturer	Each DreaM Inc.
Product use	Lining, ceiling, window frame, toilet units
Name of product	According to the heat generation test sample details
Material	Same as above
Thickness	Same as above
Date of test	2020 September 14
試験年月日 2020年 9月 14日	

(1) Total calorific value(MJ/m²)

(2) Total calorific value (S)

(3) Maximum heating rate(KW/m²)

(4) Difference of average and maximum(%) heating rate (%)

試験成績

Supply materials	(1)	(2)	(3)	(4)	Notes
First time	0.41	—	1.87	33.7	Applicable
Second time	1.01	—	3.81	35.0	Applicable
Third time	0.81	—	4.40	55.9	Applicable
(Fourth time)	0.10	—	1.21	—	Applicable

＊着火時間は、試験開始から炎が確認されるまでの時間、継続時間が1.0秒未満の場合は除く)
 ＊試験結果は、1.0kW、1.0分以内のものとする。

判定合格

一般社団法人 日本鉄道車両機械技術協会

Clear the employability criteria as Non-combustible material for railway vehicles!

- ① Total calorific value of 8MJ/m² is acceptable, but average value of 0.58MJ/m² is acceptable ⇒ **about 1/14!**
- ② Test for ignition time as most non-combustible materials require ignition ⇒ **No ignition!**
- ③ Assumed maximum heating rate of up to 300kw/m² passed with an average value of 2.82kw/m² ⇒ **1/106 of the value!**

Data

Basalt fiber tension tests

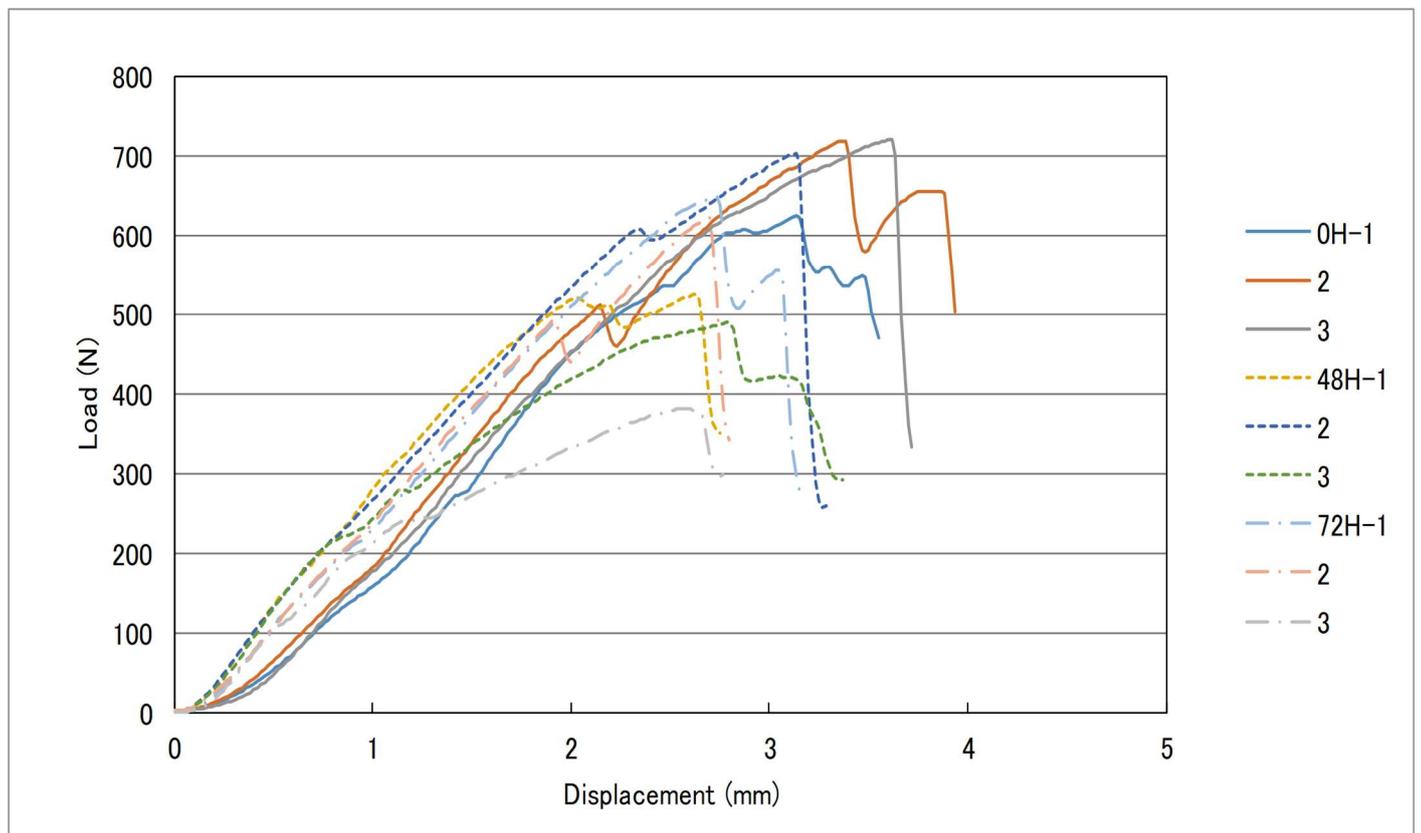
EachDreaM Inc. Basalt fiber tension test (2020/September/3)

Test amachine: INSTRON5582(Load Cell 1kN)

Test condition(s): Velocity 100mm/min, chuck distance 150mm



Subject	No.	Max. load (N)		
		No immersion	Immersion 48h	Immersion 72h
Basalt fiber	1	623.1	524.7	647.7
	2	718.6	702.2	621.4
	3	719.0	488.5	380.7
	Average	686.9	571.8	549.9



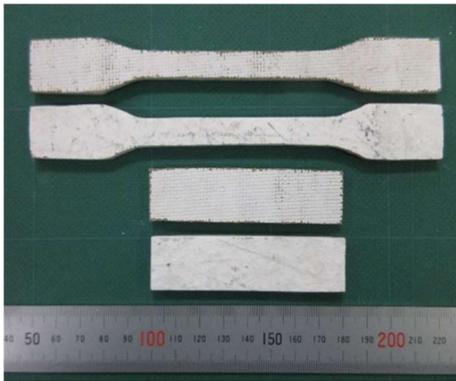
Physical property testing: Next-Generation FRP(FRC) 1

EachDreaM Inc. Basalt composite physical property test(2021/March/16)

1. Tension test(JIS K 7164)

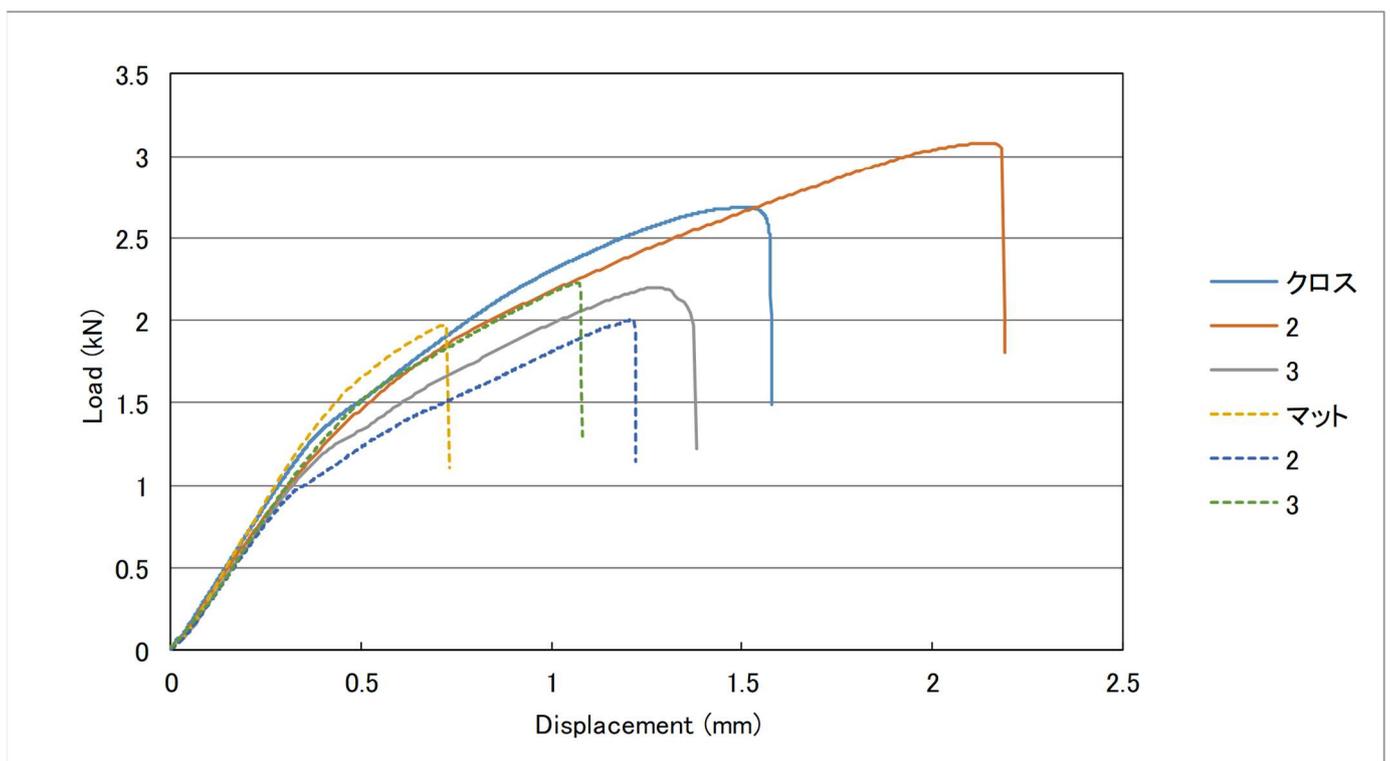
Test machine : INSTRON5582 (Load Cell 10kN)

Test conditions : velocity 10mm/min, chuck distance 115mm



Type	No.	Width (mm)	Thickness (mm)	Max. load (kN)	Fracture displacement (mm)	Tensile strength (MPa)	Breaking elongation (%)
Cloth	1	10.3	3.6	2.686	1.56	72.4	1.4
	2	10.5	3.5	3.083	2.18	83.9	1.9
	3	10.2	3.5	2.201	1.37	61.6	1.2
	Average	-	-	-	-	72.7	1.5
Mat	1	10.0	4.3	1.970	0.72	45.8	0.6
	2	10.3	3.8	2.004	1.21	51.2	1.1
	3	10.4	4.2	2.230	1.07	51.1	0.9
	Average	-	-	-	-	49.4	0.9

※Breaking elongation: Tensile fracture nominal strain calculated from crosshead fracture displacement.

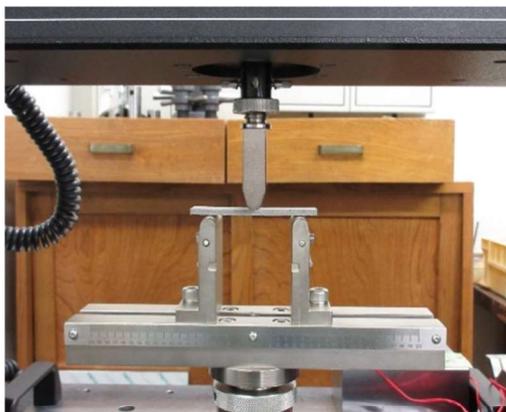


Physical property testing: Next-Generation FRP(FRC)

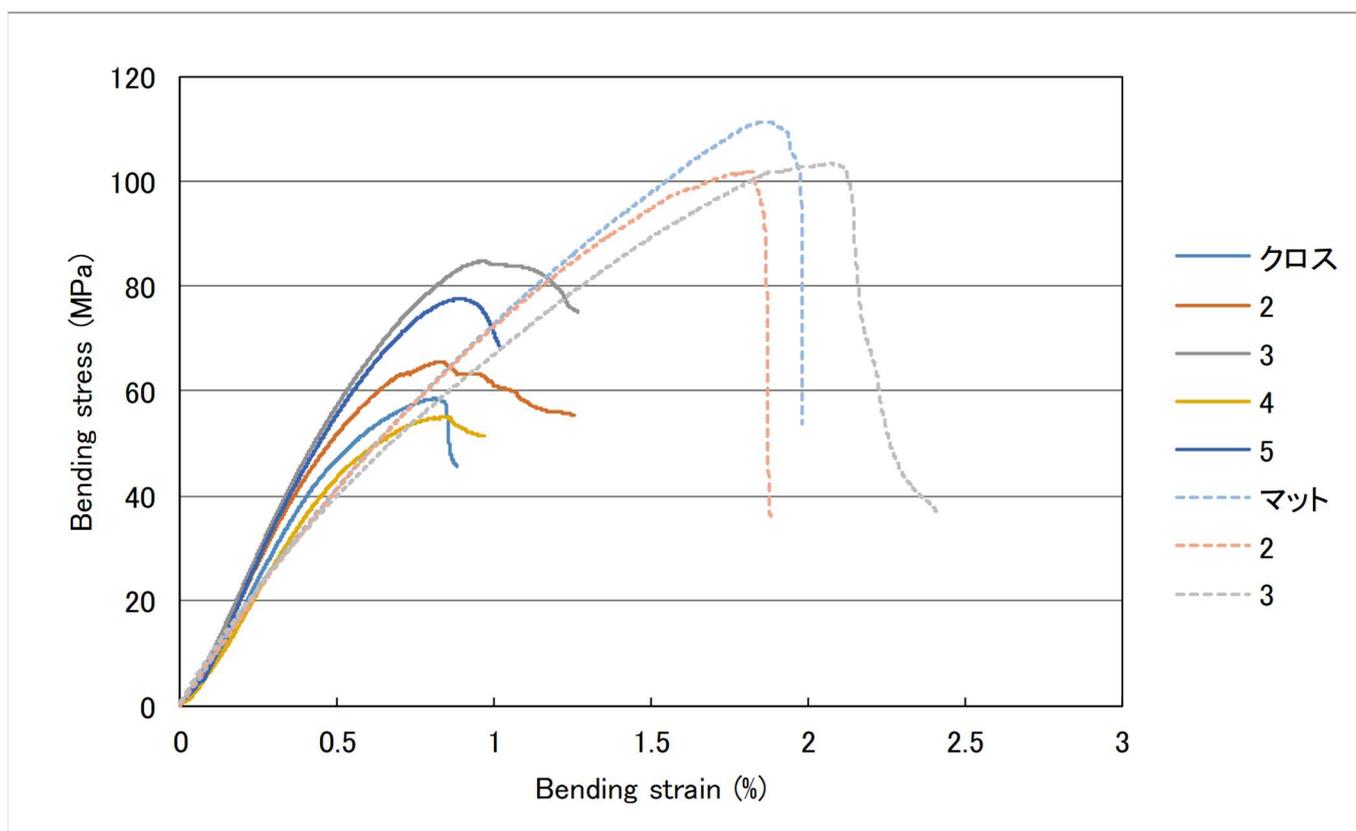
2. Bending test(JIS K 7171)

Test machine: INSTRON5582(Load Cell 1kN)

Test conditions: Velocity 2mm/min, fulcrum distance 56mm (cloth), 64mm (mat)



Type	No.	Width (mm)	Thickness (mm)	Max. load (N)	Bending strength (MPa)	Flexural modulus (GPa)
Cloth	1	20.2	3.5	172.5	58.6	10.70
	2	20.3	3.4	183.5	65.7	12.35
	3	20.6	3.5	254.7	84.8	12.48
	4	20.2	3.4	153.0	55.0	9.55
	5	20.0	3.4	213.6	77.6	12.74
	Average	-	-	-	-	68.3
Mat	1	20.4	4.1	398.0	111.4	9.09
	2	20.4	3.9	329.1	101.8	8.45
	3	20.4	4.0	351.5	103.4	8.41
	Average	-	-	-	-	105.5



Physical property testing: Next-Generation FRP(FRC)

Table 1 Density measurement results (bulk density)

Density [g/cm ³]				
1	2	3	4	Average
1.82				1.82

Table 2 Thermal diffusion rate results (nano flash)

Temperature [°C]	Thermal diffusion rate [mm ² /s]					
	1	2	3	4	5	Average
25	0.25	0.25	0.25			0.25

Table 3 Specific heat capacity results (DSC)

Temperature [°C]	Specific heat capacity [J/(g/K)]					
	1	2	3	4	5	Average
25	1.77					1.77

Table 4 Heat conductivity

Temperature [°C]	Density [g/cm ³]	Specific heat capacity [J/(g/K)]	Thermal diffusion rate [mm ² /s]	Heat conductivity [W/(m/K)]	Notes
25	1.82	1.77	0.25	0.79	

Passing the examination

Our products meet the ISO standard. We can guarantee you of their qualities.

Non-combustible Next-Generation ISO-1182

試験成績書第20-1100号

試験成績書

依頼者	住	所	愛知県一宮市千秋町加納馬場字大山9番地2
	会社名又は団体名		Each DreaM 株式会社
	依頼試験の名称		不燃性試験

令和2年6月12日付契約した依頼試験について、
において試験を実施した結果は、本試験成績書に記載
のとおりである。

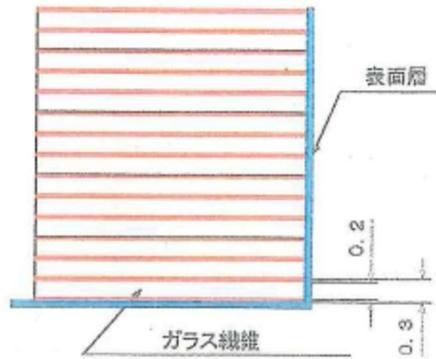
令和2年8月7日

About the contracted commissioned test on 2020 June 12th, the
results of the test conducted are as recorded in this report.

2020 August 7th

Test Report of Fireproof Material (Non-combustible materials)

Water soluble fiber reinforced ceramic laminates



※ ガラスクロスを水溶性セラミックで積層した場合
含浸後の厚みは0.3mmと成る。

Water soluble ceramics					
Test date					
Test body	Test body symbol	A	B	C	
	Diameter (mm)	44.6	44.8	44.9	
	Height (mm)	47.5	47.4	48.1	
	Mass (g)	125.5	127.4	126.6	
	Curing time (day(s))	Over 5	Over 5	Over 5	
Results	Test duration (min)	60	60	60	
	Temp. measurement curve (°C)	Fig-1	Fig-2	Fig-3	
	Furnace temp. adjustment (°C)	754.6	750.8	749.1	
	Furnace inner temp. (°C)	Max temp. (°C)	769.3	765.5	769.3
		Highest temp. arrival time	1190 sec.	1194 sec.	1184 sec.
		Final equilibrium temp. (°C)	795.1	792.9	795.4
		Temp. difference (°C)	-25.8	-27.4	-26.1
	Heating loss (g)	15.1	17.2	16	
Mass-decreasing rate (%)	12	13.5	12.6		

2020 July 22					
Test body symbol		A	B	C	
Test results	Central temp.	Max temp. (°C)	—	—	—
		Highest temp. arrival time	—	—	—
		Final equilibrium temp. (°C)	—	—	—
		Temp. difference (°C)	—	—	—
	Surface temp.	Max temp. (°C)	766.3	762.7	759.2
		Highest temp. arrival time	1178 sec.	1198 sec.	1198 sec.
		Final equilibrium temp. (°C)	792.6	791.1	784.4
		Temp. difference (°C)	-26.3	-28.4	-25.2
Ignition time		—	—	—	
Flame-out time		—	—	—	
Sustained flame duration		—	—	—	
Evaluation		Pass	Pass	Pass	

* The test results show values up to 20 minutes after the start of heating.

* Central temperature was not measured.

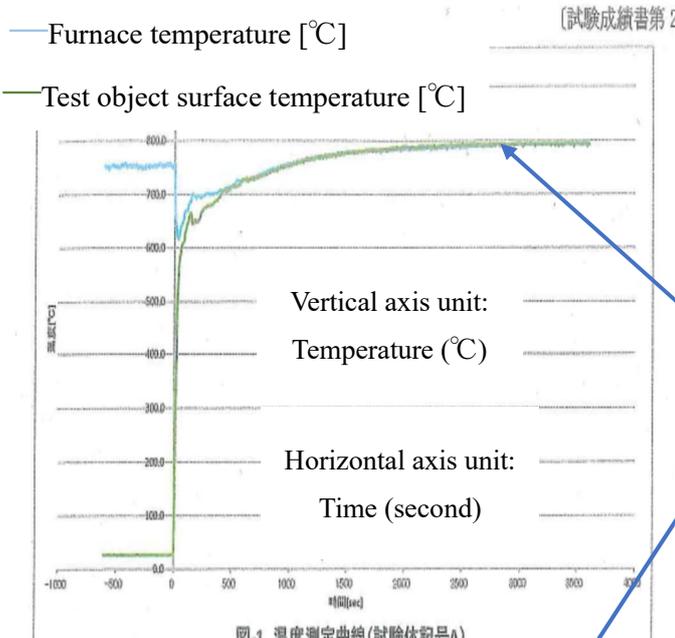


Fig-1 Temperature measurement curve (test object A)

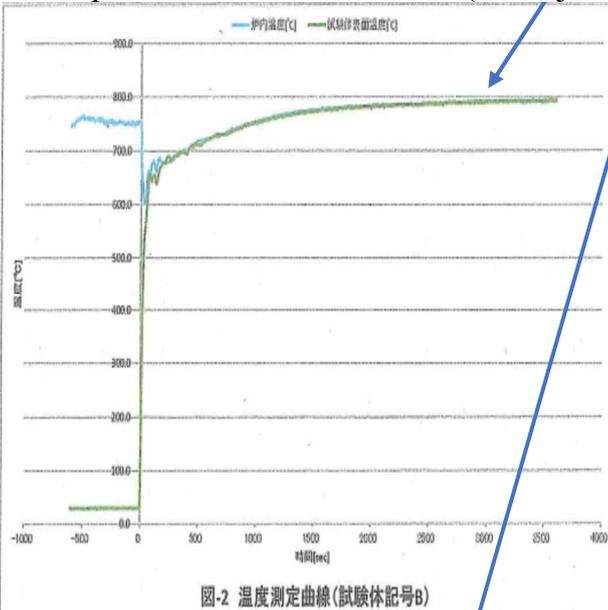


Fig-2 Temperature measurement curve (test object B)

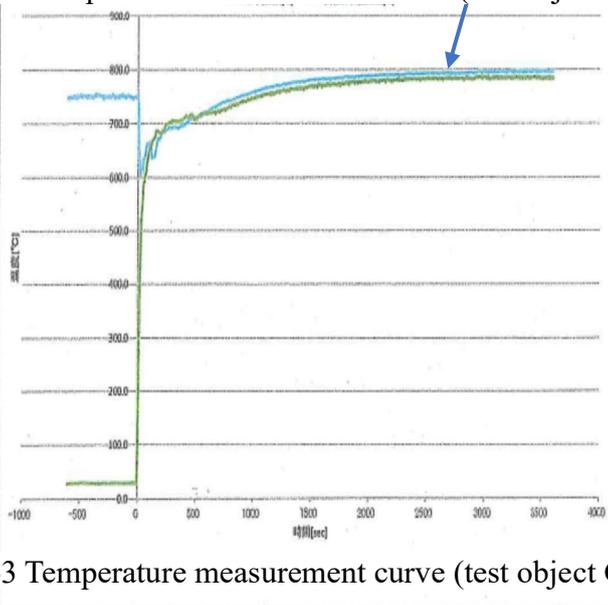


Fig-3 Temperature measurement curve (test object C)

Pass ISO 1182, the world's most difficult exam with miraculous results

Normally, the temperature continues to rise and after 30 minutes of measurement time, many non-combustible materials pass the test with just barely acceptable values, while [EachDreaM's Next-Generation FRP \(FRC\) shows almost no temperature rise](#) during the measurement. This is a clear indication that even after the 30-minute time limit for the test, it will never burn.

The reason why we tried to pass to ISO 1182, the most difficult exam

The ISO1182 qualification is not well known because if it was passed ISO5660, Ministry of Land, Infrastructure, Transport and Tourism will be certificated as a non-combustible material, and because even the point of the worldwide view, it is rare to have possibility to pass ISO 1182 for a common non-combustible material.

The reason for going for the very difficult ISO 1182 test is that the materials used in cargo ships are IMO approved, and in order to get IMO approval, you have to have passed the ISO 1182 test.

Once IMO approved, it can be used on all ships.

At present, due to the scarcity of perfect non-combustible materials, steel products are used, but due to their high weight, fuel costs and loading capacity are a major problem.

With EachDreaM's Next-Generation FRP (FRC), [more cargo can be transported at a lower fuel cost](#) due to significant weight savings.

[That indicates, it has the potential to transform the future of shipping.](#)

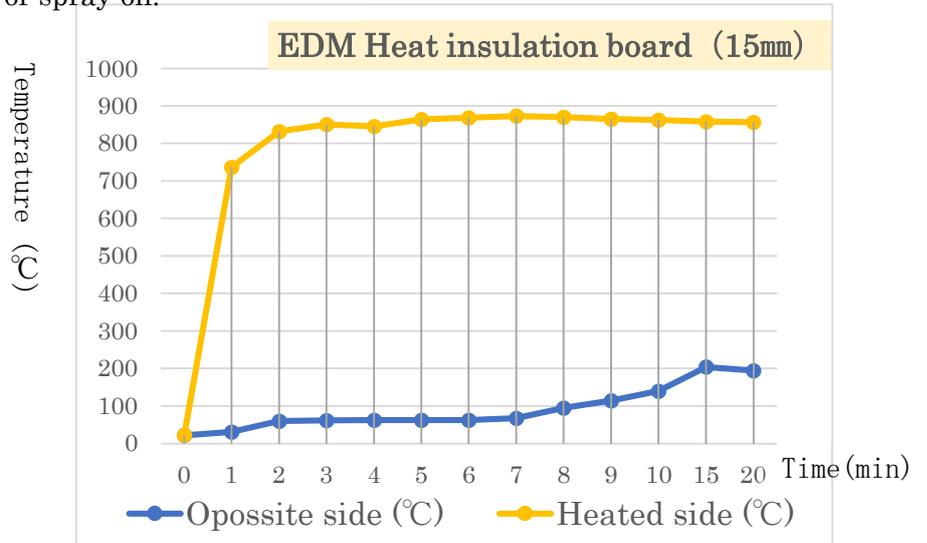
ISO-1182

Standard met

“BOTH -Cas” Non-combustible Heat Insulation

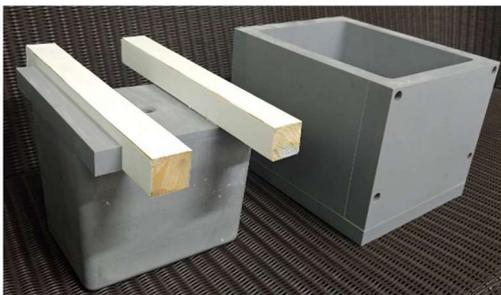
Non-combustible heat insulation undiluted solution

Can be applied by casting, trowels., or spray-on.



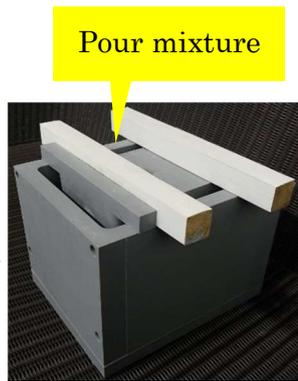
Molding Method —Casting example

1) Box Type



Left: Movable mold

Right: Fixed mold



Pour mixture



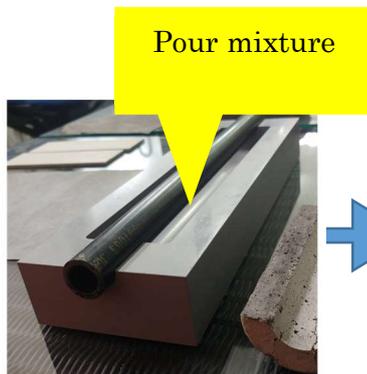
Finished product

2) Pipe Type



Pipe shaped movable mold

Right: Fixed mold



Pour mixture

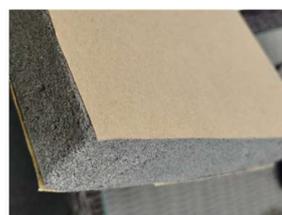


Finished product

3) Other



Can be flat shaped.



Paper can be applied on both sides for building material.

Non-combustible heat insulation Outstanding ISO-5660 results

As you can see from the graphs below, our non-flammable insulation materials also show an overwhelmingly high rate of heat generation and **almost no increase in total calorific value.**

Test number : III C-20-0069

Client : Each DreaM Inc.

Heat generation test

Test date: 2020, August 11

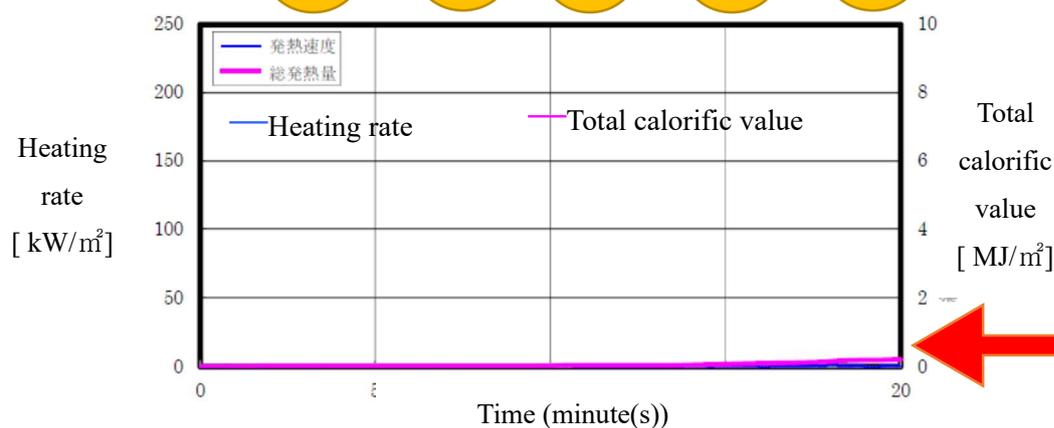
Radiation intensity: 50 kW/m²

Test duration: 20 minutes

- (1) Total calorific value [MJ/m²] * measured value 8MJ/m²
- (2) Maximum heating rate [kW/m²]
- (3) Deformation harmful to fire resistance none * measured value None
- (4) Time at which the maximum heating rate continuously exceeds 200kW/m²
* measured value 10 seconds
- (5) Ignition time [second(s)]

Measured value	Mass (g)	(1)	(2)	(3)	(4)	(5)	Notes
Test body A	151.8	0.2	1.88	None	0	No ignitions	Fig.1

備考



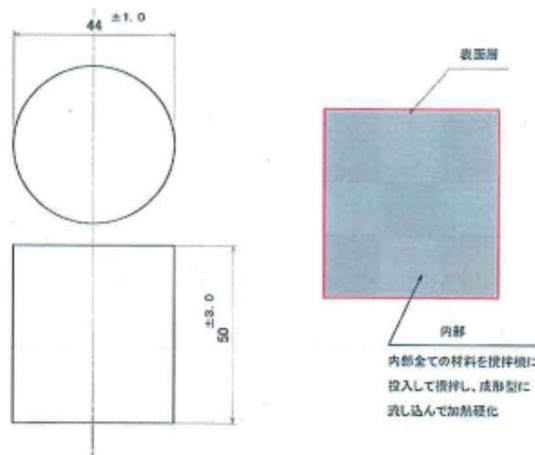
ISO-5660 Miraculously clearing the standard met

- ① Passed with a total calorific value of only 0.01MJ/m² instead of 8MJ/m² ⇒ **1/800th of the value!**
- ② Maximum heating rate of 300kw/m² is acceptable, but 0.33kw/m² is acceptable ⇒ **1/909 value!**
- ③ Not only are there no fire-hazardous deformations!
⇒ **They do not produce smoke or even toxic substances!**
- ④ The maximum heating rate of 200kw/m² is naturally exceeded and is allowed up to 10 seconds
⇒ **0 seconds!**
- ⑤ Most non-combustible materials must be ignited, so the test is to determine the ignition time
⇒ **No ignition!**

Non-combustible heat insulation ISO-1182

Test Report of Fireproof Material (Non-combustible material) materials)

Rice husk and water soluble ceramic mixture



Heat insulation board					
Test date					
Test body	Test body symbol	A	B	C	
	Diameter (mm)	45.2	45.5	45.3	
	Height (mm)	50.2	51.7	51.9	
	Mass (g)	63.9	64.5	73.6	
	Curing time (day(s))	Over 5	Over 5	Over 5	
Results	Test duration (min)	30	30	30	
	Temp. measurement curve (°C)	Fig-1	Fig-2	Fig-3	
	Furnace temp. adjustment (°C)	751	751.2	749.2	
	Furnace inner temp. (°C)	Max temp. (°C)	787	786.8	786.6
		Highest temp. arrival time	1160 sec.	1176 sec.	1180 sec.
		Final equilibrium temp. (°C)	787.8	788.5	785.3
		Temp. difference (°C)	2.2	1.7	2
	Heating loss (g)	8.3	9.1	9.56	
Mass-decreasing rate (%)	13.1	14.2	13		

2020 August 6					
Test body symbol		A	B	C	
Test results	Central temp.	Max temp. (°C)	—	—	—
		Highest temp. arrival time	—	—	—
		Final equilibrium temp. (°C)	—	—	—
		Temp. difference (°C)	—	—	—
	Surface temp.	Max temp. (°C)	797.7	799.3	786.5
		Highest temp. arrival time	916 sec.	930 sec.	1168 sec.
		Final equilibrium temp. (°C)	792.7	798	787
		Temp. difference (°C)	5	1.3	1.7
Ignition time		—	—	—	
Flame-out time		—	—	—	
Sustained flame duration		—	—	—	
Evaluation		Pass	Pass	Pass	

* The test results show values up to 20 minutes after the start of heating.

* Central temperature was not measured.

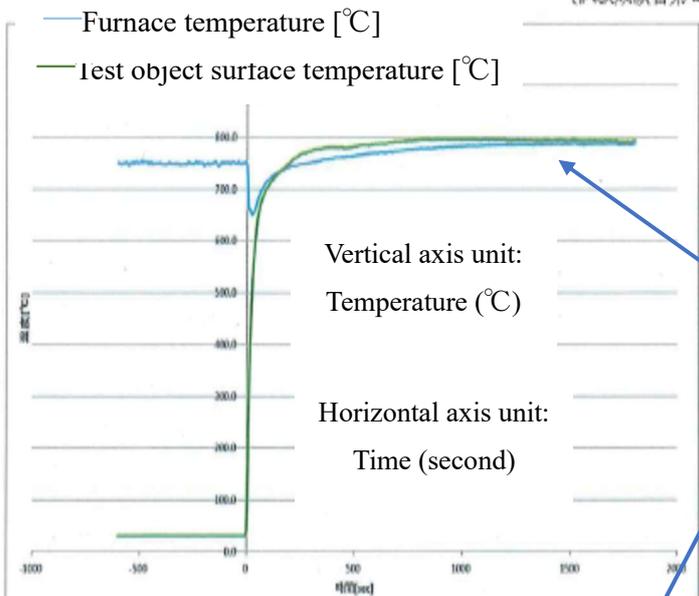


Fig-1 Temperature measurement curve (test object A)

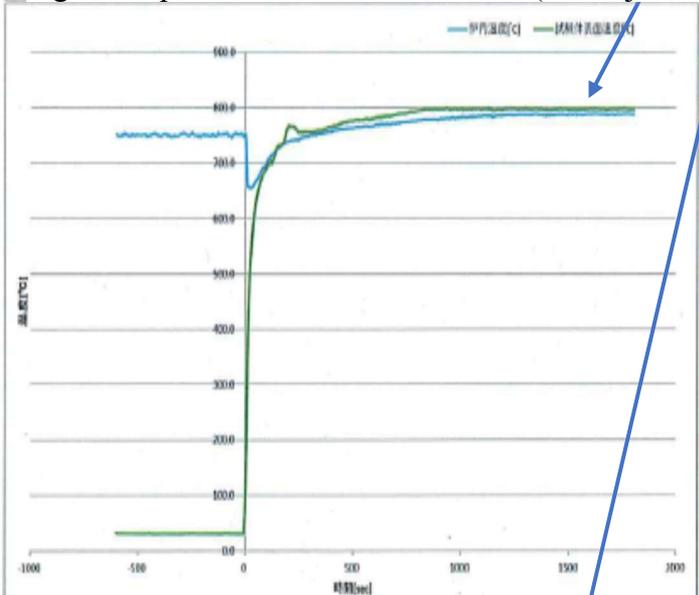


Fig-2 Temperature measurement curve (test object B)

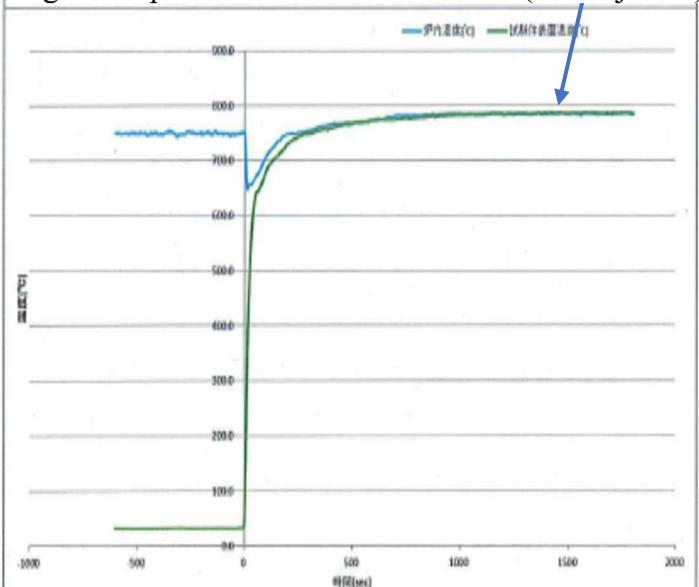


Fig-3 Temperature measurement curve (test object C)

Pass ISO 1182, the world's most difficult exam with miraculous results

Normally, the temperature continues to rise and after 30 minutes of measurement time, many non-combustible materials pass the test with just barely acceptable values, while EachDreaM's Next-Generation FRP (FRC) shows almost no temperature rise during the measurement. This is a clear indication that even after the 30-minute time limit for the test, it will never burn.

The reason why we tried to pass to ISO 1182, the most difficult exam

The ISO1182 qualification is not well known because if it was passed ISO5660, Ministry of Land, Infrastructure, Transport and Tourism will be certificated as a non-combustible material, and because even the point of the worldwide view, it is rare to have possibility to pass ISO 1182 for a common non-combustible material.

The reason for going for the very difficult ISO 1182 test is that the materials used in cargo ships are IMO approved, and in order to get IMO approval, you have to have passed the ISO 1182 test.

Once IMO approved, it can be used on all ships.

At present, due to the scarcity of perfect non-combustible materials, steel products are used, but due to their high weight, fuel costs and loading capacity are a major problem.

With EachDreaM's Next-Generation FRP (FRC), more cargo can be transported at a lower fuel cost due to significant weight savings.

That indicates, it has the potential to transform the future of shipping.

ISO-1182 Standard met

Non-combustible insulation's Certificate from the Minister of Land , Infrastructure, and Transport

Certification

Each Dream 株式会社
代表取締役 中野 省吾 様

国住参建第 3579 号
令和 4 年 3 月 4 日

Minister of Land, Infrastructure, and Transport

斉藤 鉄夫



The following structural methods, etc. are, in accordance to the provisions of Article 68-25, Paragraph 1 (including the case where it is applied mutatis mutandis pursuant to Article 88, Paragraph 1 of the same Act) of the Building Standards Law, that it conforms to the provisions of Article 2, Paragraph 9 of the same Act and Article 108-2, items 1 through 3 (non-combustible material) of the Order for Enforcement of the same Act.

記

Certification number

1. 認定番号

NM-5415

2. Name of the approved structural method:

Sodium silicate coating / Sodium silicate plate mixed with smoked charcoal

3. Details of the approved structural method etc.:

As shown in the attached sheet.

(注意) この認定書は、大切に保存しておいてください。

Heat conductivity: Non-combustible heat insulation board

依頼者	会社名	Each Dream株式会社			
	所在地	愛知県一宮市千秋町加納馬場字大山9番地2			
試験	品目名	燻炭混入セラミックボード			
	Product name ※	Non-combustible heat insulation board			
	Manufacturer ※	Each Dream株式会社			
	製造年月日 ※	2020年7月14日	ロット番号 ※	7-14	
Measured dimensions		295.4 mm × 297.3 mm			
Measured thickness d		27.9 mm			
試験	Curing condition	Air-drying curing for 21 days in a constant-temperature, constant-humidity room at 20°C and 55% RH			
	Measured density (Measured mass)	測定直前	836 kg/m ³ (2047.6 g)	Right before measurement	
		測定直後	827 kg/m ³ (2027.5 g)	Right after measurement	
	Relative mass change	During curing	0.254	During test	-0.010
		備考	<ul style="list-style-type: none"> 試験体の断面を図1に、外観を写真1に示す。 試験直前の含水率は8.3%、試験直後の含水率は7.4%であった。 ※依頼者情報による。		
Test method	JIS A 1412-2:1999「熱絶縁材の熱抵抗及び熱伝導率の測定方法—第2部：熱流計法（HFV法）」による。試験装置の概要を図2に示す。				
試験	Test date	2020年9月1日			
	Set temperature (temp.) condition	70°C			
	Heat flow density q (W/m ²)	130.8			
	High temp. side of test subject θ_1 (°C)	80.0			
	Low temp. side of test subject θ_2 (°C)	60.0			
Average temp. of test subject $\theta = (\theta_1 + \theta_2) / 2$ (°C)	70.0				
結果	Test body temp. difference ΔT (K)	20.0			
	Heat resistance R (m ² ·K/W)	0.15			
	Heat conductivity rate λ [W/(m·K)]	0.18			

Collaboration with the world's official
theme park moulding company!

“Unburnable dream partitions”

Let's make a dreamland for children! On the reverse side, a calm suitable design for adults. Double-sided designs available on request!

Protect children from the sacrifice of fire !

Bringing dreams and absolute safety to your child's room !



Safe for interiors!

The non-combustible Next-Generation FRP (FRC) is **odorless, non-toxic and smokeless** when ignited! Formaldehyde emission is almost zero, as shown below!

Tab-1 Formaldehyde emission rate test results

Lot number	組番号	Formaldehyde emission rate* (mg/L)	
		Control value	Control value average
7-20	1	0.0	0.0
	2	0.0	



*Rules of rounding result numbers is based on “JIS Z 8401:2019 Rules of rounding numbers.” Background concentration level was 0.07mg/L and did not go over 0.05 mg/L.

Each DreaM Non-combustible steel siding

Features



The steel siding itself does not burn and does not produce any toxic gases. They are also safe, as there is little heat transfer to the building materials on the reverse side.

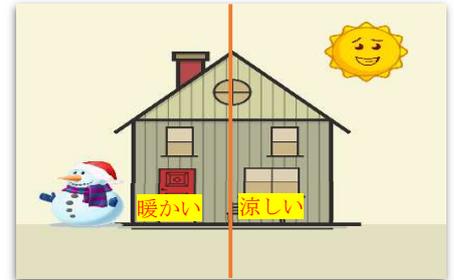
Non-combustible



Energy savings



Easy to install

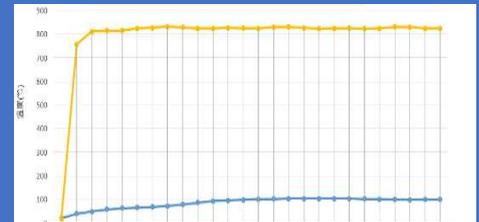


Good thermal insulation



Lightweight and earthquake-resistant

According to the experiment, the backside temperature of the EDM steel siding at about 800°C* after 15 minutes is about 100°C



Applications



Building



Housing



Public Buildings



Warehouse

*「 We want to contribute to the development of an industry where non-flammability protects human life and property.」

*「We want to save lives from tragic accidents and disasters.」



What is Basalt Fiber?



Basalt rock



Basalt fiber

Basalt is a **basalt rock**.

Basalt fiber is a non-combustible **natural material** made from basalt, which is crushed, melted at a high temperature of 1500°C and spun into yarn.

Basalt fiber is an environmentally friendly material that has been attracting a lot of attention in recent years, **in line with the SDGs (Sustainable Development Goals)**.

Eight features of Basalt fiber (Basalt rock fiber)

- 【 1 】 High insulation and sound insulation
- 【 2 】 Continuous high tensile strength
- 【 3 】 Environmentally friendly materials in line with the SDGs
- 【 4 】 High heat resistance stability
- 【 5 】 Low moisture absorption rate
- 【 6 】 1/3 the specific gravity of steel, 3 times the tensile strength
- 【 7 】 High insulation and high transmission of electron magnetic radiation rate
- 【 8 】 Excellent acid and alkali resistance

Prices and quality of Basalt fibers we wholesale

Ingredients	Content(%)
SiO ₂	51.6~59.3
Al ₂ O ₃	14.6~18.3
CaO	5.9~9.4
MgO	3.0~5.3
Na ₂ O+K ₂ O	3.6~5.2
TiO ₂	0.8~2.25
Fe ₂ O ₃ +FeO	9.0~14.0
Others	0.09~0.13

EDM's wholesale Basalt ingredients

【Why should you choose

Each DreaM's Basalt fibers?】

- 1) The President and the Managing Director have a strong network in China, which enables them to distribute high quality Basalt fibers at lower prices than other companies.**
- 2) We have tried many Basalt fibers from different countries, including those made in Japan, but the quality of Basalt fibres from China, which we deal in, was the best.**
- 3) In addition to the range of Basalt fibers we offer, we can also process any knitting method according to customer requirements.**

Product range

Basalt Cloth



Basalt chopped strand mat



Basalt surface mats



Basalt grid



Basalt insulation board



Fire insulating



Basalt chopped strand



Basalt needle mats



Basalt rod (bar)



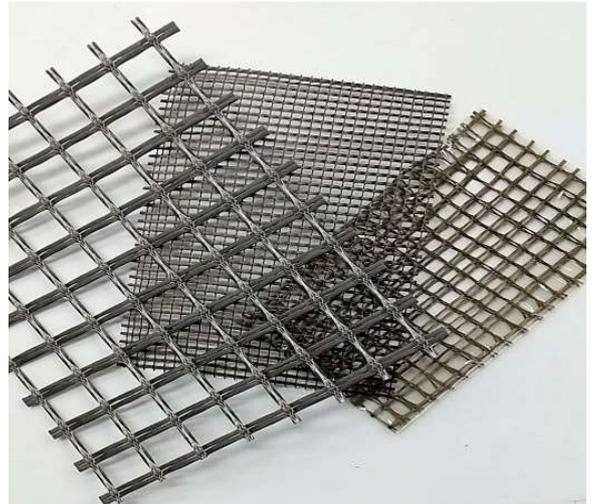
Basalt Yarn



Basalt Mesh

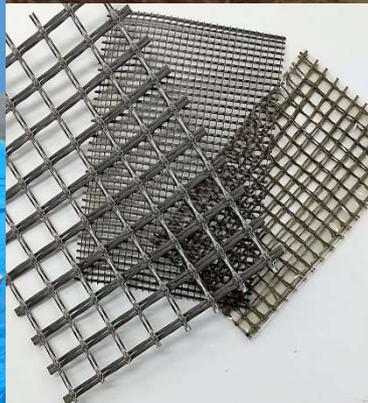


A wide range of knitting techniques can be processed





**Each DreaM's Next-Generation FRP (FRC)
and Our engineers create
Life-saving Next Generation Products**





Each DreaM Inc.

Japan, Goura42 Shimamura, Ichinomiya, Aichi 491-0121

TEL : +81-586-82-5301

FAX : +81-586-82-5302

<https://en-us.each-dream.com/>

