



# NIPPON KAIJI KYOKAI

## Certificate

### OF APPROVAL

Certificate No.  
TA1963E(R)

Item	:	Non-combustible material
Product name	:	Glasron Wool
Specifications	:	See Annex.
Applicant	:	Asahi Fiber Glass Co., Ltd. 3-6-3 Kandakaji-cho, Chiyoda-ku, Tokyo, Japan
Manufacturer	:	Asahi Fiber Glass Co., Ltd., Shonan Plant 6-11-1 Ichinomiya, Samukawa-machi, Kouza-gun, Kanagawa, Japan
Testing standard	:	2010 FTP Code Annex1 / Part1
Test reports	:	See Annex.

THIS IS TO CERTIFY that the above type of products has been approved by Nippon Kaiji Kyokai with type approval No. 03FPA79CM, and that the products of the above type will be accepted for use onboard ships classed with the Society as complying with the relevant requirements of the Society's *Rules for the Survey and Construction of Steel Ships* and those of the *International Convention for the Safety of Life at Sea, 1974, as amended*, subject to conditional upon the manufacturers having a quality control system audited by a competent authority to ensure continuous compliance with the type approval conditions.

This certificate is valid from 25 December 2018 until 24 December 2023.

Issued at Tokyo on 4 January 2019.

NIPPON KAIJI KYOKAI

  
H. Kobayashi  
General Manager  
Material and Equipment Department





### 1. Test reports

Test laboratory : Research Institute of Marine Engineering  
1-5-12, Fujimicho, Higashimurayama, Tokyo, Japan

Report numbers : 18-385(E), 18-386(E), 18-387(E), 17-225(E),  
17-201(E)-Rev.1, 17-202(E)-Rev.1, 17-329(E)-Rev.1

Date of issue : 7 September 2017 (17-225(E))  
17 December 2018 (18-385(E), 18-386(E), 18-387(E),  
17-201(E)-Rev.1, 17-202(E)-Rev.1,  
17-329(E)-Rev.1)

### 2. Specifications

#### Constructions

- Grasron Wool  
homogeneous material
- Grasron Wool with Glass Cloth
  - Surface material : Glass Cloth
  - Weight per unit area of glass cloth : 210 (g/m<sup>2</sup>)
  - Adhesive : Synthetic rubber solvent adhesive
  - Weight per unit area of adhesive : 45 (g/m<sup>2</sup>)
  - Minimum sickness of Grasron Wool : 50mm
- Grasron Wool with Aluminum Foil Reinforced Glass Cloth
  - Surface material : Aluminum Foil Reinforced Glass Cloth
  - Aluminum foil thickness : 20 (μm)
  - Weight per unit area of Aluminum Foil Reinforced Glass Cloth : 85 (g/m<sup>2</sup>)
  - Adhesive : Synthetic rubber hot melt adhesive
  - Weight per unit area of adhesive : 45 (g/m<sup>2</sup>)
  - Minimum sickness of Grasron Wool : 50mm
- Grasron Wool for pipe insulation  
homogeneous material

#### Density and organic contents

Product type	Density of glass wool (kg/m <sup>3</sup> )	Maximum Organic contents (%)
Grasron Wool	16	4.66
	32	8.82
Grasron Wool with Glass Cloth	16	5.32
	32	7.8
Grasron Wool with Aluminium Foil Reinforced Glass Cloth	16	5.81
	32	8.68
Grasron Wool for pipe insulation	48	8.09