## **REALTIE** With Remitite, Your Dreams Do Come True.

10.0

www.remitite.com

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Making great strides toward the most excellent fine chemical company with a creative mind and a pioneering spirit.





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## CEO's Greetings



#### Welcome to Remitite Co., Ltd.

With Remitite, your dreams do come true.

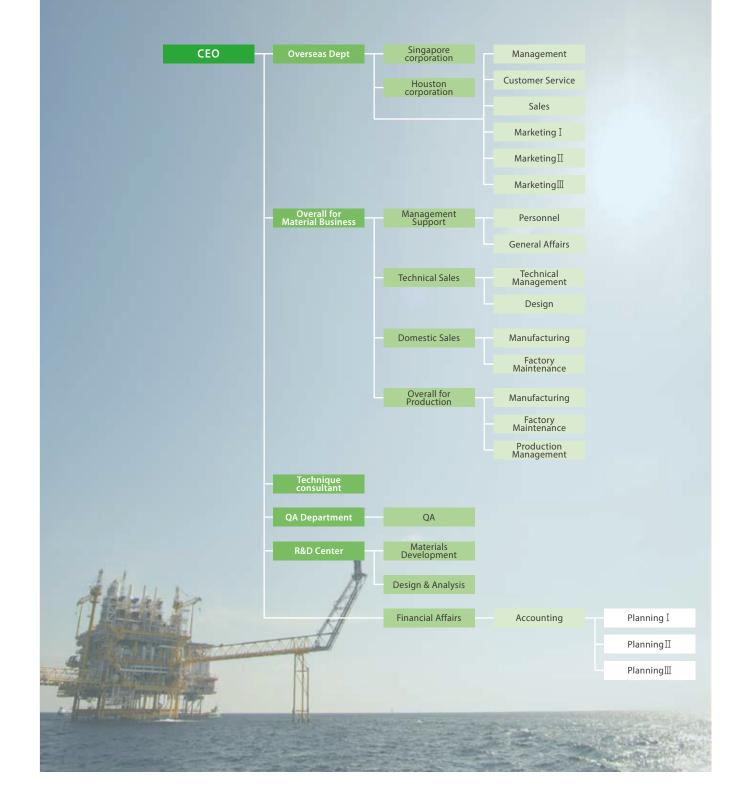
Remitite keeps this promise - we continually research, develop and produce the world's best products by constantly meeting challenges and creatively innovating for the safer world. We also have put our utmost effort into being a trusted company providing top quality products and solutions to our customers.

To continually develop and strengthen the core values of our company, all Remitite family members persistently strive for a cooperative spirit and seek perfection in creating our products. In doing so, we are building a community with mutual trust and uncompromising excellence.

We follow domestic and international laws and regulations and do our best to take social responsibility and live in harmony with nature.

We appreciate any comments and suggestions so that we may improve our services to you. We will continue to do our best in order to be recognized as one of the most innovative and trusted companies in the industry.

#### Organization



## About **Our Company**

#### What We Do

Remitite since establishment in 1975 has continuously researched and developed products and solutions for the safer world. We have focused on improving our products and special materials used for onshore and offshore facilities. In addition, we are pioneering advanced techniques for producing materials for aerospace and construction.

Remitite is constantly seeking to heighten the leading edge technology to better provide high performing quality products and solutions.

Specifically, we provide world class offshore structures such as tension leg platforms, Elastomeric bearings, and leg mating units and fire-retardant solutions such as flexible seals, sealing systems, sealing compounds, anti-vibration devices and adhesives with J-90, H-120, H-0 and A-60, A-0 certificates by the leading classification societies such as ABS, BV, DNV, GL, KR, LR, MED, NK and RS.

Remitite has been recognized as the reliable leading edge manufacturer in the offshore structures and fine chemical areas by the industry leaders fabricators and major ship owners.

Remitite, the front runner in the offshore structures and chemical industry, will continue to face every challenge with a creative spirit as the world top class manufacturer for the safer world.

#### **Company Information**

Establish	<b>ed</b> 1975		
C	EO Gwangmyeon	g Park	
Presid	ent Gilsoon Kim		
Main Produ & Solution	ons - Cable & pipe - Putty type se - Non-combus - Fire-retardar - Fire-retardar - Fire-retardar - Elastomeric I - Remitite leg	penetration sealing system ealing compounds stible sealants at silicone sealants at, anti-noise & anti-vibratio at & nontoxic adhesives	on devices
Production Capac	<b>ity</b> 2,000 tons/yea	ar	
CERTIFICATE 50 9001.2015 Subtract Car, L18 10 91 Support of the subtract of the Subtract Car, L18		CERTIFICATE	CERTIFICATE CONTINUES CONT
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	2014/90/EU Quality System Module E	ISO14001: 2004 / KSI 14001: 2009	OHSAS18001: 2007



#### **Overseas Branch Offices**

Head Quarter	•	Remitite Co., Ltd. 109–30 Yongdeok-ro, 23 Beon-gil, Hallim-myeon, Gimhae-si, Gyeongsangnam-do 50853 Korea Tel: +82–55–336–9273~4 Fax: +82–55–336–9275 E-mail: ask@remitite.com Website: www.remitite.com
America Branch	•	Remitite America, Inc. 26818 Lindenwood Creek Lane, Katy, TX 77494 USA Tel: 346-387-6161 Mobile: 281-838-2424
Singapore Branch	•	<b>Remitite Singapore Pte. Ltd.</b> 12 Hoy Fatt Road #06-01 Singapore 159506 Mobile:65-9447-0166 E-mail: snkang@remitite.com
HongKong Office	•	HongKong Office Unit 1002 Unicorn Trade Centre 127–131 Des Voeux Road Central, Hong Kong
Indonesia Branch		<b>Pt. Remitite Nusantara Design &amp; Development</b> Greenwood Golf Indah No.33, Perum Araya, Malang 65125

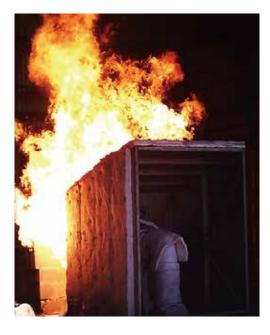
## Products & Solutions

- 08 Flexible Fire Seal Remitite EDT-629
- 16 Cable & Pipe Penetration Sealing System RS-105 & RRS-15
- 24 Extremely Advanced Pipe&Cable Penetration Sealing System RS-205 & RRS-25
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## EDT - 629 Flexible Fire Seal







#### **Features**

- · Fire ratings: J-90 & H-120 class
- $\cdot$  Approved and certified by ABS for J-90 class first post-blast of 4.2 bar
- $\cdot$  Approved and certified by ABS, BV, and DNV for H-120 class
- · Resistant to Jet-fire, Hydrocarbon-fire
- · Weather/Seawater/Shock/Blast resistant
- Excellent vibration durability and high tension tolerance
- · Abrasion/Friction/Corrosion resistance in seawater
- $\cdot$  Strong resistance to hydrocarbon splash, Liquefied gas, Liquid fuel, UV light, and Ozone
- $\cdot$  Can be designed and supplied to fit each installation and to satisfy all customer requirements.
- $\cdot \operatorname{Low}$  maintenance
- Non-asbestos



#### **Specifications**

- · Color: black
- · Capacity: piece [each]
- · Service life: more than 40 years
- Specific gravity: 1.5 g/cm<sup>3</sup> to 1.7 g/cm<sup>3</sup>
- · Compressive strength: over 4.5 bar
- Pressure strength: 0.27MPa to 0.64 MPa[25%]
- · Elongation: 150 ~ 250%
- · Hardness: 44 ~ 55 shore A
- · Elasticity: 55%
- · Storage temperature: room temperature
- $\cdot$  UV test: grade 5, (40±1)  $^{\circ}$ C, 24 hours
- $\cdot$  Cold shock: no crack, (-55±1)  $^\circ\!\!\mathbb{C}$  , 3 minutes





FPSO - BP QUAD 204 Project

#### **Applications**

- · Shipbuildings
- · Offshore oil and gas plants
- · Onshore plants
- · Power facilities
- · Linear skirts seals and expansion tolerant materials
- $\cdot$  HVAC connectors, hatch seals, tank seals, and insulation jackets, gaskets







#### **Escape Tunnel Seal**

 $\cdot$  Allows flexible connections between structures or between metal sections

**Explosion Test** 

explosion and fire.

Remitite performed the EDT-629 explosion test at the company's site on September 5, 2013. EDT-629 endured over 4.5 bar of instantaneous explosive pressure and verified the best fireproof protection material in the event of a high pressure

- $\cdot$  Protects sealed door frame connections for fire safe escape routes
- $\cdot$  Absorbs misalignments, angle deviations, and dynamic loads
- Easily customized to fit unique structures and facilities
   Moisture registrant pressure tolerant, and vibration abcorb
- $\cdot$  Moisture resistant, pressure tolerant, and vibration absorbing properties within structures



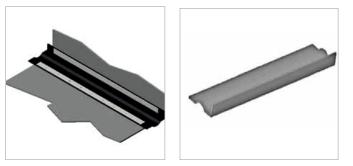
#### **Flexible Seal**

- · Allows sealed connections between various metal sections
- $\cdot$  Can be used to connect modules and protect them against explosion and fire
- · Facilitates free movement and tolerates misalignment and angle deviations
- · Eliminates pressure spikes, reduces vibration, and absorbs dynamic force loading
- · Can easily be installed on a wide range of structures
- $\cdot$  Well suited for us in modification of metal work
- · Designed for ease of installation



#### **Pipe Penetrations**

- · Diameters of the pipe measuring up to 1,016 mm
- $\cdot$  Can be used on the side of the division exposed to blast



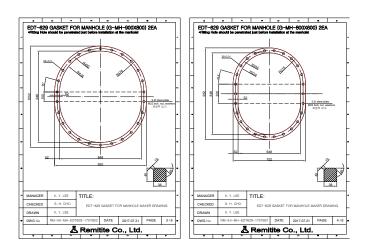
#### **Drainway Seal**

- Connects decks flexibly and absorbs and tolerates working stresses between decks
- $\cdot$  Enables natural drainage from decks

#### Hatch Seal

EDT-629 HS is special Hatch Sealing which is made with EDT-629.

EDT-629 is fire-resistant and non-flammable high quality elastomeric material with various resistant properties about toughness at sea so EDT-629 HS provides excellant fire resistance with various profits for hatch.





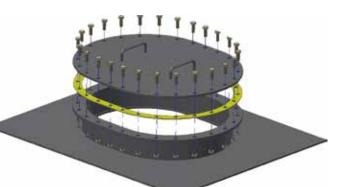


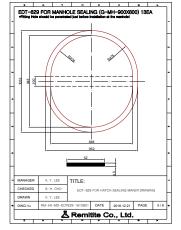
#### Manhole Gasket

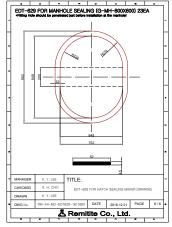
EDT-629 MG is special Manhole Gasket which is made with EDT-629.

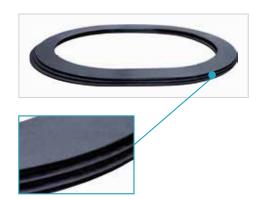
EDT-629 is fire-resistant and non-flammable high quality elastomeric material with various resistant properties about toughness at sea so EDT-629 HS provides excellant fire resistance with various profits for a manhole.

EDT-629 MG can be made in accordance with every manhole size.

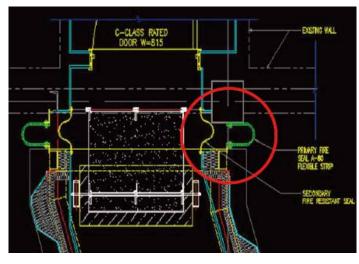








#### **Applications**



BARZAN Offshore Project of HHI [access corridor flexible seal]

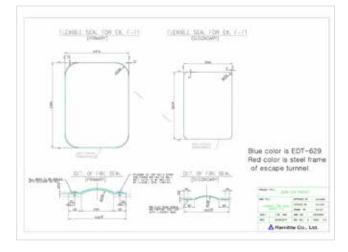


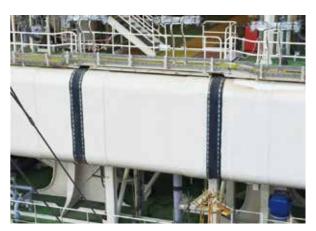


[OUT SIDE]



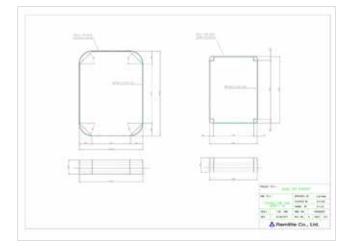
#### Fixed Platform - Rasgas Barzan Project





[OUT SIDE]

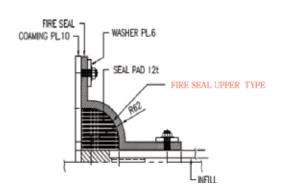
#### **FPSO - BP Quad 204 Project**



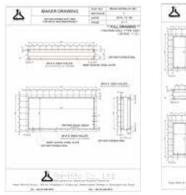


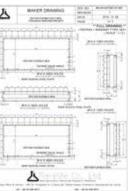
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#### FPSO - Teekay Petrojarl Knarr Project

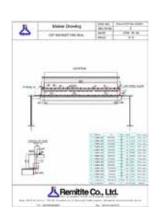


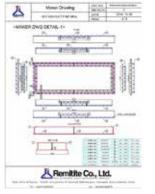








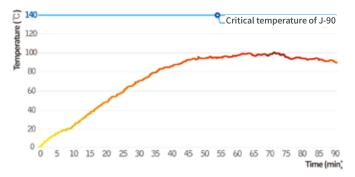






Flexible Fire Seal EDT-629 J-90 has met the strict standards of test ISO 22899-1 : 2007 and performed under direct super vision of the inspectors from LR, DNV and ABS, and verified by the KOMERI on June 28, 2013. On cessation of the jet fire after 90 minutes, the maximum temperature rise recorded in the test specimen was confirmed as 101  $^\circ$ C as shown by the graph below. The critical temperature rise for J-90 class is 140  $^\circ$ C.

Maximum Temperature on the Back Side of the Test Specimen

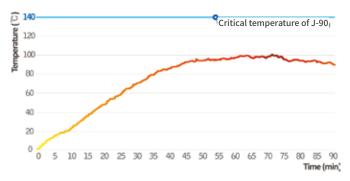


#### H-120

Flexible Fire Seal EDT-629 H-120 has been tested for its fire resistance following the standards of the IMO Res. A .754(18) : 1993. The test was approved by ABS, BV and DNV, and conducted at the KOMERI in Busan, Korea on September16, 2011.

The highest temperature on the back of the test specimen during the 120 minute test was 117 °C as shown by the graph below. The highest average temperature on the back of the test specimen was 72 °C. The critical temperature rise for H-120 class is 180 °C.

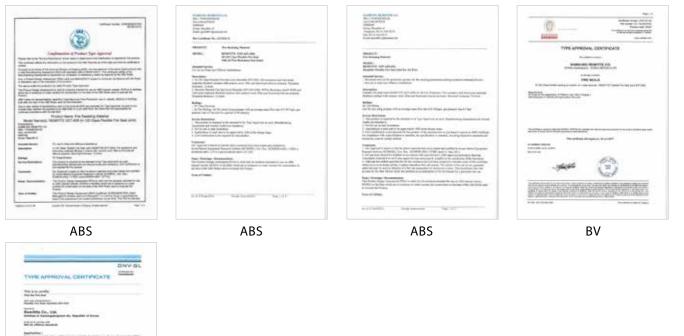
Maximum Temperature on the Back Side of the Test Specimen



#### **Certificate Status**

Class Classification Party		Description
	ABS	Flexible Fire Seal
H-120	BV	Flexible Fire Seal
	DNV.GL	Flexible Fire Seal
	ABS	Flexible Fire Seal
J-90	BV	Flexible Fire Seal
	DNV.GL	Flexible Fire Seal

#### Certificates





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## **RS-105 & RRS-15** Cable & Pipe Penetration Sealing System













#### Features

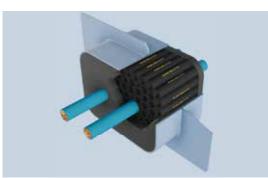
- · Fire rating: A- 0(without insulation), A-60 & H-120 class
- $\cdot$  Excellent intumescences and heat absorption
- $\cdot$  High elasticity and high tensile strength
- · High bonding strength
- · Gas-tight: 0.5 bar
- · Water-tight: 2.5bar
- $\cdot$  UV light and ozone resistance
- $\cdot$  Variety of sizes, which conform to all wiring standards
- $\cdot$  No negative changes in repelling cold and heat



#### **Specifications**

- · Color: dark grey
- · Total drying time: 120 hours [20mm]
- $\cdot$  Surface drying time: 1 to 2 hours
- · Storage life: 12 months
- $\cdot$  Service life: more than 50 years
- $\cdot$  Service temperature: -55  $^\circ\!\!\!{
  m C}$  to 180  $^\circ\!\!\!{
  m C}$
- · Specific gravity: about[1.12±0.03] g/cm<sup>3</sup>
- Tensile strength: 8.15kgf/cm<sup>3</sup> [ = 0.80 Mpa]
- · Tensile failure: 80%
- · Hardness: 40 shore A
- · Elasticity: 25%
- · Storage temperature: room temperature
- $\cdot$  UV test: grade 5, [40 $\pm$ 1]  $^\circ$ , 24 hours
- $\cdot$  Cold shock: no crack, [-55±1]  $^\circ\!\!\mathbb{C}$  , 3 minutes





#### **Applications**

- · Fire-retardant sealing for cables
- $\cdot$  Fire-retardant sealing for steel, SUS, PVC, PP-R, copper pipes
- $\cdot$  Water and gas proof sealing for electronic and wiring elements

#### Products



#### Dimensional Data of RRS-15 [A&H class]

RRS-15 is a special rubber compound which is fire-resistant, intumescent and endothermic.

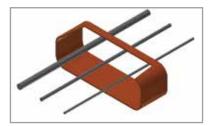
When RRS-15 is exposed to temperatures over 180  $^{\rm C}$  , it expands up to 20 times its original volume.

Carbonized mass is produced in the process which creates excellent thermal insulation ability.

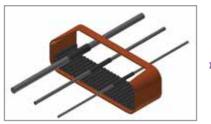
RRS-15 M 18/12 and M 27/19 can be supplied in nonsplit multi-units of 10 pieces bonded together.

Turne	Cable Diameter Length (r		n (mm)	Wall Thickness
Туре	(mm)	A-class	H-class	(mm)
12/6	5-7			3
14/8	7-9			3
16/10	9-11			3
18/12	11-13			3
20/14	13-15		210	3
22/16	15-17			3
27/19	17-21	140/160		4
31/23	21-25			4
35/27	25-29			4
39/31	29-33			4
46/36	33-39			5
52/42	39-45			5
58/48	39-45			5
64/54	51-57			5
70/60	57-63			5
M18/12	multi-type			3
M27/19	multi-type			3

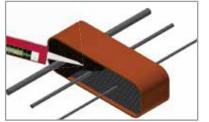
#### Installation Procedures [Bulkhead Type]



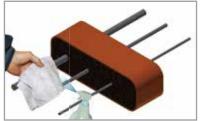
Calculate the amount of sealant & sleeve necessary after aligning cables in work area.



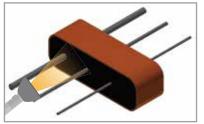
Wrap the cables with suitable RRS-15 sleeves in accordance with cable sizes.



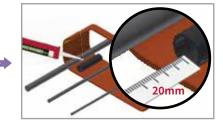
7 Spread sealant RS-105 to both side of the coaming.



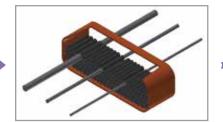
Spray water on a piece of soft cloth.



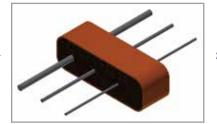
Check surface condition with a light.



2 Attach a RRS-15 to inside of the coaming for basis to set other sleeves with 20mm depth using RS-105 sealant and ruler.



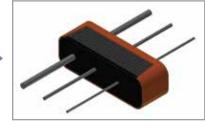
5 Fill empty space with RRS-15 sleeves & fillers to the full in the coaming.



8 Seal tightly at coaming with RS-105.



Smooth the surface of RS-105 evenly with a wet soft cloth.



14 complete.



3 After applying a little RS-105 sealant to each surface of RRS-15 sleeves, attach RRS-15 sleeves to inside of the coaming in a line on the basis of previous a RRS-15.



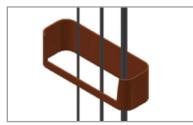
6 Push the surface of RRS-15 edges using a hand for checking denseness.



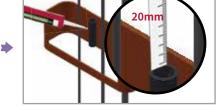
9 Trim sufficient RS-105 on exposed surface at the end of the coaming using device like as a kind of spatula or scraper.



Check the hardening condition of RS-105 with a hand.



 Calculate the amount of sealant & sleeve necessary after aligning cables in work area.



2 Attach a RRS-15 to inside of the coaming for basis to set other sleeves with 20mm depth using RS-105 sealant and ruler.



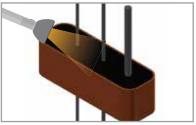
Wrap the cables with suitable RRS-15 sleeves in accordance with cable sizes.



Spread sealant RS-105 to both side of the coaming.



Spray water on a piece of soft cloth.



Check surface condition with a light.



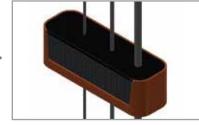
5 Fill empty space with RRS-15 sleeves & fillers to the full in the coaming.



8 Seal tightly at coaming with RS-105.



Smooth the surface of RS-105 evenly with a wet soft cloth.

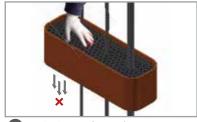


14 complete.

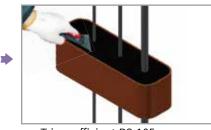
Z



After applying a little RS-105 sealant to each surface of RRS-15 sleeves, attach RRS-15 sleeves to inside of the coaming in a line on the basis of previous a RRS-15.



6 Push the surface of RRS-15 edges using a hand for checking denseness.



9 Trim sufficient RS-105 on exposed surface at the end of the coaming using device like as a kind of spatula or scraper.



Check the hardening condition of RS-105 with a hand.

#### Installation Procedures [Bulkhead Type]



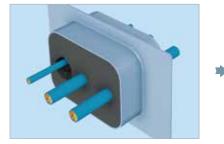
Coaming that needs to be repaired.



Remove RS-105 Sealant where to be modified with a cutting tool like as a knife.



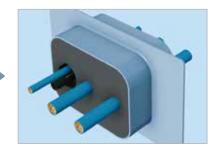
3 Remove RRS-15 Sleeve.



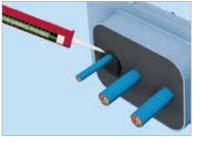
**4** Replace with new cables or pipes.



**5** Wrap modified cables or pipes with RRS-15 Sleeves.



6 Fill in the removed part with RRS-15 Sleeves.



Apply RS-105 Sealant with a sealant gun and level the surface.



8 Spray water on a piece of soft cloth and scrub the surface of RS-105 Sealant evenly with the wet cloth.



Completed.

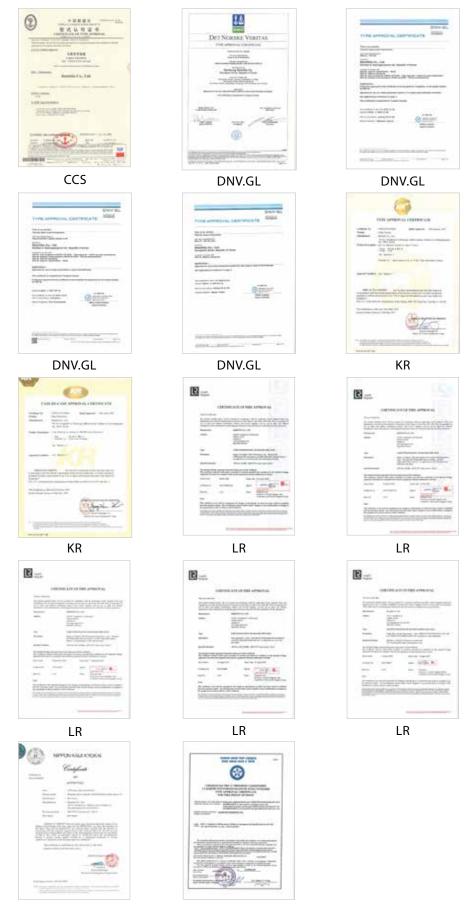
#### **Certificate Status**

Class	<b>Classification Party</b>	Description
	BV	Cable Penetration Sealing System
H-120	DNV.GL	Cable Penetration Sealing System
	LR	Cable Penetration Sealing System
H-60	DNV.GL	Pipe Penetration Sealing System
M-00	LR	Pipe Penetration Sealing System
	ABS	Cable & Pipe Penetration Sealing System
	BV	Cable & Pipe Penetration Sealing System
	CCS	Cable Penetration Sealing System
A CO	DNV.GL	Cable & Pipe Penetration Sealing System
A-60	KR	Cable Penetration Sealing System
	LR	Cable & Pipe Penetration Sealing System
	NK	Cable Penetration Sealing System
	RMRS	Cable Penetration Sealing System
A-60 Asymmetry	LR	Cable Penetration Sealing System
	ABS	Cable Penetration Sealing System
A 0	BV	Cable Penetration Sealing System
A-0	KR	Cable Penetration Sealing System
	LR	Cable Penetration Sealing System
B-0	ABS	Pipe Penetration Sealing System

#### Certificates



#### Certificates



NK

RMRS



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# **RS-205 & RRS-25** Extremely Advanced Pipe&Cable Penetration Sealing System











Remitite RS-205 sealant and RRS-25 sleeves are extremely advanced cable and pipe penetration sealing system products.

RS-205 and RRS-25 help the customer could seal penetration area more easily and widely with dramatically reduced penetration coaming or sleeve length. RS-205 and RRS-25 sealing system could make perfect tightness against cellulosic fire up to A-60 rating in Bulkheads and Decks with excellent fire-resistance, expandability and endothermic performance.

RS-205 and RRS-25 expand up to 25 times its original volume when exposed to temperatures above 160°C. Expanding performance consume thermal energy by fire and make porous layers which could slow down the heat conduction. Also, this system is not accompanied by the formation of large amounts of fumes.

#### Characteristics

Color	Matt Black
Total drying time	120 hours (20 mm)
Surface drying time	1 to 2 hours
Storage life	12 months
Service temperature	−60 ° C ~ 160 ° C
Specific gravity	about (1.15±0.03) g/cm3
Tensile failure	75%
Hardness	40 shore A
Elasticity	20%
Storage temperature	Room temperature
UV test	Grade 5, (40±1) ° C, 24 hours
Cold shock	No crack, (-60±1) ° C, 3 minutes

#### Applications



A-60 for PIPE



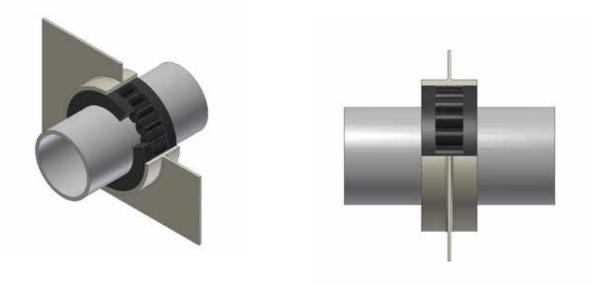


A-60 for PIPE & CABLE

- · Fire rating: A-0(without insulation), A-60
- · Excellent intumescences and heat absorption
- · High elasticity and high tensile strength
- · High bonding strength
- $\cdot$  Gas-tight
- Water-tight
- · UV light and ozone resistance
- · Variety of sizes, which conform to all wiring standards
- · No negative changes in repelling cold and heat

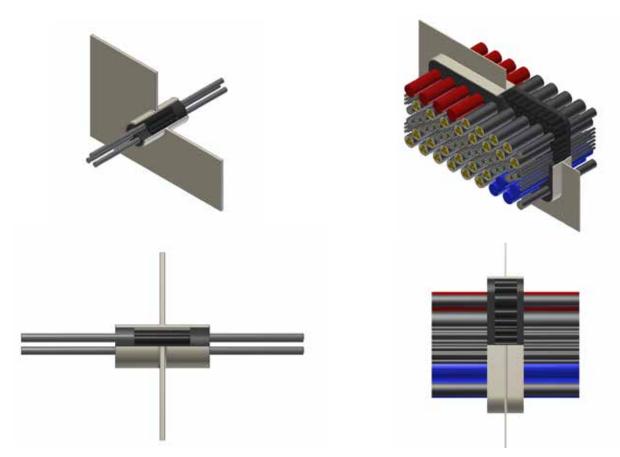
#### Applications

- · Fire-retardant sealing for cable penetration
- Fire-retardant sealing for Metal & Plastic(PVC, PP-R, etc) Pipe penetration
   Water and gas proof for piping, electronic & wiring elements



#### Dimension table of RRS-25 sleeve (A class fire rating)

RRS-25 sleeve		Applicable	
Length (mm)	TVDF(mm)	Pipe Size (O.D)	
A-class	TYPE(mm)	ANSI	JIS
		21.3	21.7
		26.7	27.2
40		33.4	34.0
		42.2	42.7
		48.3	48.6
	PAD P7(t) / P8(t) / P9(t)	60.3	60.5
		73.0	76.3
	&	88.9	89.1
	ROD R7(Ø) / R8(Ø) /R9(Ø)	101.6	101.6
		114.3	114.3
		141.3	139.8
		168.3	165.2
		219.1	216.3
	1	273.0	267.4
		323.8	318.5



#### Dimension table of RRS-25 sleeve (A class fire rating)

(unit : mm)

RRS-25 sleeve			Applicable
Size (O.D/I.D)	Length (mm) A-class	Wall Thickness	Cable Diameter
12/6		3	5-7
14/8		3	7-9
16/10		3	9-11
18/12		3	11-13
20-14		3	13-15
22/16		3	15-17
27/19		4	17-21
31/23		4	21-25
35/27		4	25-29
39/31	40	4	29-33
46/36	40	5	33-39
52/42		5	39-45
58/48		5	45-51
64/54		5	51-57
70/60		5	57-63
M27/19		3	17-21
M18/12		3	11-13
M27/8		9	All size
M18/6		6	All size
R10		10	Filler (All sizes)

# **Remiseal FS-7200** Putty Type Sealing Compound













#### **Features**

- · Fire rating: A-60 class
- · Eco-friendly
- · Easy installation and replacement
- $\cdot$  Excellent performance and durability
- · Ultralight weight

#### **Specifications**

- · Color: light grey
- · Surface drying time: 1 to 2 hours
- · Capacity: 10kg [500g x20pack]/Box
- · Storage life: 6 months
- $\cdot$  Service temperature: -30  $^\circ\!\!\!{\rm C}$  to 450  $^\circ\!\!\!{\rm C}$
- · Specific gravity: 1.1g/cm<sup>3</sup>
- · Hardness: 90 shore A
- · pH: 11.5
- · IP class: IP44



#### **Applications**

- · Ships
- $\cdot$  Marine plants
- Nuclear power facilities
- · Specialized building's cables
- $\cdot$  Fire-retardant sealing for PVC, PP-R & PB pipes
- $\cdot$  Repairing electronic & wiring elements

#### Comparative Analysis between FS-7200 and Other Brand

	Remiseal FS-7200	Others	Remark
Color	Llght grey	Light grey	
Specific Gravity	1.1	1.1	
рН	11.5	11.8	
Hardness	90 shore A	90 shore A	
Fire Test [1]	Passed [coaming size 200mm]	Passed	IMO A.754[18] A-60 deck & bulkhead
Fire Test [2]	Passed [coaming size 90mm]	-	IMO A.754[18] A-60 deck & bulkhead [10.19.2011] 10.19.2011]
Halogen	None	None	
Storage life	6 months	-	
IP44 Test	Passed	-	

#### **Installation Procedures**



 Clean the inside of the coaming with a dry duster where cables are already installed.



2 Apply layers of FS-7200 on the wall of the inside of the coaming, either form the right to the left or from the left to right.



3 Completely fill the coaming with FS-7200, and mold the material in, between the cables and the coming to avoid any air gaps using a flat or round rod.



4 Repeat step 2 and 3 as necessary.



Using a duster or other instrument dress the surface flat.



6 Repeat step 2 and 3 as necessary.

#### Images of Installations



#### **Certificate Status**

Class Classification Party		Description
	ABS	Putty Type Sealing Compound
	BV	Putty Type Sealing Compound
	DNV.GL	Putty Type Sealing Compound
A-60	KR	Putty Type Sealing Compound
	LR	Putty Type Sealing Compound
	NK	Putty Type Sealing Compound
	RS	Putty Type Sealing Compound

#### **Modification or Repair Procedures**



1 If modification is needed and FS-7200 is still soft, using either a cutting knife or something similar, excavate FS-7200 where it is already applied.



If FS-7200 has already hardened, excavate the area with a hole saw or motor drill or similar means.



3 Either install or replace the cables as needed.



After modification, fill in the remaining space with FS-7200 carefully, and smooth the surface of the material in the coaming with a flat tool.



4 Completed.

©Surface drying time: one to two hours. •After four or five months, installed Remiseal FS-7200 should be hardened.

#### Certificates

LR



NK

## HFS-90 Non-combustible Sealant





- · Highest level of fire-resistance
- · Strong adhesion
- · Halogen free
- Nontoxic and almost smokeless
- · High temperature service compound
- · Anti-bacterial
- $\cdot$  Water-resistant

#### **Specifications**

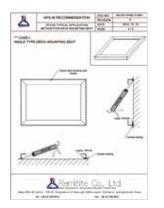
- · Color: dark grey
- · Surface drying time: 1 to 2 hours
- · Capacity: cartridge [310ml]
- · Storage life: 12 months
- · Service temperature: -55°C to 400°C
- · Specific gravity: about 1.24g/cm<sup>3</sup>
- · Hardness: 40 shore A
- · Storage: room temperature
- · Main ingredients: silicone
- · Solid: over 98%



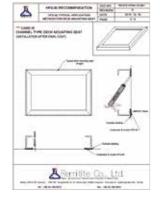
#### **Applications**

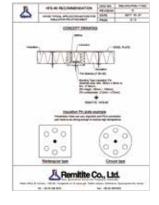
- · Sealing high temperature elements
- $\cdot$  Ships
- · Cars
- · General industry
- · Advanced construction

#### **Supporting Documentation**









#### **Certificate Status**

Class	Classification Party	Description
BV(MED)	Non-combustible Silicone Sealant	23289/B0 EC

#### Certificates





## Si-701 Fire-retardant Silicone Sealant





DNV.GL



#### **Features**

- · Powerful sealant
- · Fire-retardant
- · Nontoxic and almost smokeless
- · Excellent elasticity and high tensile strength
- · Anti-bacterial
- · Water-resistant
- · Electric transmission resistant
- · UV light and ozone resistant

#### **Applications**

- · Ships
- · Cars
- · General industry
- · Advanced construction

#### **Specifications**

- · Color: matched for customer's request
- · Surface drying time: 1 to 2 hours
- · Capacity: cartridge [310ml]
- · Storage life: 12 months
- $\cdot$  Service temperature: -55  $^{\circ}$ C to 250  $^{\circ}$ C
- Specific gravity: about 1.0g/cm<sup>3</sup> to 1.3g/cm<sup>3</sup> [1.05g/ml]
- Tensile strength: 21.4kgf/cm<sup>2</sup> [2.1N/mm<sup>2</sup>]
- Adhesive strength: 588N [20mm], 755N [25mm], 1372N[40mm], 1488N [45mm], 1646N [50mm]
- · Tensile failure: 410%
- · Hardness: 35 shore A[22°]
- · Shrinkage: 3%
- · Viscosity: nonslump paste
- · Elasticity: 0.8 N/mm<sup>2</sup> [modulus of elasticity]
- · Storage temperature: room temperature
- · UV test: grade 5, [40±1] °C, 24 hours
- · pH: neutral
- · Main infredients: silicone
- · Solid: over 98%



#### **Certificate Status**

Class	<b>Classification Party</b>	Description
A-60	BV	Fire-retardant Silicone Sealant
A-60	DNV.GL	Fire-retardant Silicone Sealant
Fire retardant	ABS	Fire-retardant Silicone Sealant
FILE LELATUATIL	BV	Fire-retardant Silicone Sealant

#### Certificates



# FS-X1 Fire-retardant, Antinoise & Anti-vibration Device





#### **Features**

- · Fire-resistant, nontoxic and almost smokeless
- · High tensile strength
- · High durability

• Standard or custom made for customer's needs (anti-vibration mount, support, mat)

- · Easy installation
- · Easy maintenance



#### **Specifications**

- · Color: dark grey
- · Service life: more than 40 years
- $\cdot$  Service temperature: -60  $^\circ\!\!\mathbb{C}$  to 250  $^\circ\!\!\mathbb{C}$
- Specific gravity: 1.6g/cm<sup>2</sup> to 1.8g/cm<sup>2</sup>
  Compressive strength: 0.27 MPa to 0.64 MPa [25%]
- · Hardness: 25 to 70 shore A
- · Storage temperature: room temperature
- · Cold shock: no crack,  $[-55\pm1]$  °C, 3minutes
- · Maximum tensile load: 5480N



#### **Certificate Status**

Classification Party	Description	Certificate No.
ABS	Fire-retardant, Anti-noise & Anti-vibration Device	12-BK923935-PDA
BV	Fire-retardant, Anti-noise & Anti-vibration Device	22594/B0 EC

#### Certificates



ABS

100.09







### Anti-vibration Mounting for Walls & Ceiling Panels

Support for the ceiling and wall panels of ships or marine structures, which minimizes vibration by certified fire-retardant rubber.

#### Applications

 $\cdot$  Ceiling and wall panels of ships or marine structures





### Anti-vibration Mounting for Walls & Equipment

Available in many different sizes to protect the foundations of driving machines, electric equipment, switchboards and lamps aboard ship using certified resilient rubber to minmize vibration.

#### **Applications**

- Foundations of fans, air handling units and auxiliary machine units
- Foundations of electrical consoles and electrical switchboards
- $\cdot$  Foundations of lighting supports



Protect metallic components from vibration with rubber coated hanger hooks on contact points between components.

#### **Applications**

- · Hooks for fixing ceiling panel channels
- $\cdot$  U-bolts for fixing pipes
- $\cdot$  Clamps

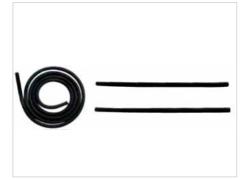


#### Anti-vibration Pad

Available in many sizes and different thickness for insulation against vibration and shock. These pads are also seawater resistant.

#### **Applications**

Foundations and profiles of machinery
 Wrapping cables
 Sealing gaps



#### O-ring for Plank Seal

O-rings are fire-resistant and very useful for plank sealing for offshore helideck. They are used to absorb vibrations and shocks.

#### **Applications**

· Plank for helideck



#### Fire-retardant Back Box

Because of its fire-resistant and fire preventive properies, Fire-retardant Back Box is highly effective inprotecting electrical swiches and equipment from fire. It is also helpful in preventing fire from spreading to other areas through the holes by expanding up to 20 times its original volume when exposed to over 180  $^\circ\!C$ .

#### **Applications**

- · Switches, Receptacles
- · Electric equipment
- · R/TV outlets



### Flexible Duct Joint

Designed for a wide variety of flexible duct joints for HVAC system.

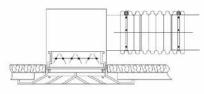


Diagram of Flesible Duct Joint

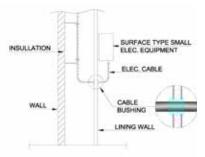


#### Wall Penetration Bushing

FS-X1 PB type is Fire retardant Wall Penetration Bushing. When wall is penetrated for cabling, FS-X1 PB supply fire-retardant, anti-vibration easily.

Applications

· Bushing for wall panel



#### Damping Clip

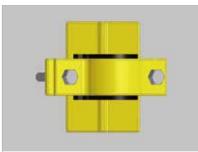




Remitite FS-X1 is a remarkable anti-vibration and fireresistant device. It performs well for protecting metallic components from vibration and in fire-resistant and fire prevention applications. FS-X1 has passed durability tests as well as the stringent regulations of the International Maritime Organization. FS-X1 Damping Clip provides easy installation and replacement without any special adhesive.







#### Features

- · Fire-resistant, nontoxic and almost smokeless
- · High tensile strength
- · High durability
- Standard or matched at customer's request (Thickness, Width, Length, Shape)
- Easy installation
- · Easy maintenance

#### **Specifications**

- · Color: matt black
- · Service life: more than 40 years
- $\cdot$  Service temperature: -60°C ~ 350°C
- · Density: 1.43 g/cm<sup>3</sup>
- · Compressive set: 14~18%
- · Tensile strength: 2.8 MPa
- $\cdot$  Elongation: 400%
- · Abraison:M~H M(Middle), L(Low), H(High)
- $\cdot$  Storage Temperature: room temperature
- · Cold shock: No crack, (-55±1°C), 3 minutes

#### **Applications**

- · Non-insulated pipe clamp
- $\cdot$  Insulated pipe clamp
- · Useful to all pipes (STEEL, SUS, COPPER, PVC, FRP, GRP, PP, PP-R, PB, ETC)

### Damping Clip



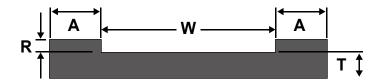


Remitite FS-X1 Damping Clip has anti-noise and vibration property with fire resistance which has been certified by class.

rovidos porfact

FS-X1 Damping Clip provides perfect protection fire, vibration, noise for pipe with pipe isolation. FS-X1 Damping Clip has standard size table. If customer want special type, FS-X1 Damping Clip can be made to any size or shape.

#### Standard size table



Type Number	Clamp Width (W)	Basic Thickness (T)	Guide Width (A)	Guide Depth (R)
FS-X1-DC35	35 mm	2 mm	5 mm	2 mm
FS-X1-DC45	45 mm	2 mm	5 mm	2 mm
FS-X1-DC55	55 mm	2 mm	5 mm	2 mm
FS-X1-DC65	65 mm	2 mm	5 mm	2 mm
FS-X1-DC75	75 mm	2 mm	5 mm	2 mm
FS-X1-DC85	85 mm	2 mm	5 mm	2 mm
FS-X1-DC95	95 mm	2 mm	5 mm	2 mm
FS-X1-DC105	105 mm	2 mm	5 mm	2 mm
FS-X1-DC115	115 mm	2 mm	5 mm	2 mm











# **RB-30, RB-50** Fire-Resistant, Non-combustible **Special Rubber Bushing**

#### **Rubber Bushing Series**

Remitite Special Bushing RB-30, RB-50 are remarkable Cable Protection devices.

It performs well for protecting cables with anti-vibration from mechanical damage caused by cutted sharp wall panel's hole edge when cables penetrate the wall panel. Customer can choose RB series between Fire Resistant Type and Non-combustible Type regading fire prevention application.

With RB series, customer can forget the cable protection including fire for human safety.

#### Fire Resistant Type Bushing

- Fire Resistance
- Non-toxic
- Almost Smokeless
- High durability
- Oil and Paint Resistance

#### Dark Grey color Easy installation

- Anti-vibration

#### Anti-noise

Flexible



#### Non-Combustible Type Bushing

#### Non-Combustible

Almost Smokeless

Oil and Paint Resistance

High durability

Non-toxic

- Grey color
- Easy installation
- Anti-vibration
- Anti-noise
- Flexible



#### Description

- Because Remitite Rubber Bushing is very flexible, it can be very easy to install and remove for maintenance.
- RB Series can be sticked to the wall panel surface by surface tension.
- Soft rubber bushing can supply perfect cable protection from vibration and shape wall panel edge.
- Customer widely and easily choose the type for application purpose with different material types.

#### Feature

- There are 4 type stadard sizes.
- No extra charge with standard size.
- Every size which the customer require is possible with Extra charge.

STANDARD SIZE TABLE						
A 5	TYPE	ØΑ	ØΒ	øс	L	L1
m RI R3	RB-30L	35	25	30	27	17
7 0	RB-50L	55	45	50	27	17
L RI	RB-30P	35	25	30	52	42
- B - R1	RB-50P	55	45	50	52	42



#### **Application Recommendation**

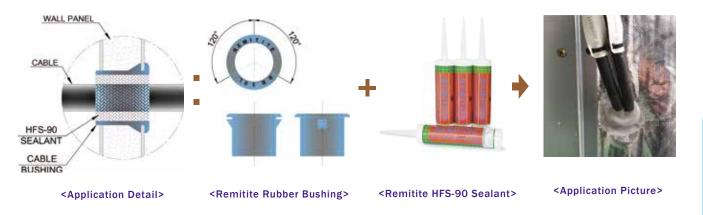
Remitite **Fire Resistant Type** Special Bushing basically could be applied to Wall Panel, Cable entry for Electric Equipments.

Remitite **Non-Combustible Type** Special Bushing could be applied to B-15 Wall Panel and Cable entry for B-15 Elec. Equipments(Lighting Fixture, Back Box, UNit Toilet) with Remitite Non-Combustible sealant HFS-90. Remitite HFS-90 is certified Non-Combustible Sealant and the feature is like normal silicone sealant, it supply very easy installation with great fire prevention ability.

'RB series + HFS-90' combination give the perfect fire solution to customer about B-15 wall panel penetration and Back Box system.

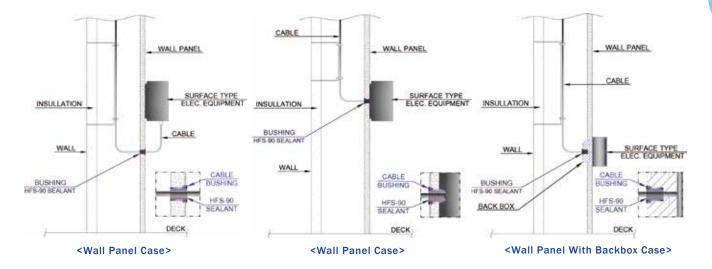
#### **Application Standard**

• This method is for perfect wall penetration sealing with B-15 Fire rating. With Remitite Non-combustible HFS-90 as sealant, the perfect sealing could be acquired.



#### **Application Example**

• 'RB series + HFS-90' combination system could be applied to every possible area and equipment which B-15 fire rating should be needed.



# GME-90 Ceramic Tile Adhesive





#### **Features**

- · Strong adhesion
- · Fire-resistant, nontoxic and almost smokeless
- · High tensile strength
- $\cdot$  Chemical, weather and water resistant
- · High durability
- · Shock-resistant
- $\cdot$  No heat distortion
- $\cdot$  Does not drip or run down metal walls during application

#### **Applications**

- · Steel
- · Ceramic tiles
- · Wood
- · Aluminum
- $\cdot$  Fireproof materials

#### **Specifications**

- · Color: ivory, white
- Surface drying time: 150 minutes [20 °C, 200g]
- · Capacity: 5kg plastic container
- · Storage life: 12 months
- $\cdot$  Pot life: 120 minutes [20 °C]
- $\cdot$  Service temperature: -20  $^\circ\!\!\mathrm{C}$  to 80  $^\circ\!\!\mathrm{C}$
- Specific gravity: 1.13g/cm<sup>3</sup>
- Tensile strength: 390kgf/cm<sup>2</sup> [390kg/cm<sup>3</sup>]
- · Compressive strength: 580kg/cm<sup>2</sup>
- · Adhesive strength: 105kg/cm<sup>2</sup>
- · Shrinkage: 0.50%
- $\cdot$  Viscosity: 200,000 cps to 250,000 cps [epoxy resin: 20  $^\circ C$ ],
- 250,000 cps to 300,000 cps [specialty organic chemical: 20  $^\circ C$ ]
- · Storage temperature: room temperature
- · Main ingredients: epoxy resin, specialty organic chemical
- $\cdot$  Solid: over 95%

#### Certificates



ΒV
_

#### **Certificate Status**

<b>Classification Party</b>	Description	Certificate No.
BV(MED)	Ceramic Tile Adhesive	36913/A0 EC

#### **Installation Guide Line**



1 Open the lid of the container.



2 Cut the plastic bags of Base and Hardener and pour them into the container.



Mix the Base with the Hardener in the ratio of 2:1.

## RF-7077 Vinyl Sheet & Carpet Adhesive





#### **Features**

- · Fire-retardant, nontoxic and almost smokeless
- · High tensile strength
- · Strong adhesion to vinyl sheets and carpets
- · Excellent usability

#### **Applications**

- $\cdot$  Carpets
- · Soft PVC

REMITITE

RE-7077

REMITITE

RF-7077

#### **Specifications**

- · Color: yellowish [light brown after drying]
- · Capacity: 8kg plastic container
- Storage life: 6 months
- $\cdot$  Service temperature: -20  $^\circ\!\!\mathbb{C}$  to 60  $^\circ\!\!\mathbb{C}$
- · Specific gravity: 1.12g/cm<sup>3</sup>
- $\cdot$  Viscosity: 100,000 cps to 110,000 cps [20  $^\circ C$ ]
- $\cdot$  Storage temperature: room temperature
- pH: 9.8
- · Main ingredients: synthetic resins modified acrylic copolymer
- · Solid: 69% to 71%

#### **Certificate Status**

Classification Party	Description	Certificate No.
BV	Vinyl Sheet & Carpet Adhesive	20970/B0 EC
ABS	Vinyl Sheet & Carpet Adhesive	12-BK884350-PDA

#### Certificates

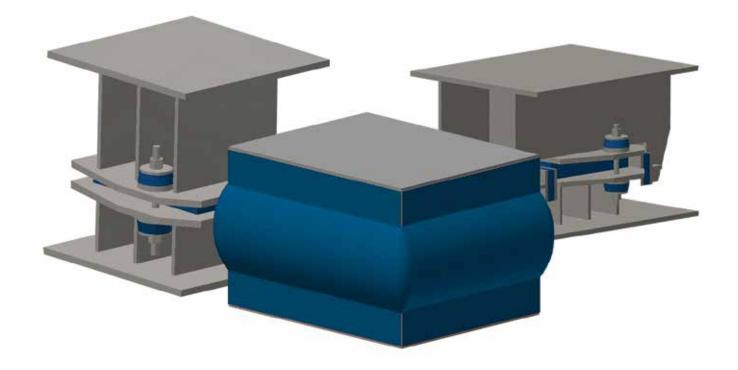


ABS



# Remitite EB-153 Elastomeric Bearing



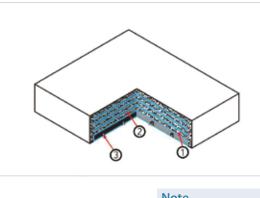




Elastomeric Bearing EB-153 is designed and produced in accordance with the European Standard En 1337-3 as a laminated elastomer consisting of uniquely bonded rubber and shim plates.

EB-153 offers infrastructure shock-absorption and reduction of execssive horizontal forces. It supports weight bearing and verticality movement on super structure in onshore or offshore installations.

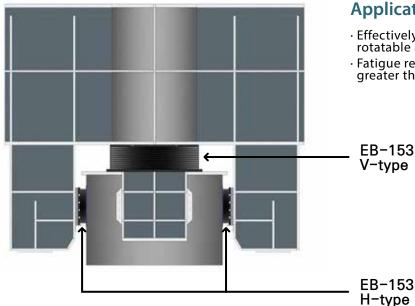
EB-153 is covered with J-90 and H-120 class certified EDT-629 material to protect the elastomeric bearing from damage in the event of fire even with temperatures exceeding 1,000  $^{\circ}$ C.





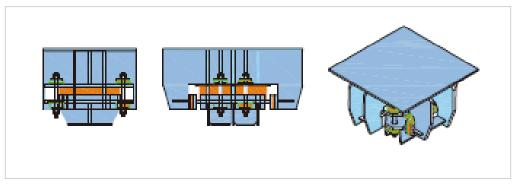
#### **Characteristics**

- · Laminated structures made of thin rubber and steel sheets.
- · Excellent seating capacity, shearing deformation resistance and effective seismic isolator.
- Easy to install, maintain and economical with excellent durability facilitating long term installations.



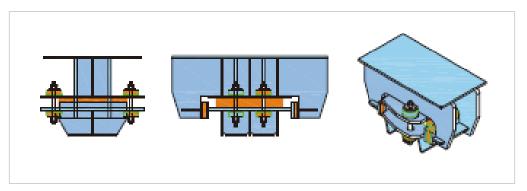
#### **Applications**

- $\cdot$  Effectively respond to any structure because it is rotatable and flexible in all directions.
- · Fatigue resistance against cyclic loads is much greater than monolithic metal.



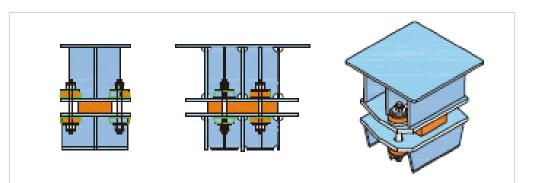
#### **Fixed Structural Type**

Effective as a "stopper structure" to restrict both acceleration and direction in a perpendicular bridge.



#### **Restraint Structural Type**

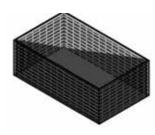
Restricts acceleration movement and direction in a perpendicular bridge.



#### Free Structural Type

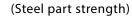
Movement configurable in any direction desired.

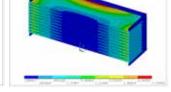
#### Vertical Model Support Elastomeric Bearing Type



(3-D Drawing)

(Analysis Model)

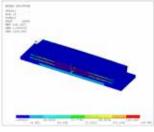


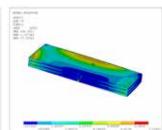


(Elastomer part strength)

#### Horizontal Sliding Elastomeric Bearing Pad Type







(Steel part strength)

(Elastomer part strength)

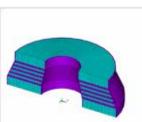
(3-D Drawing)

(Analysis Model)

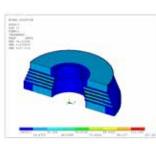
#### Vertical Anti-Uplifting Elastomeric Bearing Type



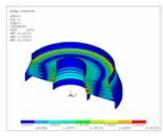
(3-D Drawing)



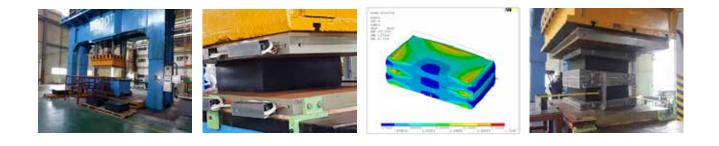
#### (Analysis Model)



(Steel part strength)



(Elastomer part strength)



# RLCU Remitite Leg Combination Unit



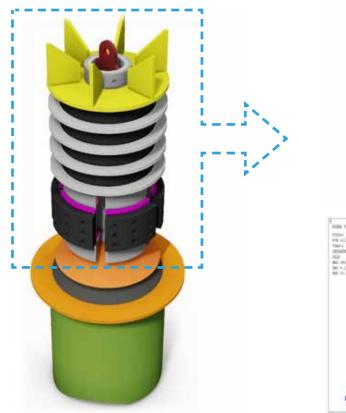


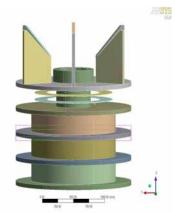
#### **RLCU (Remitite Leg Combination Unit)**

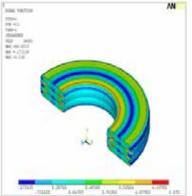
Remitite Leg Combination Unit is Remitite's version of LMU, Leg Mating Unit used in offshore construction, made with Remitite's own technology.

LCU is a device installed in the lower part of structure on the top side of offshore construction, and reducing impact and stable installation are the key factors.

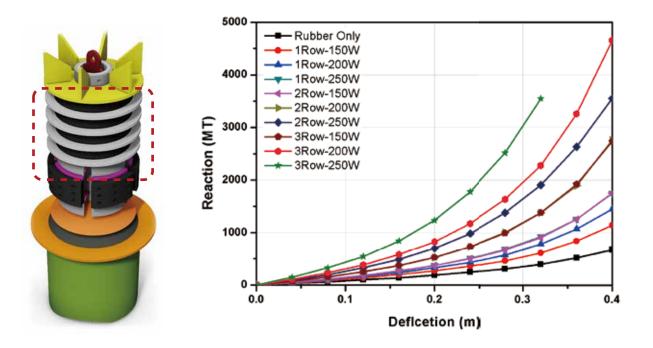
RLCU consists of several layers of elastomeric bearings with uniform hardness. It is a device that effectively damps the imbalance and vibration of vertical and horizontal forces that inevitably result during installation of structure.



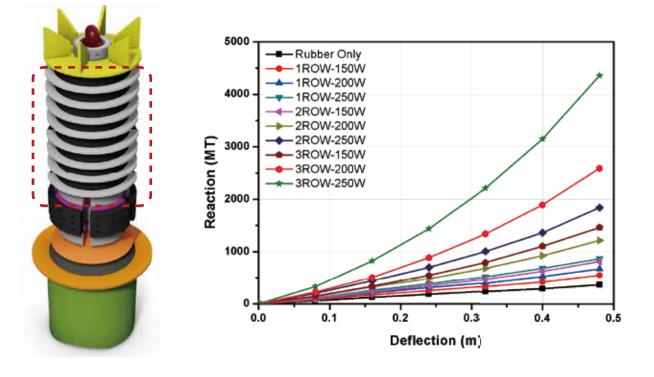




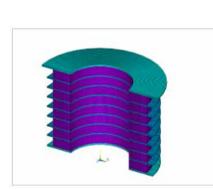
#### 4-Layers Bearing for RLCU

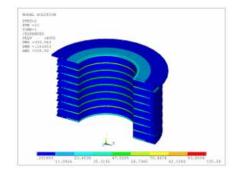


#### 8-Layers Bearing for RLCU

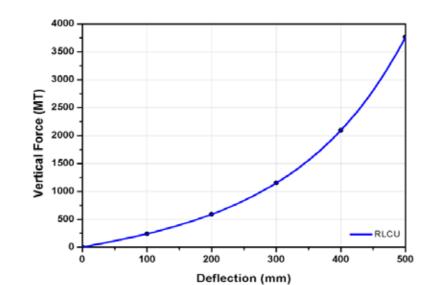


#### **RLCU Typical Model**

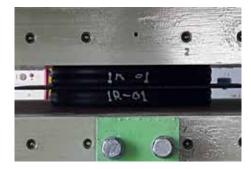


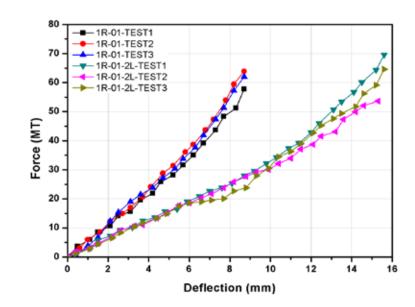










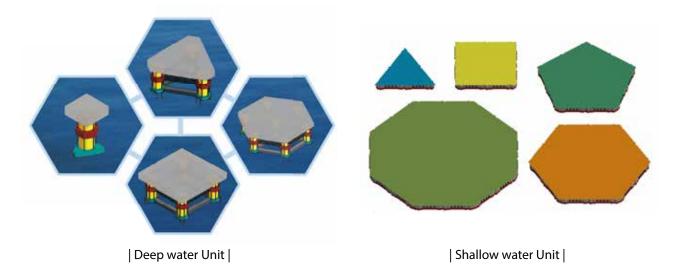


### MEFP Multi-purpose Extendible Floating Platform



#### MEFP(Multi-purpose Extendible Floating Platform)

Multi-purpose Extendible Tension Leg Platform, ME-TLP, developed by Remitite, is a new form of floating type platform. Unlike other previous floating platforms, our product is able to produce various forms of platform, which is constructed by assembling triangle, square, pentagon, hexagon, and octagon base units with same side length.



#### Examples

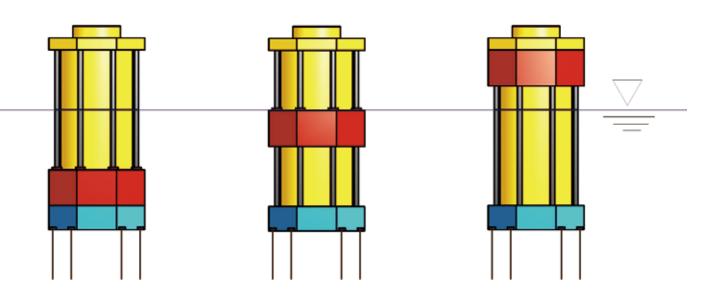
Able to form such various shapes, MEFP can be applied not only in the field of oil & gas industry but also other various purpose such as floating gas terminal, floating transportation, floating residence including villa, hotel and island, and ocean energy including wind energy, wave energy and ocean farm.



#### | Deep Water Platforms

#### Hexagon & Octagon buoy unit

Each buoy unit has middle joints with which buoy units can be linked. The vertical position of joints can be situated over sea level to be used as a passageway, or be situated over sea level to be equipped with wave activated generator, or be situated under sea level to help pontoon function, increasing buoyancy.

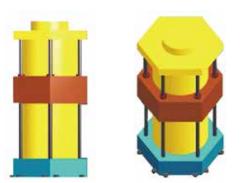


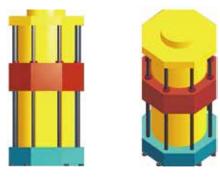
#### Hexagon buoy unit

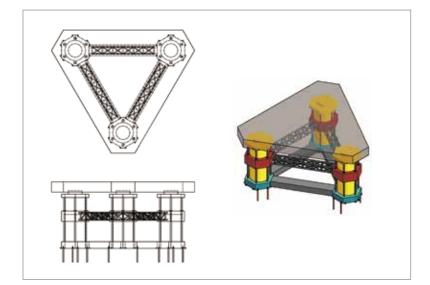
- For triangular, hexagonal, and honeycomb type platform

#### Octagon buoy unit

- For square, rectangular type platform

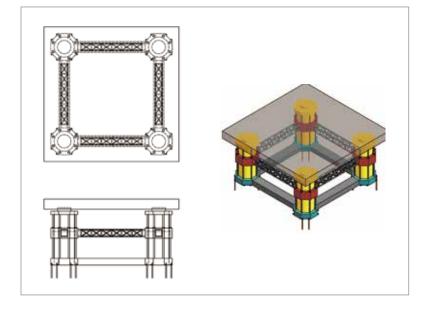






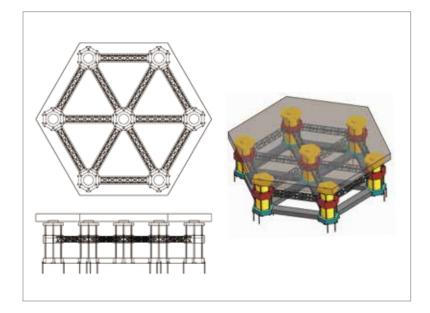
#### **Applications**

- · Oil/ Gas drilling/ Production
- · Ocean energy (wind, wave energy)



#### Applications

- · Oil/ Gas drilling/ Production
- Floating residence (including villa, hotel and island)
- $\cdot$  Floating gas terminal
- · Ocean energy (wind, wave energy)



#### Applications

- Floating residence (including villa, hotel and island)
- Ocean energy (wind, wave energy)
- · Ocean farm

#### Shallow Water platforms



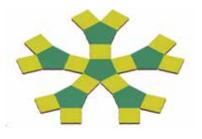
4angle combination



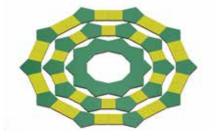
6gon combination



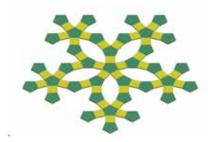
6gon combination



4angle/ 5gon combination



4angle/ 5gon combination



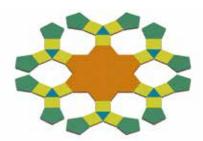
4angle/ 5gon combination



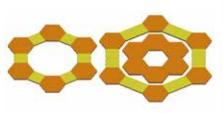
4angle/ 8gon combination



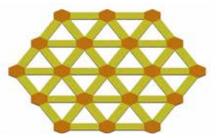
4angle/ 8gon combination



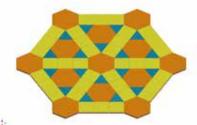
3,4angle/ 5,6gon combination



4angle/ 6gon combination



4angle/ 6gon combination



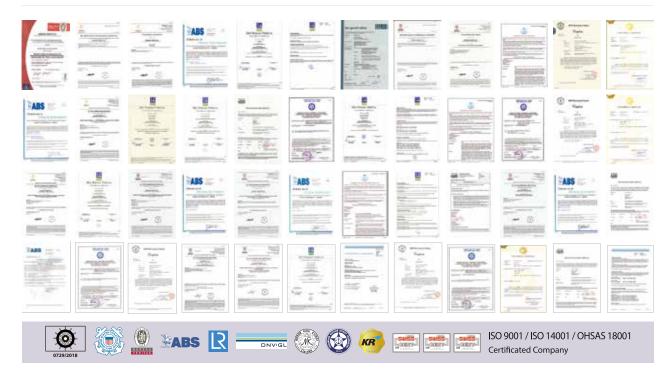
3,4angle/ 6gon combination (1)

### **Our Core Competencies**

Provide world class products & solutions for onshore and offshore facilities. Trusted suppliers for major companies. All products are certified by key certifying authorities. Operated by people with integrity.



#### CERTIFICATES



### Remitite Co., Ltd. www.remitite.com