

Anyone can easily and quickly repair ships!

SHIP + AID®





EXP: 2 YEARS FROM MANUFACTURING DATE



For repairing & adhesion of any metals & resins!

 Aluminum alloys, Cast irons, Copper & Copper alloys (Brass & Bronze), Magnesium and Magnesium allys, Carbon steels, Stainless steels, Galvanized surface, PVC, CPVC, ABS, Fiberglass, Black polypropylene, Kyner.



- 〈Features〉 High adhesion & pressure
 - Easy & Quick
 - Chemical resistance
 - Quick repair by heat curing (with heat gun)
 - Temp. limit -40°C ~ 176°C (Continuouse use 148°C)

Red Label / Base Resin White Label / Hardener **Epoxy Resin** Content ea. 14.8ml Approval of Food Sanitation Act No.370/595

- 1. Remove moisture and oil from repair area and coarsen the surface with sandpaper.
- 2. Mix the base resin and hardener from the container in the same amount and leave it for 10 minutes.
- 3. Warm up the repaired area and uniformly apply red epoxy.
- 4. If you heat the repaired area with a heat gun (140°C) for about 20 minutes, it turns from red to gold.
- 5. Curing is complete when it turns to gold. It is ready to use after return to normal temperature naturally.
- 6. If the heating temperature is high, it bubbled and burn up. In that case, please retry from the beginning.

Excellent Chemical Resistance CFC, Petroleum, Toluene, Xylene, Plant Oil, Animal Oil, Lubricant Oil, Hydraulic Fluid & more



Take the same amount of base resin and hardener.



Mix and leave for 10 minutes



Apply after warming up the repair area and turn to gold after 20 min heating.



Curing is completed after return to natural temperature naturally.



PIPING







Watch the detailed usage of this product with the video.



(1500W / 100V /60°C~550°C)

* We can arrange a heat gun, if you need it.



Instant adhesion repair material RAPIDFIX



Instant repair of all materials!!
A new sense of repair agent that can be repaired to holes, cracks, chips, breakage by using liquid and powder.

※Even liquid alone can be used as an adhesive.



- *When you want to increase strength, please repeat the above work.
- *After hardening, rasping, holes and screw processing, painting are also possible.
- Metal, PVC, Plastic, Rubber, Wood, Pottery, Glass, FRP, Leather, and any materials

Surprising instant repair!

Liquid and powder, in either order OK









One set package



※PP, PE, Styrene resin, Silicon, Paper Flourine are not applied.



*The liquid does not cure in the container.

Adhesive : Ethyl cyanoacrylate (10ml) Welding powder : Oxide glass (10ml) Material Curing time A few seconds ~ several tens of seconds Complete curing time 24 hours Temperature -55°C ~ 95°C

Pressure 50 ~ 70kg/cm2(It depends on the repair condition.) JAN code 4560361000416

Approval of Food Sanitation Act No.370/595

*Please keep this product away from direct sunlight Please do not put it in an excessively hot and cold place. Please do not refrigerated / forzen storage

Approval of ISO 10993-5

Super Strong

It can be used for a wide range of applications and can respond quickly even in emergency case.



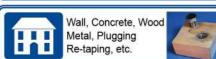
Piping repair SGP, Stainless PVC, Copper, etc.



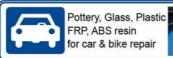


Rubber hose repair Air hose Tire tube











Chemical resistance

○= Conformity ×= Non-conformity Ethanol Acetone ○ (× Concentrated) Gasoline Benzin Toluole **Xylole** Hydrochloric acid ○(×Concentrated) Sulfric acid ○(×Concentrated)

○(×Concentrated)

○(×Concentrated)

Phosphoric acid

Sodium hydroxide

Watch the detailed usage of this product with the video.



Epoxy Putty RECTOR SEAL

All-purpose putty

EXP: 3 YEARS FROM MANUFACTURING DATE

DRINKING

WATER LINE

TEMP. -40~200°C

Tough & Durable!

Harden like a metal in 15~20min after kneading.

Just cut and knead it

Easy to use putty type everywhere





EP-400 EP-200 **EP-200W**

Epoxy Putt

(Approval of Food Sanitation Act No.370/20)

RECTOR SEAL

	EP-400	EP-200	EP-200W	
Contents	112g	56g	56g	
Color	Gray	Gray	White	
Material	Epoxy resin			
Hardness	Shore D85			
Temperature	-40~200°C	-40~200°C		
Pressure	10kg/cm ²			
Tensile strength	420kg/cm ²			
Compressive strength	1,260kg/cm ²			
Elastic coefficient	6×10⁵PSI			
Shear strength	49kg/cm ²			
Insulation properties	400Volts/mil 0.125in			
Volume resistance	5×10 ¹⁵ Ω·cm	N/2 31	II.	
JAN code	4560361000010	4560361000034	456036100004	

Chemical resistance =Conformity ×=Non-conformity

C committee in	
10%Acetic acid	0
2%Nitric acid	0
10%Sulfric acid	0
10%Hydracid	0
Acetone	0
Xylole	0
Gasoline	0
Methanol	0
Ethanol	0
10%Hydrochloric acid	0
Caustic soda	0

The use is diverse, such as repairing holes and cracks, reforming the surface.

- Piping (Stainless, Copper, Steel, PVC)
- ◆ Air conditioner (Duct, Unit, Fan)

Joint

- Electrical machinery (Housing motor, Shaft)
- ◆Industry (Equipment, Pump casing)
- ◆ Car (Oil tank, Engine block, Fan, Muffler, Oil pan, Radiator)
- ◆ Shipping (Hull, Piping, Pump casing)
- ◆ Agriculture (Tools, Machinery)
- ◆ DIY (Tile, Wall, Piping, Cabinet, Door)



Watch the detailed usage of this product with the video.



⟨How to use⟩ ※ Please repair under non-pressure.

First of all, please remove dirt, paint, dust, rust, oil etc. on the adhesion surface.



- ① Remove the packaging film and cut it in the required amout.
- 2 Knead it for 1~2mins until there is no color unevenness.
- against the adhesive / filling spot.
- # If you use a wet cloth or wet spatula, it will be beautiful finished.

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- * When the temperature is low, the time to compelete hardening becames longer. Please use at temperature above 5°C
- ** Please be careful as excessive kneading and redoing of molding after adhesion will cause poor adhesion and poor hardening.
- Recommend to conbine with Quick Tape and Arlon Tape for piping repair.
- Cover Rector Seal by Quick Tape for additional strength.
 Cover Arlon Tape by Rector Seal for protection.
- ® Embed and mold so as to press
 @ Harden and adhere in 15~20mins. It can be done tapping, bufffing, painting and etc. after completed hardening (1 hour)



SRG-38 Wide type **SRG-11** SRG-5 SRG-2 Watch the detailed usage

Width 25mm / 38mm Please use according to the pipe diameter.

Arlon Tape Gray repair example

When pulling strongly while winding it, the tapes will self-fuse, and they will adhere to broken parts such as piping and hose leakage, bleeding, pinholes and gaps.

Repeat to wind the tape until stop.

Since it does not adhere to piping, any material can be repaired.

Example of leakage repair of pinhole Cut the tape to 20~30cm Clean a repair spot. and overlap winding it

while pulling strongly.

Complete if leakage stops. If it is still leaking, continue to overlap winding the tape until the leakage stops.

ARLON TAPE GRAY

	Product size	Applicable dia.	Qty	JAN code
SRG-2	W 25 x L 2000mm	Under 50A	24	4560361000331
SRG-5	W 25 x L 5000mm	Under 50A	12	4560361000348
SRG-11	W 25 x L 11000mm	Under 50A	6	4560361000355
SRG-38	W 38 x L 6000mm	Under 100A	8	4560361000362

Material	Silicone rubber
Pressure	1.0MPa
Tensile strength	8.0MPa
Temperature	-50°C ~ 200°C
Confficient of extension	600%

Approval of Food Sanitation Act No.370/201 Approval of JIS K6353(Rubber for water) US military standard compliant goods (MIL-I-46852C

Chemical resistance

Conformity ×=Non-conformity 10%Acetic acid 2%Nitric acid Δ 10%Sulfric acid 10%Hydracid Acetone × × **Xvlole** Gasoline Methanol Ethanol Ammonia Δ Antifreeze

Example of leakage repair of joint Continue until be a Clean a repair spot. Overlap winding

the tape around a low level spot.

of this product with the video.

same level.

Overlap winding the tape around a leakage spot.

Complete!

- Press the end of the tape against it while pulling finally.
- Since it done not adhere to piping, the winded tapa can be easily removed with scissors
- Recommend to combine it with Quick Tape or Rector Seal for protection after completion.
- It can be used in either direction on both sides.



Various uses Please select the size according to location and purpose.



- ◆ Repair for water, air, aux. steam and oil piping in factories & plants
- ◆ Repair for elevated tank, septic tank, toilet bowl and other tank.
- ◆ Repair for plastic molding machine, construction machine and oil feed pipe.
- ◆ Repair for ship equipments during long voyage

Approval of Food Sanitation Act No.370/595 Approval of EPA601 / Approval of AS4020

Easy work just to wet & wind

Easy to handle, anyone can work quickly and easily.

It is available for plastic, steel, lead, copper, stainless, concrete, ceramic, glass, PVC and etc. Ideal for piping repair of all materials

(How to use) * Please repair under non-pressure.

※ Close the root valve of the piping and hose before repair, and relieve pressure Remove oil, rust and other dirt from the repair spot. Please be sure to wear the supplied gloves before work



- (sea water/muddy water)
- 2) Wind strongly while pulling the tape, and use up all the
- 3) Fit in piping to squeeze the tape, and don't allow
- ④ Bubbles come up from the tape after a while, keep making the tape fit in piping due to loose the tape during bubbling (about 10~15mins). It hardens in 30~40mins at outside temperature 21°C. Wipe by alcohol after completion if required surface finish.
- Cover Rector Seal by High Tape for additional strength.
- Cover Arlon Tape by High Tape for protection.



Wet and Wind





Watch the detailed usage of this product with the video.



Chemical resistance Conformity ×=Non-conformity

20%Acetic acid	0
20%Nitric acid	0
75%Sulfric acid	0
20%Hydracid	0
Methyl alcohol	0
10%Ammonia	0
Gasoline	0
Kerosene	0
Toluene	0
37%Hydrochloric acid	0
Corn oil	0

RECTOR HIGH TAPE

Contents ● Glass filber tape (Aluminum packed) ● Rubber gloves ● Pat

	RH-1	RH-2	RH-3	RH-4	RH-5
Size(mm)	W25xL750	W50xL750	W50xL1500	W75xL2700	W100xL4500
Applicable dia.	Under 15A	Under 20A	Under 40A	Under 80A	Under 150A
Material	Glass fiber cl	oth tape	22		
Num of turns	6~8 windings	ĺ.			
Hardness	Shore D53				
Temperature	-15~210°C				
Pressure	10kg/cm ²				
JAN code	4560361000058	4560361000065	4560361000072	4560361000089	4560361000096

Usage : Repair and reinforce pipes and hoses for metals, plastics, PVC, FRP, ceramics, glass, rubber. Particularly suitable for piping using chemicals and oil.



Only wet and wind RECTOR QUICK TAPE

Harden in 3mins

Significant shortening of construction time for fast fixation!



RECTOR Q-TAPE

It can be repaired permanently.

Easy work that just wets and winds, repair and reinforcement of piping is completed at once.

Fixed in just 3 mins, hardened in 20 mins. Greatly shortening your working time!

It can be used for a wide range of materials such as any metal, ceramic PVC and etc.

Approval of Food Sanitation Act No.370/595 Approval of EPA601 / Approval of AS4020 QT-1 (12pcs) QT-2 (8pcs) QT-3 (6pcs)

Watch the detailed usage of this product with the video.



https://youtu.be/rXRcGkJS0Si



RECTOR QUICK TAPE

Contents ● Glass filber tape (Aluminum packed) ● Rubber gloves ● Pat

	QT-1	QT-2	QT-3
Size(mm)	W25xL600	W505xL1200	W75xL2400
Applicable dia.	Under 25A	Under 505A	Under 80A
Material	Glass fiber cl	oth tape	
Num of turns	6~8 windings		
Hardness	Shore D60		
Temperature	-15~200°C		
Pressure	12.6kg/cm ² (A	STM D 1599)	
JAN code	4560361000157	4560361000164	456036100017

Usage : Repair and reinforce pipes and hoses for metals, plastics, PVC, FRP, ceramics, glass, rubber.

Particularly suitable for piping using chemicals and oil.

◆ Chemical resistance ○= Conformity ×=Non-conform

RECTOR Q-TAP

O=Conformity ×=Nor	1-CONIONNILY
20%Acetic acid	0
20%Nitric acid	0
75%Sulfric acid	0
20%Hydracid	0
Methyl alcohl	0
10%Ammonia	0
Gasoline	0
Kerosene	0
Toluene	0
37%Hydrochloric acid	0
Corn oil	0

Easy work just to wet & wind

Easy to handle, anyone can work quickly and easily

It is available for plastic, steel, lead, copper, stainless, concrete, ceramic, glass, PVC and etc. Ideal for piping repair of all materials.

Close the root valve of the piping and hose before repair, and relieve pressure.
 Remove oil, rust and other dirt from the repair spot.
 Please be sure to wear the supplied gloves before work.



(1) Soak the tape in water (sea water/muddy water) for 20 ~ 30 seconds ②Wind strongly while pulling the tape, and use up all the

3 Fit in piping to squeeze the tape, and don't allow air to enter without gaps.

- ④ Bubbles come up from the tape after a while, keep making the tape fit in piping due to loose the tape during bubbling (It fixes in 3mins). It hardens in 20mins at outside temperature 21°C. Wipe by alcohol after completion if required surface finish. It can be sanded and opinted also.
- Cover Rector Seal by Quick Tape for additional strength.
- Cover Arlon Tape by Quick Tape for protection.

RECTOR SUN SHEET



EXP: 1 YEAR FROM MANUFACTURING DATE

FRP Sheet

Just cut & paste it to the necessary size at the repair spot!

15 mins hardening with sunlight (UV ray)

Easy to use with a sense of sticker for various repair.











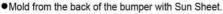


RECTOR SUN SHEET UV600

Material	Glass fiber UV curable epoxy acrylate resin		
Size(mm)	150×220	Thickness 1.5mm	
Temperature	-20~100	วัต	
Tensile strength	115MPa	Elastic modulus 8.8GPa	
Bending strength	235MPa	Elastic modulus 7.8GPa	
Breaking extension	1.5%	Impact strength 45KJ/m²	
JAN code	4560361000140		

Usage: Repair and reinforce damaged and corroded parts such as steel plate steel piping, FRP, glass, ceramic, PVC, and hardened vinyl chloride







Finish the surface with resin.

It's a repair example using Uni Solar in combination

Other Uses

- Piping repair
- Sewer pipe welding reinforcement
- Steel, copper, stainless
- Air conditioning equipment
- Emergency repair of ships
- Repair of outdoor equipment (FRP boat / PWC / Fishing rod)

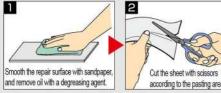
*Usage prohibited

- · Polyethylene
- Polypropylene
- Polycarbonate

Watch the detailed usage of this product with the video.

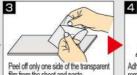


(How to use)



* Remove dust, mud and oil in repair spots

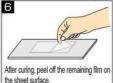
* If water is out, stop water and dry the surface before using



film from the sheet and paste







* Please be careful not to put in the air when pasting. (Remove the air with roller or hands.)

* The surface temperature of the repair spot should be less than 80°C. Avoid outdoor work in rainy weather.



UV curing repair material UNI SOLAR

Gel type

For repairing cracks & holes!

Hardening to irradiate sunlight or UV light.

Special gel quickly repair cracks & gaps.

It's suitable for emergency repair of tanks & piping.



Uni Solar Soft for soft materials such as PE tanks.

UNI SOLAR SOFT



太陽光3分で硬化!
SOIaTHARD
ユニソーラー・ハード
紫外線硬化樹脂
ポリエチレン・ポリプロビン
金属に強力接着!
©は3子様の手の触れる所には置かないでくぎ

Pit

Uni Solar Hard for repair of pressure part such as pipings.

UNI SOLAR HARD

GEL TYPE

UNI SOLAR

	Soft	Hard	
Material	UV curable epoxy acrylate resin		
Tensile coefficient	4.6×10 ⁵ psi	100 10	
Extension rate	5-6%		
Bending strength	1,540kg/cm ²		
Bending coefficient	4.9×10 ⁵ psi		
Compressive strength	2,240kg/cm ²		
Deformation temp.	105℃		
Hardness	Barcol 35		
Permittivity	3.38		
Shear strength	304 stainless 800 psi		
JAN code	4560361000188 456036100018		

Usage: Repair and reinforce damaged and corroded parts such as steel plate, steel piping, FRP, glass, ceramic, PVC, and hardened vinyl chloride.

It may peel off for deformable materials.

(How to use)

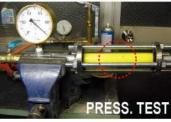
- ① Dry the surface, remove the dirt and the oil with a degreasing agent, and roughen the surface with coarse sandpaper to improve adhesion.
- Squeeze Uni Solar in the shade, and apply to the repair spot.
- ③ Irradiate with UV light or sunlight for about 3 mins. If you paste a transparent film on the surface of Uni Solar, then block the air and cure it, it will be a clear and beautiful finish.
- When Uni Solar Hard is felt hard, adjust the hardness by adding a small amount of acetone.
- Since UV is difficult to reach deeply, the one with 1~2 mm of overcoating is better in the curing condition.
- If the surface does not dry even when irradiated with UV for more than 10 mins, the surface will dry out by wiping with a industrial alcohol.

Watch the detailed usage of this product with the video.



https://youtu.be/rBut9fTkKPg





UV-LED Flashlight that will cure Sun Sheet & Uni Solar quickly after repair.



CHARGE	Type-C (FOR CHARGE)
CHARGE	Approx. 2.5 Hr (0 to 100%)
SPEC	3.7 V 2000 mAh 7.4 Wh
WEIGHT	47.0 g



EXP: 2 YEARS FROM MANUFACTURING DATE

UV curing type leakage repair material

LEAKAID



MAIN FEATURES

- ① Lipophilic before hardening, oil resistant after curing!
- 2 Harden in 1 second with UV ray, slow leakage can be cured even it's leaking
- 3 No drop on vertical surface, gap can be filled
- 4 Removable after hardening

TEMP. −40~150°C

Effective repair material with

" Adhesive on oil surface" and "Quick hardening" functions !

Revolutionary repair material which can be used for OIL, WATER, and GAS leakage by UV curing. Strong adhesive, effective for the leakage which conventional putty could not stop.



1 Stir the material

② Apply on leakage area

3 Quick hardening with UV ray

4 Completed!

Effective especially for the leakage on OIL, AIR, and REFRIGERANT PIPES where is difficult to remove oil from the surface.



◆ Adhesive property (with #1000 surface preparation)

M EXCELLENT	Stainless, Iron, Acrylic, Glass, Brass, Aluminum, Copper, etc
ぱ GOOD	PP, PT etc.
⊙ POOR	Silicon, Teflon, etc.

*Depends on material

Durability

Mineral Oil : Good!

Synthetic Oil : Depends on its component





*Flash light is included in SHiP+AiD Standard and Delux







CDEMO MOVIE> https://vimeo.com/374886073

assword : LLJ1 (all capital letters)



Fiberglass sheet tape **POW-R PATCH**



OWER PATOE



Holes, crack repairing... multi-purpose usage! Tanks, Pipes, Flat / curved surface... for all over places!



Sheet tape type repairing material

Apply for all kind material



EMP. -17~170°C









Hardener

Partition

Fiberglass

tape

"POW-R PATCH" is a fiberglass sheet tape with epoxy resin which have developed in the United States. It applies for all materials, such as metals, PVC, etc. Adhesive in 15 minutes after mixing tape and hardening agent. Safety use for both temporarily repair work and long term use. Saving your time and cost!



Fiberglass tape Rubber Glove

* Working Glove is not including, please prepare by your side.

	PA1015	PA1030	
Size	100×150mm 100×300		
Туре	Fiberglass fabric tape		
Color	Semitransparent		
Hardening time	5-8minutes in appearance, 15 minutes hardening		
Temperature	-17~170℃		
Hardness	(shoreD) 79		
Tensile modules	@23℃ 2900Mpa 420,000psi		
Chemical resistance	Good for Gasoline, Acetic Acid (20%), Hydraulic oil, Muriatic Acid (20%), Kerosine, Toluene, Sea Water, etc.		
JAN code	4560361000515	4560361000522	

^{*} Use together with Rector Seal on page 3, for drinking water pipes and tanks.

Tank repairing example

Remove fluid and release pressure, then clean up the repairing surface



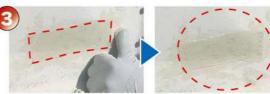


- ·Remove the partition bar between Hardener and Fiberglass tape
- File the surface for more strong adhesive





·Mix the Hardener and Fiberglass tape very well (approx. 90 seconds). Then take out from the pack. * Fiberglass tape is overlapped in the pack.



- ·Put on the repairing surface, and press the sheet not to have gapbetween the repairing surface. Then harden in approx. 15 minutes
- Possible to put as double-folding for more pressure and tough use.

* Color turns to light-yellow after few days.

CAUTION

Wear heavy working gloves beneath the Rubber Gloves.

- * Pay attention not to get burned by high temperature (40~70°C) when repairing.
- * Dip in more than 60℃ hot water in case of crystallization whitening. Then it turn back to normal and can be used as usual.
- * There is "12 pcs package hanger" for sales display.

Aluminum putty



EXP: 2 YEARS FROM MANUFACTURING DATE



Easy-to-use for Lab-metal (Standard)

Single component putty l

Harden like a metal Cont. service temp. 537°C

Single component alminum putty It has excellent adhesion to metals such as aluminum, steel and stainless, and wood, resin, glass and the like.

It is a multipurpose metal putty with good useability of single component type and strong adhesion. Adhesion and repair of damaged parts for molds, vehicles and boilers, and painting of welded parts. Heat resistant temperature is 537°C Hi-Temp type and 176°C Standard type.

LAB-METAL

	Standard (R)	Hi-Temp (H)
Hardness	Shore D81	
Expansion coefficient	15×10 ⁻⁶ inch/inch per°F	
Tensile strength	45.4kg/cm²	
Compressive strength	1,400 kg/cm ²	
Component	Aluminum	
Specific gravity	1.95 at 24°C	ųV
Temperature	-40~176℃ -40~53	
Contents	336g 336g	





Lab-metal (Hi-Temp)

If dilute it with a diluent, can apply brush and spray. Furthermore, polished after hardening it will shine like a metal.

It's suitable for repairing a surface of high temperature flange such as a cylinder head cover of main engine.





Usage : Repair and mold for metal, glass, ceramic, stone, concrete, plastic, wood and etc

** To use this product, a mixture of toluene and acetone 1:1 is required. (MEK and toluene 1:1, or even acetone alone can be substituted.)











11



RESBOND

Ceramic putty

(WATER SOLUBILITY)

Stop the high temp. gas leak!





Sealing of exhaust ducts

Flange forming of exhaust pipings

Cont. service temp. 1,287°C

For adhesion and sealing of high temperature part, protection and reinforcement of connection part. It is a high-performance repair agent with strong adhesion to all metals and ceramics and corrosion resistance to most solvents and chemicals.

Repair Agent of Boiler

- ◆ Repair of expansion joint crack
- ◆ Repair of flange gas leakage
- ◆ Repair of refractory

Other

It's suitable for a sealing material for diesel engines, gas turbines and turbochargers, for a repair agent for high temp. parts of incinerators and exhaust gas systems.

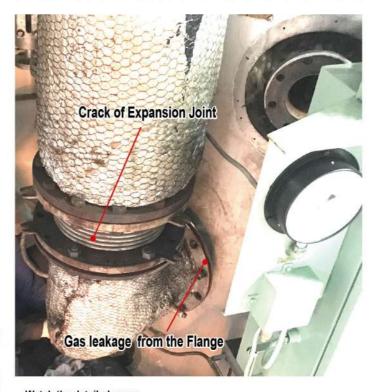
RESBOND 907GF

Temperature	1,648°C (Max. temp.) 1,287°C (Cont. ope. temp	
Compressive strength	105kg/cm²	
Expansion rate	5%	
Permittivity	3.0 (at 10 ⁸ cps)	
Volume resistance	10°Ω·cm	
Insulation properties	145 volts/mil	
Heat conductivity	6.0 (at 260°C)	
Shrinkage ratio	2%	
Contents	112g	
	rs	



Usage : Adhesion, sealing and protection of high temperature part and piping such as metal and ceramic. It can be used for most chemical products and solvents.

₩ It can not be used in areas exposed to water leakage and water.



Watch the detailed usage of this product with the video.







AQUA STICK



EXP: 1 YEAR FROM MANUFACTURING DATE

Bondable, fillable for both "underwater"&"wet surface"



Built-in type underwater forming epoxy resin filling adhesive material





It forms water-resistant bonding membrane when using under water & wet surface by the intermolecular bonding effect.

*Compliant to Water Quality Criteria





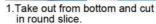
Various metals

50ml

How to use AQUA STICK

* Wipe the rust, oil, and dirt off from the bonding surface before use.







2.Squash material by spatula or trowel.





Usage of AQUA STICK

Concrete, FRP, and Vinyl Chloride, etc. *surface preparation needed for stainless



Pipe leakage Repairing

Catch-basin Repairing

Hume pipes Repairing







Bonding







3.Mix until the color turns to uniform milky-white.



Stick

Hardener

1.10

Milky-White

Modified Polyamine

Paste like wiping and hold until harden.

Main Agent

1.16 Clear

Modified Epoxy

Hardening Time	60~180 min.[25°C]	
Heatproof Temp.	56℃	Shape
Compressive Strength	920kgf/cm²	Specific gravit
Tensile strength	650kgf/cm²	Appearance
Bending strength	1,120kgf/cm²	Component

* Test result data based on our testing procedures. Your using condition is beyond our jurisdiction.

CAUTION

• Do not use other than specific purposes. • Make sure the working area is well ventilated. • Be careful not to adhere to the skin, and wear protecting mask,gloves, and safety goggles if necessary. • Wipe off immediately when adhered to the skin, then wash with soap and water sufficiently. • Take medical examination if necessary, such as becoming unwell case. • Store in a cool and dark place. Expiry date is 1 year from manufacturing date. • Use it up as soon as possible after opening. • Dispose wastes under the disposal regulations. • Keep, store and dispose in safe to prevent infant and children from touching.

Non-slip 2 components type lining material



NON-SLIP COAT

Safety ensuring starts from YOUR FEET upwards!

Main component of Non-slip coat is epoxy resin, which is excellent in its adhesive force and chemical resistance. Also containing Silica and Ceramic filler improved its durability, revolutionary lining material with high fire-retardant performance corresponded to UL-94 V-0

*Following preparation is required before below procedures: "1.SURFACE PREPARATION, 2.PASTING MASKING TAPE, 3.STIRRING"



- 1.Drop the mixed non-slip coat directly to the painting surface
- 2.Spread to a uniform thickness around 1~2mm by rubber spatula
- Use the special made roller for rough-patterning.
- 4. Wait to be harden



5.0kg set

- · Main agent 4.5kg
- · Hardener 0.5kg



Exclusive Primer (Optional)

M-Primer (1-Liquid type) NET 1kg (Painting area 8 m $^{2}\sim$ 10 m 2)

Exclusive roller for Non-Slip Coat (Optional)

Paper tube roller (standard): 100mm×Φ38mm× 3 pcs/bag 200mm×Φ38mm× 2 pcs/bag

Short bristle roller (for checkered plate) :100mm×Φ38mm× 2 pcs/bag 230mm×Φ38mm× 2 pcs/bag

NON-SLIP COAT NON-SLIP TAPE Anti-slip Excellent Poor Good Excellent Poor Operability Good Fire resistance Excellent Poor Poor Excellent Wear resistance Poor Poor Excellent Very Good Poor Corrosion resistance Off limit period 1Day 2Days **ODay** Actual heat resisting temp Excellent Excellent Good

Features

- High-performance non-slip effects for the materials which could be a cause of slip, such as water, oil and dust.
- Stick very well with base material and hardly peel off. (Metals, Concrete, Asphalt, etc.)
- No need of a primer treatment except rarecase.
 One-time easy painting by exclusive painting roller.
 In order to increase adhesive strength on painting surface of hot-dip galvanizing, optional exclusive primer (M-Primer) available.
- Having self-extinguishing function, corresponded to the world standard of fire resistance "UL-94 V-0"
- Excellent resistance function of water, chemical, and wearing.

Usage

- PCC, ladder, stair, etc.
- Rampway of Ro-Ro ferry.
- Slippery area due to water, oil, etc.
- Top board of dangerous / non-dangerous tank, stairs, dike, etc.
- Stairs, passage, lift car path, truck yard around factory and office area. (Also for surface protection purpose)

<Notes of base material>

- Please ask before painting on special base material, such as "Color-crete", "Chemi-crete", or dust-proof coating. It peels when paint on such special base materials directly.
- Surface have to be polished by #40 sandpaper when painting on FRP.
- Please ask before painting on large content of glass components surface, such as granite.
- Be aware of dew drop when painting on metals in humid or winter season.
- Not adhesive on glass, silicone, and thermoplastic materials.

CAUTION

Refer and follow the guidance on the SDS for health cautions.

Rust conversion agent



Stop corrosion by chemical change!

It's more powerful than rust preventive paint.





Red rust (hematite) turns into black rust (magnetite)

Strongly prevent from correston !

Are you troubled with rust?

- Deck Handrail Piping Valve Flange Tank Machine tool



SELECT COAT - SABI CHANGE

Material	Aqueous silicone acrylic resin paint	
Contents	1kg 16kg	
Surface Preparation	SP3 / Hand tool cleaning (Keep red rust)	
Application	2~3Layers	
Coating Method	Brush or Spray coating	
Qty for application	150~200g/m²/Layer	
Painting interval	2~3hours	
Drying time	3~4hours (20℃)	
Temperature	130°C	
JAN code	4560361000287	

- * Agitate this paint thoroughly before painting
- Make sure there is no uncoated area.
- * In coastal areas or salt damage environments, 3 yayers coating is recommended.
- ※ To keep a stable rust preventive effect, must overpaint on it.
- * Recommend to overpaint on this paint after 24hrs if the medium is strong
- * It's easy to clean a brush after painting for aqueous paint.
- * If water is applied on this paint before drying, it may become white as other aqueous paints. Pay attention to the weather and its surroundings so that it will not be esposed to water during painting

1kg/16kg

(How to use) Hand tool cleaning (SP3) is enough for the surface preparation! No fire work required!







Turn into black rust about 30 mins. ※Drying time 3~4hrs

After drying, overpaint with general paint.



Stainless coat (Spray type)

Just spraying will be stainless steel! STAINLESS COAT

Stainless steel paint



Long Life

Anti-corrosion

Anti-rust

Weatherability

■ SPRAY TYPE







Super Bright / SB Type

It is a long-term exposure type that exerts excellent effects on rust prevention and corrosion protection in the atmosphere such as corrosive stainless steel material, it is also gas and sea breeze.

Standard / PU Type

The color tone is bright, and mirror finish is possible by polishing after hardening. With the same finish as ideal for repairing weld burnign of stainless steel.

High Temp. / SIL Type

It has heat resistance up to 650°C and can be used mainly for high temperature exhaust gas piping and such as boiler and incinerator, funnel.

STAINLESS COAT / SPRAY TYPE



	PU-200A	SB-200A	SIL-200A
Material	SUS316-L Pigm	ent	
Pencil hardness	6H		
Flexibility	2mm 180°		
Contents	200mL		
Temperature	-50~110℃	-40~110°C	-62~650°C

■ BRUSH · ROLLER TYPE

Spray guns can also be used!



5K, 10K, 20K *We also have the primer coating for Stainless coat

■ PUTTY TYPE







Since each type does not contain any harmful substances, it can be used for any material.



Weld burning of stainless steel >>> Just coating with STAINLESS COAT

Easy Finish! BEFORE

AFTER







* Super bright /SB type is used.

EXP: 1 YEAR FROM MANUFACTURING DATE



This coating compound with fluororesin is high-performance and resistant to chemicals, high temperature, oil, and insulation. It can be used for caulking, sealing, coating, and lasts a long time in harsh environments. It does not contain silicone resin or generate siloxane gas. It has no odor and can be applied safely.

Chemical Resistance

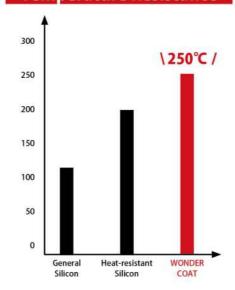
Sodium hydroxide (30 %)	0
Hydrogen chloride (30 %)	0
Sulfuric acid	0
Nitric acid (60 %)	0

Oil Resistance

Kerosene	0
Gasoline	0
Fuel oll	0

*Volume change rate for immersion time 7 days at room temp. $\Re \bigcirc : 0 \sim 5 \%$

Temperature Resistance



Usage

- · Exhaust ducts
- · Pipe flanges
- · Drainage channels.
- · Areas requiring acid & alkali resistance
- · Areas requiring heat resistance
- · Chemical pipes without pressure
- · Areas where oxygen or oil liquids are used
- · Electronic parts

How to Use

1. Clean the surface you're applying to. 2. For cartridges, cut the cartridge gun to the right width, break the aluminum film with a screwdriver, and set the cartridge gun in place. 3. Apply the coating at the same thickness as the nozzle to prevent air from entering. 4. Don't move until it cure.

Caution

1. Do not use the product for any purpose other than its intended use. 2. Ensure good ventilation when working. 3. Avoid skin contact when handling. Wear protective mask, goggles, gloves, etc. as necessary. 4. In case of eye contact, rinse immediately with water. 5. If irritation occurs, discontinue use immediately and seek medical attention. 6. For tube type, close cap tightly after use. 7. Do not store at high temperatures or in direct sunlight. 8. Use as soon as possible after opening the container. 9. Store in a safe place out of the reach of children and infants. 10. Dispose of in accordance with applicable laws and regulations.



DRINKING

MULTIPURPOSE ELASTIC ADHESIVE

MIRACLE 5





Shockproof

Heatproof

Waterproof

ELASTIC ADHESIVE

Elastic bonding absorbs shock and vibration. It is also resistant to temperature changes and waterproof. The paste form is also suitable for construction of uneven surfaces. Bonds to a variety of materials including concrete, tile, slate, aluminum and other metals, rigid PVC, ABS, FRP, iron and stainless steel.

FAST & STRONG

"Miracle 5" is one-component and dries quickly. There is no need to weigh or mix the main and hardener.

WATER QUALITY CRITERIA

"Miracle 5" conforms to water quality criteria, so you can safely apply it around drinking water.

GENERAL PROPERTIES

Material	Modified urethane
Color	White / Gray
Viscosity (Pa⋅S/23°C)	250,000 mPa • s
Specific	1.4 ± 0.05

CURING TIME

Pot life	2 minutes after applyin	
Tack-free	3-10 minutes	
Curing time	20 minutes	

CHEMICAL RESISTANCE

Water	140 kg / cm ²
Saline solution (10 %)	160 kg / cm ²
Gasoline	165 kg / cm²
Machinery oil	225 kg / cm ²

#JIS6251 Tensile speed: 50 mm /min

Usage

"Miracle 5" can be used in combination with various other applications such as bonding, waterproofing, caulking, repairing, sealing, etc. with just this one.

ADHESION

- · Saddle bands, leveling bands and other metal support
- · Waterproof surfaces and roof surfaces where fasteners cannot be used
- · Use in conjunction with screws
- · Waterproof ALC, thin walls and other areas where screws cannot be used
- · Outdoor unit racks, solar racks, etc.
- Waterproof fixing of wheel stops
- · Kitchen panels
- · Decorative mirrors
- · Tiles and sanitary ware

WATERPROOF, CAULKING

- · Gaps around pipes
- · Around drain
- · P-Con and FRP tanks
- · Sealing waterproofing terminal treatment
- · Waterproofing of insulation
- · Leakage prevention around electrical equipment
- Caulking of concrete cracks

REPAIR

- · Cracks and joints in drainage PVC
- Concrete racks
- · FRP and stainless steel tanks
- · Grease traps
- · Roof sections

SEALING

- · Seal for screw piping
- · Fixing of bolts
- · Drainage PVC pipe
- · Between metal and resin



Welding-Like Adhesion for Metal Mastery

Two-component adhesive with strong bonding strength. It has a low odour and high safety profile and can be used on metals, wood and concrete. After curing, it has high strength and elasticity, making it resistant to impact. It can also be slightly oiled.

BONDING METALS

Some metals, like iron, stainless steel, aluminium and copper, can be bonded together. Different metals can stick together.

WELDING SUBSUTITUTE

Useful in small spaces where welding is difficult or where temperature changes should be avoided. It lets you work safely without firearms.

SEALING SCREWS

The product prevents screws from loosening or falling out. Seals screws used in areas with impact and vibration.

EMERGENCY REPAIR FOR PIPES

Dries quickly, so you can repair cracks and pinholes instantly. The product is water-quality tested, so it can also repair water pipes.

JOINT COPPER PIPES

Joining copper pipes used for refrigerant piping.

HT-Bond 777

Material	2-component liquid acrylic
Temperature	150 ℃
Curing time	15 minutes (25℃)
Tensile shear strength	150~250 kg / cm ²

◆ Chemical resistance

	Tensile shear strength			
Water	140 kg / cm²			
Saline solution 10 %	160 kg / cm²			
Gasoline	165 kg / cm ²			
Machinery oil	225 kg / cm ²			
Hydrochloric 10 %	120 kg / cm²			
Odium hydroxide 10 %	125 kg / cm²			
Methanol	90 kg / cm²			
Water (80℃)	80 kg / cm ²			
Acetone	60 kg / cm ²			

^{*} The values are measured when copper sheets are bonded with this, cured for 24 hours at 25°C, and then immersed in the chemical for 250 hours.

[How to Use]

- Clean any dirt, oil, or moisture on the surface.
- 2. Mix A and B together in equal amounts.

Make sure the mixture is uniform in color and condition.

- *It dries fast, so mix only the necessary amount.
- 3. Apply evenly to the dried surface.
- 4. Allow to rest until fully cured.

TOUGH RUBBER PUTTY NEO

2-COMPONENTS URETHANE



Repair Bamaged Rubber Original-Form

Applications

- · Repair rubber parts like conveyor belts and bellows.
- · Restoring airtightness of butterfly valves and manholes.
- Leakage repair of vibrating pipes, flanges, boxes, etc.
- · Preventing noise from metal collisions.
- Protection of surfaces exposed to collisions.
- Adhesion between rubber materials.

This repair compound adheres to metal and rubber. When cured, it becomes a tough, elongated, rubber-like material with excellent impact and abrasion resistance. Because it is in paste form, it can be used on vertical surfaces.

Excellent properties

Provides a highly flexible and durable repair. It is impact resistant and can protect base materials. Also effective in reducing noise and vibration. Heat resistant up to 80°C. Can be used in a variety of environments.

Multiple Applications

Repair rubber products with wall filler to prolong their life. It's resistant to impact and abrasion and can repair leaks in vibrating equipment. Bonds rubber materials together for flexible repairs.

Easy and Efficient

It's easy to apply and mix. It can be used on wall surfaces. It cures quickly, so repairs can be made quickly and efficiently. It can be applied evenly to any shape or size.

Tough rubber putty NEO

Mixing ratio	9:1			
Color	Base resin:Transparent yellow Hardener:Black	After mixing : Black		
Viscosity	Base resin: 20000~20040 mPa • s Hardener: 200~240 mPa • s			
Pot life	6~9 minutes	300 g , 25°C		
Tack-free	30~40 minutes	Thickness: 5 mm, 25℃		
Curing time	7~10 hours	Thickness: 5 mm , 25℃		
Specific	1.02			
hardness	shore A 80	JIS K 7215		
Tensile strength	10~14 MPa	JIS K 7113		
Elongation	400~450 %	JIS K 7113		
Tear strength	52~59 N/mm	JIS K 7113		
Tensile shore strengh	Cohesive Failure: 6.2 MPa Adhesive Failure: 0.6 MPa	SPCC Rubber for conveyor belts		
Temperature	80 °C			
Coatable area	0.118 m ²			
Volume	Base resin : 0.54 kg Hardener : 0.06 kg			

[How to Use]

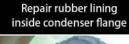
- Wipe off dirt, oil, and moisture from the surface.

 Clean the surface until metal and rubber are exposed.
- 2. Mix the main and hardener 9:1.

Make sure the color and condition are uniform.

- * Measurements should be accurate.
- 3. Apply evenly to the repaired surface. Adjust thickness as needed. 4. Curing time at 25°C is about 7-10 hours.
- 4. Curing time at 25 C is about 7-10 hours.

Heat curing takes about 2.5–3 hours at 60°C.





Repair rubber part of butterfly valve



Repair rubber lining of circulating water pipe manhole



Repair of conveyor belts for coal transport



First aid kit for your ship SHIP AID

Repair agent kit

EVEN SHIPYARD



SOLUTION TO TROUBLE UNDER THE WARRANTY

WITH INAUGURATION

By equiping it on new ships, it supports the crew in maitenance and preserving the ship.

FIRST AID UNTIL DOCKING

By applying suitable first aid, it eliminates the need for emergency attangements.

DAILY TROUBLES

SHiP+AiD

Water, steam, and oil.
It resolve various troubles faced by ship.

REPAIR ANY POINT OF THE SHIP,

FROM ENGINE ROOM TO DECK,

Your ship's doctor, just like your home doctor.

There is full after-sales support available;

- · Proposal suitable repair materials and methods to reslove trouble that occur on ships,
- · Inventory systems to supply repair material for SHiP+AiD.

SHiP+AiD is not just a first aid kit,

it is your vessel's doctor,

just like your home doctor.

3 of the merit of SHiP+AiD

- In a pinch, you can rush to the scene to take in hand the "SHiP+AiD" without hesitation. Every time, without having to look for a required repair materials, everything is OK, if you have a "SHiP+AiD"!
- 2. Superintendent, chief engineer & the crew can have the common recognition for the repair agent has been standing in your ship. In "right repair agent on the right spot", anyone can be reliably repair!
- 3. The contents of "SHiP+AiD" always be kept constant quantity, it is possible to inventory management. The prevention of "Three No": "No more" & "No longer available" when needed, are "No more".



SHiP + AiD®

Based on the advice from superintendents of ship management company, we gathered the repair materials, which are needed for ship repair, in this one. When considering to introduce SHiP+AiD, please try the standard version for your ship at the first as trial.

*Overseas shipment is available for this item.



SHiP + AiD Beluxe

This is including a product lineup that also supports large diameter piping and "Red Epoxy" which can repair high pressure hydraulic piping. Heavy users who want to repair anything in your ship, please consider deluxe version by all means.

**Overseas shipment with this set content is not possible, due to some dangerous goods are included, alternative products will be dispatched for overseas shipment.

(W21×L36×H20cm/3.3kg)

(W18×L18×H18cm/1.5kg

SHiP+AiD usage example

- Repair of various piping leaks (water, sea water, air & oil)
- Repair of aux. steam piping leaks
- Repair of exh. gas piping leaks
- Repair of hydraulic piping leaks

- As a reinforcing material to a thinned portion
- Repair of pump casing
- Alternative repair at areas that can not be welded
- Repair of expansion joint crack
- Repair piping under pressrue

(SHIP+AID REPAIR AGENT LIST)

Product name	Page	Model No.	Content / size	SHIN SHIP+AID Standard	SHIN SHIP+AID Deluxe	Num of orders*2	Remarks
RED EPOXY	1	_	Base resin(Red) 14.8ml Hardener(White) 14.8ml	_	lset		
RAPIDFIX	2	(7 <u></u>)	Adhesive 10ml Welding Powder 10ml	lset	lset		
RECTOR SEAL	3	EP-200	56g	2pc	2pcs		
		EP-400	112g	1pcs	2pcs		
		EP-200W	56g	_	_		
ARLON TAPE GRAY	4	SRG-2	W25 x L2000mm	_	-		
		SRG-5	W25 x L5000mm	1pc	1рс		
		SRG-11	W25 x L11000mm	=:	=		
		SRG-38	W38 x L6000mm	1рс	2pcs		
RECTOR HIGH TAPE	5	RH-1	W25 x L750mm	1pc	1рс		
		RH-2	W50 x L750mm	=	-		
		RH-3	W50 x L1500mm	1pc	1рс		
		RH-4	W75 x L2700mm	1pc	1рс		
		RH-5	W100 x L4500mm	 -	1рс		
RECTOR SUN SHEET**1	7	UV600	W150 x L220 x T1.5mm		1sheet		
LEAKAID	9	LA10G	10g	1pc	1рс		
		LA180G	180g	==	-		
POWER PATCH	10	PA1015	W100 x L150mm	_	1sheet		
		PA1030	W100 x L300mm	-	8 <u>—8</u>		
RESBOND	12	907GF	112g	1рс	1pc		
AQUA STICK ^{*1}	13	1 7 - 1	50cc	l a - li	1 2 .		
		:	150cc	-	1pc		
UV-LED FLASHLIGHT	8	UVL-2	Type-C	1рс	1pc		
HEAT GUN	1	RHG-1500	1500W 100V 50/60Hz	=	-		

^{※1} It can not be shipped overseas with other goods due to dangerous goods.

^{%2} When restock with the repair agent, please copy the above list and use it as a purchase order form.



Scan the QR code so that you can watch movies which illustrates usage of products.

SHiP+AiD



http://ship-aid.com

For SHiP+AiD inquiries N.Y.co.,LTD. MAKE YOUR SHIP ENERGETIC! http://www.ny-tokyo.com

