



UPS 19500/3/4/5 SPRK Small Pipe Repair Kit has been designed to put all products required to carry out emergency repairs to leaking pipework.

Many industries and marine companies today are suffering from unplanned small pipe leaks that need an instant repair solution. The leaks can seriously affect the company's ability to continue to manufacture and make profits.

To prevent the replacement of pipework - Unique Polymer Systems LTD can supply a long-term solution that enables full repair whilst allowing full protection / plant operation to continue.

### Product Features

- By utilizing UPS 19601/3/4/5 PR Pipe Repair Bandage – immediate and cost effective repairs can be carried out.
- Surface preparation is at a minimum due to the surface tolerant characteristics of the UPS 19601/3/4/5 PR
- The end result can offer long term protection at a working temperature of 270°C and at pressures ranging from 10 bar (150psi) through to 27 bar (400psi) if used in conjunction with UPS 19060 SG and a double wrap
- The finished repair can seal effectively after only 5 minutes with full cure after 30 minutes.
- UPS 19601/3/4/5 PR Pipe Repair Bandage is fully WRAS approved for contact with potable water.



### UPS 19500 Small Pipe Repair Kit - Contents

Product	Size	Quantity
UPS 19601 PR	50mm X 1.8m	5
UPS 19060 SG	125gms	1
UPS 455 TA	30mm x 0.7m	1
Disposable Gloves	Pair	5
Application Booklet	-	1

### UPS 19503 Small Pipe Repair Kit 3 - Contents

Product	Size	Quantity
UPS 19603 PR	50mm X 3.6m	5
UPS 19060 SG	125gms	1
UPS 455 TA	30mm x 0.7m	1
Disposable Gloves	Pair	5
Application Booklet	-	1

### UPS 19504 Small Pipe Repair Kit 4 - Contents

Product	Size	Quantity
UPS 19604 PR	75mm X 3.6m	5
UPS 19060 SG	125gms	1
UPS 455 TA	30mm x 0.7m	1
Disposable Gloves	Pair	5
Application Booklet	-	1

### UPS 19505 Small Pipe Repair Kit 5 - Contents

Product	Size	Quantity
UPS 19605 PR	100mm X 3.6m	5
UPS 19060 SG	125gms	1
UPS 455 TA	30mm x 0.7m	1
Disposable Gloves	Pair	5
Application Booklet	-	1

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**Health & Safety:** Please ensure good practice is observed at all times during the mixing and application of this product. Protective gloves must be worn during the mixing and application of this product. Before mixing and applying the material please ensure you have read the fully detailed Material Safety Data Sheet.

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UPS 19601/3/4/5 PR Emergency Pipe Repair Bandage is a high performance rapid curing moisture activated repair bandage, specifically developed for the repair of leaking pipes, which is activated by immersion in water.

UPS 19601/3/4/5 PR is ideal for pipe repairs to low pressure systems. As a general guide, a repair built up to a thickness of approximately 12mm (½") will withstand a maximum service pressure of 10 bar (150 psi). Higher pressures, up to 50 bar, can be achieved by first applying a 'plug' of UPS 19060 SG as described herein, always at users discretion.

### Product Features

- Easy to apply, requiring no special tools or equipment.
- Specially selected woven polyester fabric impregnated with a polyurethane resin, which is activated by immersion in water.
- Ideal for repairing pipes operating at low pressures.
- Designed for use for repairs up to 500mm diameter.
- Can be used on a wide variety of surfaces, including all metals and many types of plastics.
- WRAS approved product.

Correct bandage size is relevant to pipe dimension (with holes approximately 3 - 6mm (118 – 236mil) diameter).

### Surface Preparation

All pressure should be removed from the pipe. For leaks where pressure cannot be removed, holes should be stopped using a pipe repair clamp or UPS 455/456 TA. Remove all oil, grease, loose rust scale, sealant tape and paint from the repair area. Rough score a 10cm (4 inch) patch around the pipe centering on the leak site.

If the pipe is pitted with rust, surfaces must be wire brushed to remove the loose scale. If the surface is smooth, as with copper or stainless steel, surfaces should be roughened with a coarse file, rasp or saw blade. For plastic pipe, the external mold release must be removed. Abrade surfaces with coarse grit sandpaper. A saw blade may also be used to create a crosshatch pattern. This is particularly useful on polypropylene and PVDF piping.

### Application Procedures

Before and during application, lightweight disposable gloves should be worn to protect the hands.

UPS 19601/3/4/5 PR is a single component material, which should be immersed in water and squeezed two or three times for about five seconds prior to use.

Remove roll from water and wrap quickly and tightly as follows.

Centre tape over leak site, wrap from bottom of roll, pulling firmly throughout application. After 5-7 passes, resin foam will come through the tape, which is desirable and aided by pulling tightly. Continue until entire roll is applied, building to a minimum thickness of 12mm (½"); use a second roll if necessary. Firmly press and smooth end of roll into wrap in the direction of application. Wet gloves in water, smooth and firmly press the wet resin back into the wrap.

When used in conjunction with a 'plug' of UPS 19060 SG repair using the above instructions but having first plugged the hole.

Knead a bead of putty in a gloved hand and flatten out into a disc placed centrally over the hole pressing gently and feathering the edges. Leave to semi-harden (full cure 20 minutes) before applying the tape, although the tape may be applied immediately if necessary.

KEEP HANDS MOVING QUICKLY AND WET GLOVES FREQUENTLY TO AVOID STICKING

Continue rapid hand movement pressing and polishing resin in motions around and parallel to the pipe. Continue process until resins are no longer tacky. The repair should now have a smooth, hard surface and an enamel-like appearance with no fabric protruding through the surface.

NOTE: If a thicker application is needed, spend a little less time finishing the first roll and immediately begin the application of the next. Finish the final roll as if a single roll application.



### Technical Data & Performance

#### Characteristics

##### Which Size Bandage Do I Need?

Bandage Size	Pipe Nominal Diameter
UPS 19601 PR 50mm X 1.8m	>100mm (3 15/16")
UPS 19603 PR 50mm X 3.6m	>200mm (7 7/8")
UPS 19604 PR 75mm X 3.6m	>300mm (11 13/16")
UPS 19605 PR 100mm X 3.6m	>400mm (15 3/4")

##### Drying & Cure Times at 20°C (68°F)

Useable Life	2 – 3 minutes
Initial Set	5 minutes
Full Mechanical Cure	30 minutes
<i>Once hardener, the material should be left for the following periods of time at 20°C (68°F) before being subjected to the conditions indicated. These times will be doubled at 10°C (50°F) and halved at 30°C (86°F)</i>	

##### Appearance

Single Pack	White
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##### Over Coating Times

Minimum	The applied material can be over coated as soon as it is touch dry
Maximum	The over coating time should not exceed 30 minutes
<i>Where the maximum over coating time is exceeded, the material should be allowed to harden before being abraded or flash blasted to remove surface contamination.</i>	

##### Shelf Life

2 years if unopened and store in normal dry conditions (15-30°C / 60-86°F)

##### Solids Content

100%

##### Pack Sizes

This product is available in the following pack sizes:  
 UPS 19601 PR 50mm X 1.8m Pack of 10  
 UPS 19603 PR 50mm X 3.6m Pack of 5  
 UPS 19604 PR 75mm X 3.6m Pack of 5  
 UPS 19605 PR 100mm X 3.6m Pack of 5

##### Maximum Heat Resistance

270°C (500°F)

##### Maximum Service Pressure

10 bar (150 psi) - ½ inch / 12mm thick repair  
 27.5 bar (400 psi) – 1 inch / 25mm thick repair

#### Mechanical Properties

Flexural Strength ASTM D790	32Mpa (4,640 psi)
Tensile Strength ASTM D6382	19Mpa (2,740 psi)
Shore D Hardness ASTM D2240	82

Adhesion (Bond Strength)	14Mpa (2,000 psi)
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Chemical	Resistance
Citric Acid <10%	R
Crude Oil	R
Diesel	R
Formic Acid <10%	R
Zinc Chloride	R
Phosphoric Acid < 10-20-75%	R
Potassium Carbonate	R

Key: R – Resistant for continuous immersion.

Part of Chemical Resistance Chart – Full Resistance Chart Available on Request.

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The Engineer's Choice

... for Solutions

UPS 455/456 TA Instant Leak Stopper is the all-in-one wrap around instant leak stopper, designed for all pipe systems. This innovative product requires no special tools and is capable of sealing leaks even under pressure.

### Product Features

UPS 445/456 TA is a stand-alone system. It can be used over and over again, saving valuable water resources and maintenance downtime.

UPS 445/456 TA is made from high temperature EPDM rubber (-40°C - +120°C (-40°F to 248°F)) and has a wide chemical resistance.

UPS 445/456 TA is a must for all plumbers, maintenance and heating engineers.

### Application Procedures

1. Ensure that the surface of the pipe around leak is free from grease and loose debris before you start
2. Hold rubber strap over leaking area. Stretch the rubber and wrap around pipe maintaining tension at all times, when fully wrapped lock off with Velcro.

Temperature Range	-40°C - +120°C (-40°F to 248°F)
Pressure	10.26 bar (149psi)
Shelf Life	Minimum 5 years

### Packaging

UPS 455/456 TA Leak Stoppers is supplied in the following;

UPS 455 TA      30mm X 0.7m      Pack of 10  
(1 3/16" x 2' 3 9/16")

UPS 456 TA      50mm X 2.9m      Pack of 10  
(1 32/32" x 9' 6 11/64")

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UPS 19060 SG Stick Grade Metal is a specially packaged rapid curing synthetic metal repair compound for on site repairs to metal components such as leaking pipes, tanks, ducts, radiators, etc.,

### Product Features

- Simple to use; only requiring simple hand mixing to activate reaction between the concentrically packed components.
- Designed for application by gloved hand, putty knife or spatula.
- Can be applied to any damaged metal surface, plus glass, fiberglass and other composite surfaces.
- Designed for rapid repairs to cracked casting, leaking pipes, tanks, flanges, etc., minimizing downtime.
- Exhibits excellent adhesion to correctly prepared metal surfaces.

### Product Applications

Suitable for emergency repairs or part of planned maintenance to equipment such as; worn or damaged pump shafts, cracked pump or valve casings, scored hydraulic rams, worn bearing housings, damaged flanges, leaking tank seams, worn keyways, cracked engine blocks, etc.,

**Before proceeding, please read the following information carefully to ensure that the correct application procedure is fully understood.**

### Surface Preparation

All oil and grease must be removed from the surface of the using UPS CLEANER MEK.

The material is suitable for application to manually prepared surfaces such as hand wire brush, sanding, mechanical grinding or wire brush.

All loose material such as rust or flaking paint must be removed prior to the application of this product.

### Mixing & Application

The product is supplied in stock form and therefore the Base and Activator components are pre-measured.

Simply break off the required amount of material from the stick and using gloved hands, knead the product until the black and grey components become a consistent mid grey.

The product once fully mixed has a useable life of 3-5 minutes at 20°C (68°F).

## Technical Data & Performance

### Characteristics

#### Drying & Cure Times at 20°C (68°F)

Useable Life	5 minutes
Hard Dry	30 minutes
Machining & Light Loading	30 minutes
Full Loading	1 hour
Immersion	1 hour
<i>Once hardener, the material should be left for the following periods of time at 20°C (68°F) before being subjected to the conditions indicated. These times will be doubled at 10°C (50°F) and halved at 30°C (86°F)</i>	

#### Over Coating Times

Minimum	The applied material can be over coated as soon as it is touch dry
Maximum	The over coating time should not exceed 3 hours
<i>Where the maximum over coating time is exceeded, the material should be allowed to harden before being abraded or flash blasted to remove surface contamination.</i>	

#### Shelf Life

5 years if unopened and store in normal dry conditions (15-30°C / 60-86°F)

### Mechanical Properties

<b>Compressive Strength ASTM D695</b>	5000 psi
<b>Tensile Shear Adhesion ASTM D1002 (Abrasive Blasted Mild Steel with 75 micron profile)</b>	650 psi
<b>Flexural Strength ASTM D790</b>	3,250 psi
<b>Hardness Rockwell R ASTM D785</b>	85
<b>Corrosion Resistance ASTM B117</b>	Minimum 5000 hours

#### Heat Resistance

Suitable for long-term water immersion at temperatures up to 140°C (284°F).

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