



Plug-n-Wrap™

Plug-n-Wrap™

(Part No. : WMP-203)

Leak Repair in Minutes!

before



after



*Good for Plastic, Metal and Poly Pipe
Use on straight runs, elbows, tees and unions
Up to 450 psi*

THE KIT COMES COMPLETE !

JUST ADD WATER !

RUSSELL

Technologies-India

Plug-n-Wrap™

Quick Steps

Step #1

Evaluate Defect for



Step #2

Prep & Clean Surface



Step #3

Mix Putty and Apply to defect



Step #4

Soak Repair Tape in Water then tightly wrap repair area



Step #5

Massage repaired area 2-3 minutes, allow to cure for 30 minutes



General Information

- The Plug-n-Wrap is safe for potable water and may be used on Plastic, Metal, Poly Pipe and Fittings. Depending on the size of the Plug-n-Wrap used and the layers applied to 450 psi.
- The Plug-n-Wrap Kit provides a quick, easy repair and applied even underwater for low pressure piping and joint or fitting reinforcement. The Plug-n-Wrap Kit comes complete - just add water (fresh or salt). Refer to the reference guide for large size pipe or higher pressures.
- It is always recommended to use both the Repair Tape and Putty together as a system. The finished repair, once cured, should be rigid and hard with a smooth finish.
- The “Working Time” and curing of the system is affected by temperature. Allow more curing time when < 60°F and for temperatures > 80°F, it is suggested to place the materials in a cool place until time for use. “Working Time” is the time the materials remain pliable after the ***MATERIALS ARE ACTIVATED WITH WATER***. The “Working Time” for both materials is about 2-3 minutes, so remember to get organized and work swiftly.
- The recommended material build-up is ½” minimum and to reinforce plastic pipe couplings – apply the Repair Tape at least 2” beyond both sides of the coupling. The tape should be spirally wound with a material thickness of about ¼”.

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Product Specifications

Material Description

Plug-n-Wrap is a leak repair system cured in 30 minutes for low-pressure applications up to 450 psi (dependent on number of rolls and size). The Plug-n-Wrap Kit is comprised of a flexible fiberglass mesh material impregnated with water activated polyurethane resin and an epoxy putty plug. The tape will react with the humidity in the air but should be activated with a water supply (fresh or salt). After application and total cure, a rigid case-like monolithic sheath is produced. The Plug-n-Wrap is non-toxic for potable water lines.

Temperature Limits

-20 °F to 250 °F (temperatures > 150 °F will affect pressure capability)

Set & Cure Time

Plug-n-Wrap will “set” tack free in 3-5 minutes and fully cure in 30 minutes for temperatures of 50 °F to 80 °F. Anticipate longer cure times for colder temperatures and shorter cure times for warmer temperatures.

For Longitudinal Reinforcement

A 50% overlap has been shown to be the most effective in improving longitudinal strength. When applying on a slope, it is best to fold the tape (not twisted) to change directions.

Shelf Life

2 years when stored at 40 °F to 80 °F

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Chemical Compatibility List

Plug-n-Wrap™ is chemically resistant to most chemicals and fuels.

No visible changes after 35 day immersion in the following chemicals:

Acetone
Ammonia
Sulfuric Acid (30%)
Ethyl Alcohol
Hydrochloric Acid (10%)
Mineral Spirits
Methyl-ethyl-ketone (MEK)
Toluene
Diesel Fuel
Varsol
Ethylene Glycol
Crude Oil
Hydraulic Oil
Xylenes, Mixed, o-, m- and p-

Plug-n-Wrap™ may be used with products that are compatible with polyurethane plastic.

The user must always determine the suitability of the product for its intended use and recognize that strong acids or bases may affect the durability of the repair.

Case Studies

Plug-n-Wrap: Industrial Applications

February 9, 2000

Koch Sweet Gas Compressor Station – East Texas

A schedule 40, Gr. B carbon steel 1" sweet gas return line for the meter station had a leak due to external corrosion. The gas line operating at 20 psi had an axial defect length of approximately 18" with several areas having complete wall loss. To repair the line according to previous methods would have resulted in a larger excavation area and hot-working plus additional equipment. To use the Plug-n-Wrap product, the line was temporarily shutdown for repair. After the pipe section was abraded and solvent wiped, Six (6) Plug-n-Wrap kits (#WMP-212: 2" x 12 ft) were applied in accordance with procedures. The total repair time was approximately 45 minutes. The line is still in operation.

March 15, 2000

Eastman Chemical Company – Longview, Texas

The East Texas Chemical Plant processes Olefin products for the manufacture of thermoplastics. Within the process, a low carbon steel 4" flanged stub had thinning wall in the welded area of the flange resulting in a hole approximately a 1/16" in diameter in the weld. The weld zone was attacked internally by mixture of solvents and Sulfuric Acid and due to the nature of the weld zone degradation, the entire weld was suspect. Based on production schedules, a maintenance shutdown was not possible until October 2000. The Plug-n-Wrap product was chosen as an alternative after verification of products' chemical resistance. The flange bolts were an obstruction requiring greater attention to surface area preparation. After surface prep, four (4) Plug-n-Wrap kits (#WMP-412: 4" x 12 ft) were applied within 15 minutes and allowed to cure for 30 minutes. The repair has enabled the continued operation of the process line

June 22, 2000

Eastman Chemical Company – Longview, Texas

The East Texas Chemical Plant processes Olefin products for the manufacture of thermoplastics. A 20" diameter pressure vessel for the return water of a Cooling Tower had a pin-hole leak at the interface of a 12" diameter stub. The vessel operates at 50 psi - 150 °F. After surface preparation, nine (9) Plug-n-Wrap kits (#WMP 412 – 4" x 12 ft) were applied and the vessel continues to operate. Total repair time was 60 minutes.

Product Benefits

Plug-n-Wrap™

- ❖ Kits come Complete (NO ADDITIONAL TOOLS REQUIRED)
- ❖ Make Permanent Repairs in Minutes
- ❖ Ease of Application
- ❖ Versatile Uses (straight sections, bends, elbows, tees, etc.)
- ❖ Bonds to a Range of Materials (plastic, metals and polyethylene)

Alternate Uses

Plug-n-Wrap™

- ❖ Pipelines
- ❖ Plants
- ❖ Municipal Water
- ❖ Gas Distribution Lines
- ❖ Oil & Gas Gathering
- ❖ Irrigation Lines
- ❖ Marine Applications

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