# LLFA® TAPE

## A Revolutionary product that will change the way industry seals natural gas leaks

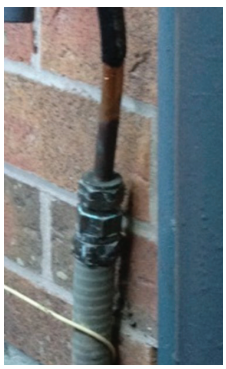


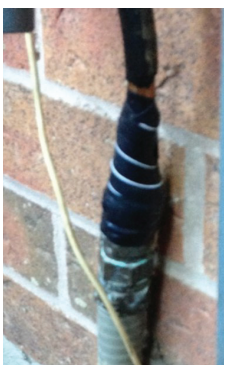
## EMERGENCY NATURAL GAS SEALING SOLUTIONS

LLFA® TAPE is a self-fusing silicone based tape designed to seal leaks in harsh weather conditions and is currently used as a permanent repair for natural gas leaks. LLFA® Tape can also be used as a temporary repair by first responders.

Mechanically, LLFA® Tape provides a high tension compressive wrap that creates an enduring seal under extreme environmental conditions. Due to its remarkable properties LLFA® Tape is also used to repair punctured water, air and hydraulic pipes that are subject to pressure and temperature variants.









- LIVE LEAK SEALING <150PSI
- STRAIGHT FORWARD APPLICATION, MINIMAL PREP
- STABLE FROM –130°F TO 500°F
- HIGHLY UV & OZONE RESISTANT
- NO STORAGE REQUIREMENTS, 4 YEAR SHELF LIFE

TECHNICAL SPECIFICATIONS LINK:

LLFA® TAPE
Emergency Natural Gas Sealing Solutions

UV & OZONE RESISTANT

<< 0.5% WATER ABSORPTION

-90°C TO +260°C

SELF-EXTINGUISHING

TENSILE STRENGTH > 1200 PSI*

TEAR RESISTANCE > 125 lbf/in

SUBMERSIBLE

SUITABLE FOR BURIAL

ABRASION RESISTANT

## APPLICATION

LLFA® Tape seals by fusion and compression. The tape is pulled as tightly as possible during application. The tape then fuses and amalgamates with itself, and compresses onto the pipe, sealing up to 150psi of live pressure.

## PREPARATION

"Clean Surface - Clean Hands - Clean Tape." Clean the pipe surface with a wire brush or grit paper, then wipe with an isopropyl alcohol wipe to remove all loose debris and traces of leak soap. Wipe hands with a separate alcohol wipe. Keep tape in its plastic bag or hard case. Good to go.

## TEMPERATURE RANGE

LLFA® Tape is proven stable from –130°F to 500°F. While the properties of some products are altered by extreme cold or heat & humidity, LLFA® Tape applies and performs as well in the dead of winter as it does in mid-summer heat.

## STORAGE REQUIREMENTS

The only storage requirement for LLFA® Tape is to keep it in its included plastic bag or hard case, to prevent exposure to dirt & dust, which interfer with fusion. There are no temperature or humidity control requirements. LLFA® Tape can be left in the bed of your truck in winter, or on the dash in summer. Shelf life is 4 years.

## FUSION

LLFA® Tape is an ultra-fast self-fusing tape, and utilizes no adhesives. Its performance is consistent regardless of pipe composition. Therefore it is safe to use on any range of pipe: Steel, HDPE, Cast Iron, ABS, Copper, Galvanized, etc. The pipe only needs the structural rigidity to withstand the compression of LLFA® Tape (ie. no garden hoses).

## WATER ABSORPTION

LLFA® Tape's water absorption rate is <<0.5%, meaning it creates a watertight seal and will not contribute to pipe corrosion. Because of its unique formula and ultra-fast fusion rate, LLFA® Tape can be applied in the rain or snow.

## CHEMICAL/UV RESISTANCE

LLFA® Tape maintains its properties when exposed to $CH_4$, $H_2S$ and $O_2$, and is highly UV resistant.

## ABRASION RESISTANCE

For abrasion resistance, apply two layers at minimum tension over the entire wrap. For buried applications, or where there is a concern of excessive interference or impact (ie. weedeater on a riser at ground level), use FiberArmour® for advanced abrasion protection.

## REMOVAL

Simply cut along the wrap using a knife or razor blade to remove LLFA® Tape. Because there is no adhesive it comes off clean. NOTE: Use caution when removing LLFA® Tape as it is under tension and releases from the pipe with great force.



**TENSILE STRENGTH**
>1200 psi
(ASTM D412, A-A-59163)

**TEAR RESISTANCE**
> 125 lbf/in
(ASTM D625, A-A-59163)

**BREAKING STRENGTH**
> 15 lbs

**ELONGATION**
> 325%

**ADHESION (FUSION)**
Standard requirement: "Tape shall not unwind more than 1.0 inch after 3 minutes with an attached load of 600g."
Result: LLFA® Tape < 1 inch.

**TEMPERATURE RANGE**
-130°F through to 500°F.

**THERMAL STABILITY**
-130°F to 500°F continuous.

**SELF-EXTINGUISHING**
UL standard 94 rating V-0. Tested to IEEE383 and IEEE1212 for flammability –self extinguishes and will not propagate a flame.

**UV RESISTANCE**
Highly UV resistant (ASTM D4352)

**WATER ABSORPTION**
<< 0.5% (Fed Test Standard No. 601)

**ACIDS AND ALKALINE**
No negative effect from brief exposure to acids and alkaline, and can withstand submersion up to 3 days.

**OZONE RESISTANCE**
Highly ozone resistant. (ASTM D4325)

**DUROMETER HARDNESS**
55 – 65

**STANDARD COMPLIANCE**
ASTM D2240, A-A-59163, ASTM D-149, ASTM D-412, MIL-I-46852, ASTM D2148, ASTM D3767
(LLFA® Tape specifications also meet other international standards not included in this list)

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