



INTERNATIONAL  
Standards Worldwide



INFRASTRUCTURE REPAIR SYSTEMS, INC.

# TRENCHLESS PIPE REPAIR SOLUTION GUIDE

## A Comprehensive Guide to IRSI Trenchless Point Repair Systems

### *The Permanent Solution*

100 Year-Life Certified

877.327.4216

irsi@irsi.net • www.irsi.net



# »» PRODUCT LIST



PAGE 3

## Mainline Point Repair System

For 6" to 100" Pipe Diameter

The proven no-dig sectional repair solution for aging sewer systems.



PAGE 5

## Lateral Point Repair System

For 3" to 6" Pipe Diameter

An innovative lateral sectional repair that can be pushed or pulled through a 4" or larger cleanout for a truly no-dig repair.



PAGE 7

## Elbow Point Repair System

For 4" to 6" Pipe Diameter

A flexible fleece and fiberglass liner technology that provides a strong, smooth, unobstructed curve in up to a 90° bend.



PAGE 9

## Infragard® Concrete & Manhole Rehab System

Easy trowel-on rehab system to stop leaks. Choose our "Top Coat" or Flexible "Chim Coat" systems.



# FEATURES & BENEFITS

## OF IRSI POINT REPAIR SYSTEMS

- ✓ No Costly Digging
- ✓ 100 Year Life & NSF 14 Certifications
- ✓ Permanent I/I Correction
- ✓ Self-Sealing Ends, No Rings or Grout
- ✓ Patented Velcro & String Technology
- ✓ Customized liner sizes
- ✓ No Shrink & No Creep
- ✓ Fiberglass for strength
- ✓ Eliminates Root Intrusion
- ✓ Fast or Slow Cure Time



# REQUIRED EQUIPMENT

## FOR IRSI POINT REPAIR SYSTEMS

Infrastructure Repair Systems, Inc. sells equipment needed for your trenchless repairs, including rope reels, push rods and reels, hose reels, an air tank package, and carriers.



IRSI Tool Box



Push Rod & Reels



Hose Reels



Air Tank Package



Rope Reels



Carriers





# MAINLINE POINT



Infrastructure Mainline Point Repair System is a no-dig, ambient cure, permanent solution to repair any size pipe with minimal interruption of service. The complete, user friendly point repair kit features a patented, easy to wrap, sewn fiberglass and felt liner that stays in place. It is available in four liner options with pre-measured epoxy formulated for summer or winter environments.

CALL TODAY TO BECOME AN  
IRSI CERTIFIED INSTALLER!  
877.327.4216



## HOW TO INSTALL IRSI MAINLINE POINT REPAIRS:

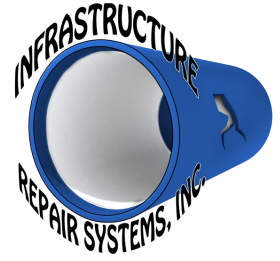
1. Televis and clean the pipe.
2. Find and measure the point of damage.
3. Using the IRSI kit and equipment, wet out and wrap the liner onto the carrier and pull the carrier into place.
4. Inflate carrier and allow the resin soaked liner to fill the voids in the pipe.
5. Allow resin to cure, deflate carrier and remove for perfect repair, creating a "pipe in a pipe."



## LINER OPTION COMPARISON

	Bronze 2.55mm Thick	Silver 4.5mm Thick	Gold 6mm Thick	Super 11mm Thick
<b>Engineered Design</b>				
1 Layer of Reinforced Fiberglass & Felt	✓	✓	✓	
2 Layers of Reinforced Fiberglass & Felt				✓
2nd Layer of Felt		✓	✓	
4th Layer of Felt				✓
Easy Slide Mesh			✓	✓
<b>Applications</b>				
Pre-Liner	✓	✓		
Any Sized Pipe	✓	✓	✓	
I/I Correction	✓	✓	✓	✓
Structural	✓	✓	✓	✓
<b>Recommended Pipe Diameter</b>				
3" – 6"	✓			
4" – 15"	✓	✓		
6" – 54"		✓	✓	✓
54" +		✓	✓	✓

# REPAIR SYSTEM



Field tested IRSI repairs prove to be stronger than the host pipe!



The original pipe cracked but the IRSI Point Repair remained intact.

## TECHNICAL DATA

### MECHANICAL & PHYSICAL PROPERTIES

ASTM D638	TENSILE STRENGTH	16,577 PSI
ASTM D638	TENSILE MODULUS	1,119,000 PSI
ASTM D695	COMPRESSIVE STRENGTH	23,595 PSI
ASTM D695	COMPRESSIVE MODULUS	1,446,000 PSI
ASTM D790	FLEXURAL STRENGTH	33,266 PSI
ASTM D790	FLEXURAL MODULUS	822,000 PSI
ASTM 256	IMPACT STRENGTH	9.95 FT.-LB/ IN
ASTM 648	STRESS	264 PSI
ASTM 648	STRESS DEFLECTION	139° F
ASTM 732	SHEAR STRENGTH	12,303
ASTM 2583	AVERAGE HARDNESS READING	81.2

### 28 DAY IMMERSION TEST

Toluene	1.2% Weight Gain
Ethanol	5.5% Weight Gain
10% Acetic Acid	12.1% Weight Gain
70% Sulfuric Acid	0.4% Weight Gain
50% Sodium Hydroxide	0.0% Weight Gain
Distilled Water	0.0% Weight Gain

### PRODUCT PROPERTIES

Density	9.07lbs per gallon
Viscosity	800 cps
% Vehicle Solids	100%
% Volatile	0%
VOC	0
Working Time	20 min @ 75° F. (25° C)
Shelf Life	1 year @ Moderate Temperature

MAINLINE POINT REPAIR SYSTEM



# LATERAL POINT



Infrastructure Lateral Point Repair System features an ambient cure, two part, no shrink or creep, epoxy system along with liners that are sewn together with patented pop-open Velcro straps and melt-away strings to securely hold the liner in place on the carrier. The carrier can be pushed or pulled through a 4" or larger 90° cleanout to position it over the damage for a permanent, trenchless lateral repair.



## TECHNICAL DATA

### MECHANICAL & PHYSICAL PROPERTIES

ASTM D638	TENSILE STRENGTH	16,577 PSI
ASTM D638	TENSILE MODULUS	1,119,000 PSI
ASTM D695	COMPRESSIVE STRENGTH	23,595 PSI
ASTM D695	COMPRESSIVE MODULUS	1,446,000 PSI
ASTM D790	FLEXURAL STRENGTH	33,266 PSI
ASTM D790	FLEXURAL MODULUS	822,000 PSI
ASTM 256	IMPACT STRENGTH	9.95 FT.-LB/IN
ASTM 648	STRESS	264 PSI
ASTM 648	STRESS DEFLECTION	139° F
ASTM 732	SHEAR STRENGTH	12,303
ASTM 2583	AVERAGE HARDNESS READING	81.2

### 28 DAY IMMERSION TEST

Toluene	1.2% Weight Gain
Ethanol	5.5% Weight Gain
10% Acetic Acid	12.1% Weight Gain
70% Sulfuric Acid	0.4% Weight Gain
50% Sodium Hydroxide	0.0% Weight Gain
Distilled Water	0.0% Weight Gain

### PRODUCT PROPERTIES

Density	9.07lbs per gallon
Viscosity	800 cps
% Vehicle Solids	100%
% Volatile	0%
VOC	0
Working Time	20 min @ 75° F. (25° C)
Shelf Life	1 year @ Moderate Temperature

# REPAIR SYSTEM



## LINER OPTION COMPARISON

	Bronze 2.55mm Thick	Silver 4.5mm Thick
Engineered Design		
1 Layer of Reinforced Fiberglass & Felt	✓	✓
2nd Layer of Felt		✓
Applications		
Pre-Liner	✓	✓
Any Sized Pipe	✓	✓
I/I Correction	✓	✓
Structural	✓	✓
Recommended Pipe Diameter		
3" – 6"	✓	
4" – 6"	✓	✓

CALL TODAY

TO BECOME AN

IRSI CERTIFIED

INSTALLER!

877.327.4216



**IRSI**

CERTIFIED  
INSTALLER

## HOW TO INSTALL AN IRSI LATERAL POINT REPAIR:

1. Televis and clean the pipe.
2. Find and measure the point of damage.
3. Using the IRSI kit and equipment, wet out and wrap the liner onto the carrier and then pull or push the carrier into place.
4. Inflate carrier and allow the resin soaked liner to fill the voids in the pipe.
5. Allow resin to cure, deflate carrier and remove for perfect repair, creating a "pipe in a pipe."



LATERAL POINT REPAIR SYSTEM





# ELBOW POINT



Our Infrastructure Elbow Point Repair System is a patented, flexible fleece and fiberglass liner technology. The flexible center of the liner creates a strong, smooth, unobstructed curve in up to a 90 degree bend. It seals joints, cracks, or even missing pieces of pipe. Our no-shrink epoxy system cures in as little as two hours.

**AVAILABLE IN 4"-6" DIAMETER & 2' & 3' LENGTHS**

## TECHNICAL DATA

### MECHANICAL & PHYSICAL PROPERTIES

ASTM D638	TENSILE STRENGTH	16,577 PSI
ASTM D638	TENSILE MODULUS	1,119,000 PSI
ASTM D695	COMPRESSIVE STRENGTH	23,595 PSI
ASTM D695	COMPRESSIVE MODULUS	1,446,000 PSI
ASTM D790	FLEXURAL STRENGTH	33,266 PSI
ASTM D790	FLEXURAL MODULUS	822,000 PSI
ASTM 256	IMPACT STRENGTH	9.95 FT.-LB/ IN
ASTM 648	STRESS	264 PSI
ASTM 648	STRESS DEFLECTION	139° F
ASTM 732	SHEAR STRENGTH	12,303
ASTM 2583	AVERAGE HARDNESS READING	81.2

### 28 DAY IMMERSION TEST

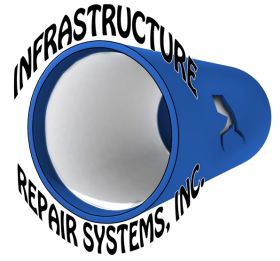
Toluene	1.2% Weight Gain
Ethanol	5.5% Weight Gain
10% Acetic Acid	12.1% Weight Gain
70% Sulfuric Acid	0.4% Weight Gain
50% Sodium Hydroxide	0.0% Weight Gain
Distilled Water	0.0% Weight Gain

### PRODUCT PROPERTIES

Density	9.07lbs per gallon
Viscosity	800 cps
% Vehicle Solids	100%
% Volatile	0%
VOC	0
Working Time	20 min @ 75° F. (25° C)
Shelf Life	1 year @ Moderate Temperature



# REPAIR SYSTEM



ELBOW REPAIRS REQUIRE A BENDY CARRIER TO NAVIGATE ANGLES & PREVENT KINKS



## FEATURES

- Sewn Fleece & Fiberglass Liners
- Patented Hook & Loop Closure, Straps and Strings
- Pre-Measured Epoxy
- Will Not Creep
- Smooth Even in the Curves
- Repair Cracks, Joints or Breaks
- Stops Inflow & Infiltration
- Cost Effective
- Summer & Winter Formulations

## HOW TO INSTALL AN IRSI ELBOW POINT REPAIR:

1. Televis and clean the pipe.
2. Find and measure the point of damage.
3. Using the IRSI kit and equipment, wet out the liner and wrap it onto the carrier and pull or push the carrier into place.
4. Inflate carrier and allow the resin soaked liner to fill the voids in the pipe.
5. Allow resin to cure, deflate carrier and remove for perfect repair, creating a "pipe in a pipe."

CALL TODAY TO BECOME AN  
IRSI CERTIFIED INSTALLER!

877.327.4216



**IRSI** CERTIFIED  
INSTALLER

ELBOW POINT REPAIR SYSTEM

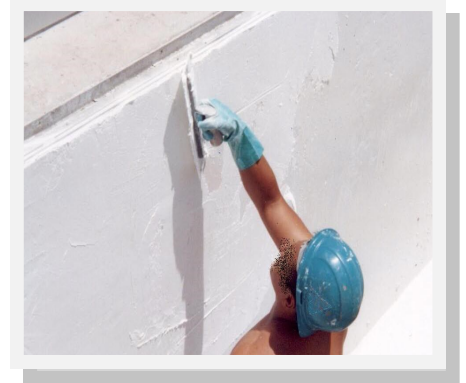


# INFRAGARD® CONCRETE &

Infragard® Concrete and Manhole Rehabilitation Systems are easy trowel-on rehab systems to stop leaks. Choose **Top Coat** or flexible **Chim Coat**. They are to be applied from 120-150 mils or as required by qualified design engineers to either wet or dry surfaces.

## TOP COAT

A two component, 100% solid thermosetting epoxy **Top Coat** that is convenient, spreads easily, is corrosion resistant, and creates a new lining within the manhole that stops leaks.



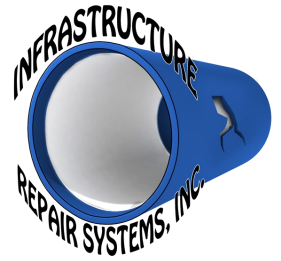
A scientifically formulated flexible two part epoxy chimney coating that expands and contracts with changing temperatures. **Chim Coat** is corrosion resistant, stops leaks, and is easy to apply.

## CHIM COAT

## PRIMER/SEALER

A two part epoxy system that works as a primer/sealer that can be easily applied to wet or dry surfaces with a garden sprayer.

# MANHOLE REHABILITATION



## FEATURES

- Easy trowel-on application
- No expensive equipment needed
- Environmentally friendly
- Zero VOCs
- Bonds to metal or concrete
- High compression and tensile strength
- High performance durability
- High performance corrosion resistance
- Prevents infiltration and ex-filtration

An **Infragard®** strength test revealed that the bonded **Infragard®** system did not fail. The adhesion was so strong that the concrete was pulled from the wall!



## TECHNICAL DATA

### MECHANICAL & PHYSICAL PROPERTIES

ASTM D638	TENSILE STRENGTH	8, 228 PSI
ASTM D638	TENSILE MODULUS	463,516 PSI
ASTM D638	ELONGATION STRENGTH	1.886%
ASTM D695	COMPRESSIVE STRENGTH	13,627 PSI
ASTM D695	COMPRESSIVE MODULUS	542,290 PSI
ASTM D790	FLEXURAL STRENGTH	16, 917 PSI
ASTM D790	FLEXURAL MODULUS	465,306 PSI
ASTM D2240	HARDNESS MOLD SIDE	84.7

### TENSILE PULL OF STRENGTH

ASTM C297	Steel	1101 PSI (Avg 2 tests)
ASTM C297	Concrete	>464 PSI (Avg 3 tests)

### CHEMICAL RESISTANCE

Tap Water pH 6-9	0.0% Concentration
Nitric Acid	0.0% Concentration
Phosphoric Acid	1.8% Concentration
Sulfuric Acid	17.9% Concentration
Gasoline	6.5% Concentration
Vegetable Oil	1.2% Concentration
Soap	0.01% Concentration
Detergent	0.01% Concentration





## “The Leader in Trenchless Pipe Repair Solutions”

Infrastructure Repair Systems, Inc. was founded in 1997 and is located in St. Petersburg, Florida. IRSI is the sole manufacturer of the patented Trenchless Mainline, Lateral and Elbow Point Repair Systems, as well as Infragard® Concrete and Manhole Rehabilitation Products. The Infrastructure Point Repair System was developed to provide a user-friendly, cost-effective repair for damaged pipe without disrupting the environment. This solution provides the most reliable, easy to use, ambient cure epoxy point repair systems on the market today.



**877.327.4216**

**irsi@irsi.net**  
**www.irsi.net**

 **Proudly Made  
in the USA**

