

# ELASTOMERIC JOINTING & CRACK BRIDGING SYSTEM

## epigen KIS

**epigen**

Performance Resins & Composite Systems

### TECHNICAL BULLETIN

KIS is a truly unique system that has extremely high elongation to deal with installations that may exhibit uncontrolled movement or simply benefit from a fabric reinforced lining. Originally designed as a boot seal for tank base protection, KIS has fulfilled functions bridging cracks, overlaying joints, wrapping pipes and sealing tank internals. Suitable for concrete and steel substrates.

KIS is applied wet so cross overs are fully integrated without welding or external bonding, and complex shapes can be treated with minimal inconvenience.

Surfaces are simply primed, the specially woven KIS fabric impregnated with the KIS Binder, and placed.

KIS is also suitable for use in combination with other Epigen products such as floor rebuilding or coating materials, water industry linings and chemical resistant toppings.

#### TYPICAL APPLICATIONS

Boot Seals	Joint Sealing
Crack Bridging	Pipe Wrapping

KIS may be laid as a thin film at 1mm thick however it can also be laid at over 3mm thick in multi layers in applications such as pipe wrapping to increase burst pressure. In cryogenic applications, KIS exhibits high elongation and freeze thaw stability making it suitable for use as a pipe protective wrap to control corrosion or internal of vessels as a lining.

#### FEATURES

- Alloy Epoxy/Polyurethane polymer system
- Free of all solvents - zero VOC
- Outstanding resistance to shock & stress
- Versatility in application - follows any contour
- Suitable in new lining or repair
- Variable widths and lengths, cures as a continuous
- Application DFT from 1mm to over 4mm in 1 coat.
- Engineered for high elongation, 200% @ -165 celsius.
- Versatility in application.



Boot Seal arrangement

#### TYPICAL CURED PROPERTIES

Tensile strength, MPa	>8
Hardness, Shore A	40 - 45
Maximum exposure temperature, °C	95
Elongation	800%

This information is supplied as an indicative reference only. Caution should be used where direct comparisons are to be made.



Reservoir joint and crack remediation

**SURFACE PREPARATION**

In line with all cases where good adhesion is expected, the substrate should be reasonably clean and free from loose particles. Methods for substrate preparation include abrasive blasting, etching, grinding or scarifying. The technique best suited depends on the substrate, the service conditions, and practical considerations.

**PRIMER APPLICATION**

KIS Primer can be applied directly to surfaces and left to gel before overcoating KIS Fabric/Polymer within 24 hours of application.

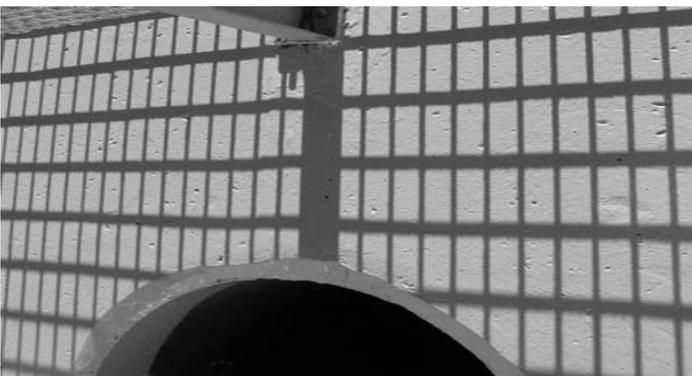
**KIS FABRIC/POLYMER APPLICATION**

Ensure the KIS Fabric is cut to the required size and shape before mixing the KIS Binder and saturating the fabric. Apply the saturated fabric directly to the job site and roll away any entrapped air between the fabric and primer.

Allow to cure overnight.



Crack in reservoir (top) and KIS treated (below)



**COVERAGE GUIDE**

Primer (up to 1000 micron on porous concrete)

1 kg of *Epigen KIS Primer* / m<sup>2</sup>.

Fabric/Polymer (nominally 1mm)

0.3 kg of *Epigen KIS Fabric* / m<sup>2</sup>.

1 kg of *Epigen KIS Binder* / m<sup>2</sup>.

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**CHEMICAL RESISTANCE - KIS STANDARD \***

Tested at 21°C. Samples cured for 10 days at 25°C. Curing at elevated temperatures will improve chemical resistance.

- 1 = Continuous or long term immersion
- 2 = Short term immersion
- 3 = Splash and spills
- 4 = Avoid contact

Acetic Acid, 10 %	2	Acetone	2
Acetic Acid, Glacial	2	Ammonium Chloride	1
Hydrochloric Acid, 5 %	1	Beer	1
Hydrochloric Acid, 10 %	1	Dichloromethane	3
Hydrochloric Acid, conc	2	Diesel Fuel	1
Nitric Acid, 5 %	1	Isopropyl Alcohol	2
Nitric Acid, 10 %	2	Kerosene	1
Phosphoric Acid, 10 %	1	Petrol	2
Phosphoric Acid, 35 %	1	Salt Water	1
Sulfuric Acid, 30 %	1	Sewage	1
Sulfuric Acid, 70 %	2	Skydrol	1
Sulfuric Acid, 98 %	3	Sodium Cyanide	1
Ammonium Hydroxide, 5 %	1	Sodium Hypochlorite	1
Ammonium Hydroxide, 20 %	1	Toluene	2
Potassium Hydroxide, 5 %	1	Trichloroethane	2
Potassium Hydroxide, 20 %	1	Wine	1
Sodium Hydroxide, 20 %	1	Xylene	1
Sodium Hydroxide, 50 %	1		

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\* KIS STANDARD is untreated with Chemical Resistant Topcoat. This Version is KIS Chemproof

**CURE**

Variations in cure may arise due to the amount of material being applied, the thickness of material being applied, the surface temperature, and the product temperature. The cure may be increased by heating product or by leaving mixed material stand for 15 minutes before use. The cure may be decreased by cooling the product before mixing.

**EPIGEN PRODUCTS**

**MANUFACTURED BY**

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