



# EVEREK SRE

## Semi-Rigid Airfield Repair Epoxy

### Description:

EVEREK SRE was developed by CTI Consultants for use as a unique, hard-wearing, flexible repair material for use in cracks, expansion and/or construction joints or other repairs to concrete and asphalt pavements.

EVEREK SRE has found consistent usage in airfield pavement repair where any broken pavement is a hazard for aircraft.

Aircraft jet turbine engines, surfaces and fittings are vulnerable to damage by loose particles (e.g. aggregate particles, concrete spall debris, asphalt fragments or other loose materials) that may emanate from the pavements and their margins.

Foreign Object Damage (FOD) results from such material striking fast-moving aircraft when disturbed (blown or sucked up from the pavement surface) or by being ingested into the engines themselves.

EVEREK SRE can be modified, on-site, with suitable rubber crumb to increase the toughness and flexibility for repairs spanning joints and cracks without reflection or de-bonding.

It can also be modified, on-site, with a bitumen solution to reduce mixed viscosity and increase cured flexibility. This modification finds application in field joints between asphalt and concrete pavements.

Alternatively, for repairs requiring less flexibility, EpiMax EA3, graded, washed, and dried quartz can be used.

Feathered edges must be avoided because the material will not be retained under traffic and will constitute a FOD hazard.

EVEREK SRE/HS is also available as a higher strength product. This version provides stress relief in repairs. It is not recommended for joints.

### Advantages:

- Excellent adhesion to concrete
- Quartz or rubber modification
- Solvent resistant
- Good movement capability
- Good chemical resistance
- Excellent impact resistance

### Typical applications

- Airfield apron repairs
- General floor repairs
- Airfield lighting installation
- Joint nosing repairs

### Typical properties - EVEREK SRE (unfilled)

- Work time: 20 minutes
- Shore A hardness: > 60 at 7 days
- Tensile strength (full cure): 6 MPa
- Full cure: 14 days at 25°C
- Compressive stress to 50% strain: 6 MPa (no failure)
- Elongation at break: > 100%

### Typical properties - EVEREK SRE/HS (unfilled)

- Work time: 20 minutes
- Shore D hardness: > 50 at 7 days
- Tensile strength (full cure): 12 MPa
- Full cure: 7 days at 25°C
- Compressive stress to 50% strain: 15 MPa (no failure)
- Elongation at break: > 25%



---

## **Surface preparation**

Concrete should be sufficiently cured. Ensure it is free of all contaminants, additives, curing agents, oils, pre-existing coatings etc and is also alkaline in nature. Prepare as necessary by industry approved methods like abrasive blasting etc, as applicable, to expose firmly held aggregate to minimum CSP 2 Standard. Vacuum all dust and debris. Allow to dry if wet. Always confirm preparation adequacy.

## **Application**

Airfield pavements may require rehabilitation for a variety of reasons. These can include correction of surface conditions that will affect airplane performance (roughness, surface friction, and/or drainage), material-related distresses and repair of localized structural damage due to overloading. A pavement in good condition may require strengthening to serve heavier airplanes and/or more frequent operations than the original pavement design supported.

As stated previously, EVEREK SRE can be modified by choice of filler on site, to enhance flexibility and toughness and modify handling characteristics.

The **EVEREK SRE/S** version is prepared by mixing with EpiMax EA3 selected quartz aggregate to increase both the depth of pour and handling stiffness.

Pour these mixes into the prepared area.

Then broadcast the top surface to refusal with EpiMax EA3 selected quartz aggregate. This will break air bubbles at the surface and create a non slip finish to the repair. The depth of the repair will depend on the overall size, but, in general, the depth will be to a maximum of 75 mm. Do not feather edge.

The **EVEREK SRE/R** version is prepared by mixing with EpiMax FRC fine rubber crumb to increase both the flexibility and toughness as well as handling stiffness.

These mixes are used to repair spalled or deteriorated pavement where some flexibility is required in the repair itself. They may be poured directly into a joint, crack or other repair. For joints or deep narrow cracks, use a backing rod (closed cell) to prevent the material settling in the joint. A filler such as damp sand may be used as support beneath the backing rod for deep, wide joints to prevent sag. The depth of the repair will depend on the overall size, but in general the depth will be to a maximum of 25 mm. Do not feather edge.

The **EVEREK SRE/B** version is prepared by mixing with an EpiMax BSA bitumen grade to decrease mixed viscosity and increase cured flexibility.

These mixes are usually poured directly onto the prepared surface, and spread to the required thickness by notched trowel. It may then be levelled-off using a steel trowel on its edge, or a squeegee. EVEREK SRE/B is generally used at concrete and asphalt/bitumen interfaces.

**EVEREK SRE Toppings** generally self-level and are applied by notched trowel. They may also be applied by roller. Apply a coat of the mixed resin, followed by a layer of stone or aggregate. Alternate layers of resin and aggregate are then applied until the desired thickness or surface finish is attained. For particularly porous substrates, a seal coat of EpiMax 225 may be applied to minimise air release from the substrate.

## **Special notes**

All existing joints should be carefully inspected to ensure the edges are sound, free from porosity, form-work pulls, spacing materials, oils, grease, etc. Only clean, sound and dry concrete surfaces are suitable for making repair. Cracks or aged, deteriorated joints should be cleaned using appropriate tools such as routers, grinders, etc. Saw cuts may be used to clean out and widen existing joints. All sides of joints and cracks must be of freshly exposed, sound and dry concrete free from entrained contaminants. Broken shoulders should be similarly excavated by saw-cutting until no more cracked or crumbling concrete is present. Clean out all debris, loose aggregate, dirt, dust, etc, by sweeping, vacuuming or blowing with clean, dry compressed air. Establish installation plan in advance and avoid feather edges.

---

---

## Mixing guidance

Mix the EVEREK SRE Part A and Part B together thoroughly using a power mixer for a minimum of 3 minutes, then slowly add the aggregate whilst continuing to mix. Mix until the product is uniform in consistency. Adding a 12 litres of EpiMax EA3 or half the contents of 4 kg of EpiMax FRC (fine rubber crumb), to the standard EVEREK SRE 8 kg kit will create a stiff, trowelable mix; use less aggregate if more flow is desired. Similarly, the addition of 1.6 kg of EpiMax BSA (bitumen solution additive) will reduce viscosity and increase flexibility.

Note 1: Do not exceed more than 1 volume mixed EVEREK SRE to 1.5 volumes selected quartz aggregate.

Note 2: With EVEREK SRE/S and EVEREK SRE/R, cold weather conditions can increase the viscosity of the mixes. Pre-conditioning the temperature of the products before application will assist, however, external airfield pavement temperatures will not change. The mix viscosity can be maintained by reducing the EpiMax EA3 and EpiMax FRC included in the mixes, respectively, but this will reduce the yield proportionately. Mixing technique will also affect the yield.

Note 3: As stated above, colour issues can often be improved by broadcasting the EVEREK SRE/S surface to refusal with EpiMax EA3 quartz.

## Yield guidance

### EVEREK SRE/S

Note: Do not exceed more than 1 volume mixed EVEREK SRE to 1.5 volumes selected quartz aggregate.

EVEREK SRE 8 kg + EA3 12 L = say, 15 L

### EVEREK SRE/R

EVEREK SRE 8 kg + EpiMax FRC 2 kg = say, 10 L

### EVEREK SRE/B

EVEREK SRE 8 kg + EpiMax BSA 1.6 kg = say, 8.5 L

## Packaging

EVEREK SRE is available in 8 kg packs (including Part A, Part B).

It is pre-packaged in correct proportions for use.

The on-site addition of EpiMax EA2/EA3, EpiMax FRC or EpiMax BSA will produce the EVEREK SRE/S, EVEREK SRE/R and EVEREK SRE/B versions.

EVEREK SRE/HS is available in 8 kg packs (including Part A, Part B).

## Safety precautions

Read **Safety Data Sheet** before commencing any application. Keep away from children. Avoid contact with skin and avoid breathing vapour. Always provide adequate personal protection (gloves and goggles etc) during use. Always provide adequate ventilation, especially in confined spaces. If poisoning occurs, call Doctor or Poisons Information Centre.

Phone 13 11 26. If swallowed, DO NOT induce vomiting. Give plenty of water or milk. If skin contact occurs, quickly remove contaminated clothing and wash affected areas thoroughly with soap and water.

TDG Code: EVEREK SRE: Part B - UN 2735 Part A - Not Classified.