

CHEMRITE® CILV

Low viscosity Crack Injection System

Product Description

CHEMRITE® CILV is a low viscosity epoxy injection system used to repair cracks and fill gaps in concrete structures to prevent water and air from reaching the steel reinforcing. It is also used to fill small gaps in structural components.

CHEMRITE® CILV can be used in high- or low-pressure applications.

CHEMRITE® CILV is a low viscosity epoxy grouting system suitable for filling cracks/gaps down to 0.2 mm at the surface.

Benefits of CHEMRITE® CILV:

- Low viscosity – provides deeper penetration and improved adhesion
- Cost effective – low viscosity allows for easy installation
- Easy to use – CHEMRITE® CILV system includes items required to carry out repair
- High early strengths

Features

- Deep penetrating
- Bonds to damp concrete

Technical

	CHEMRITE® CILV
Shelf Life	2 Years
Work time (@25°C , 55% RH)	45 Minutes
Initial Cure time (@25°C , 55% RH)	120 Minutes
Compressive Strength – 24 Hrs (ASTM D695)	60 MPa
Bond to concrete	Concrete failure
Tensile Strength – 7 Days (ISO 527)	38 MPa
Flexural Strength –7 Days (ASTM C580)	77 MPa
Modulus of Elasticity (GPa)	2.6
Viscosity (@25°C)	150 cps

Typical applications

CHEMRITE® CILV can be used in low- or high-pressure applications. Typical crack/gap injection applications include:

- Structural components
- Tunnel linings
- Water retaining structures
- Fractured concrete bases
- Bridge decks
- Concrete Piles
- Concrete columns

Approvals

CHEMRITE® CILV has been approved by the Queensland Department of Transport and Main roads as a conforming product for concrete element repairs.

Resistance to chemical spillage

- Fuel
- Oils
- Ammonia solution (20%)
- Sulphuric Acid (40%)
- Food emulsion
- Hydrochloric Acid (33%)
- Sodium Chloride (50%)

Preparation and application

Preparation

All surfaces must be free of release agents, oil's, grease, standing water or any loose material.

Low Pressure Application

The crack/gap should be sealed using CHEMRITE® Epoxy Gel (mixing instructions can be seen on the CHEMRITE® Epoxy Gel data sheet). The Injector flanges are also fixed to the injection points using CHEMRITE® Epoxy Gel. See Chemrite Injector TDS. When fixing the flanges, ensure that CHEMRITE® Epoxy Gel is allowed to pass through the outer holes in the base. It is important to have at least 3mm of material protrude beyond the circumference of the flange. This will create a better mechanical bond. CHEMRITE® Epoxy Gel QS can be used where a faster cure time is required.

Once the epoxy Gel has cure, mix 2 parts of CHEMRITE® CILV Part A and 1 part of CHEMRITE® CILV Part B in a mixing container. Mix at low speed for about 3 minutes. Then use the Chemrite Injector to hand draw the mixed CHEMRITE® CILV for the mixing container. Insert the Injector into the first flange and attach the rubber bands to the flange/injectors.

Once CHEMRITE® CILV is discharged from the next flange, install a new filled injector, and continue the process. Leave the previous injector in place to stop CHEMRITE® CILV from flowing back out.

The process is then repeated in the remaining flanges until the project is complete.

Once CILV has cure, Grind off the flanges and remaining CHEMRITE® Epoxy Gel.

Cleaning

All tools and spillages can be cleaned before the curing process has started using the CHEMRITE Technologies cleaner (A011).

Packaging

CHEMRITE® CILV is packaged in 3, 15 and 30 litre kits.

Safety Precautions

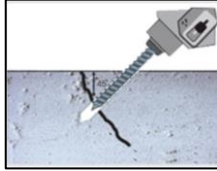
Whenever applying an epoxy resin, protective clothing must be worn. At a minimum, suitable rubber gloves and protective eyewear must be worn.

This epoxy is classified as hazardous and it is recommended that you refer to the Material Safety Data Sheet (MSDS).

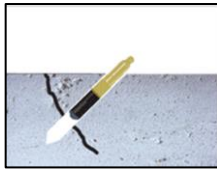
Application – HIGH PRESSURE

The crack should be sealed using CHEMRITE® Epoxy Gel (mixing instructions can be seen on the CHEMRITE® Gel data sheet).

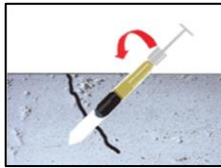
1. Drill a hole to the side of the crack at an angle so that the drill hole intersects the crack at a desired depth



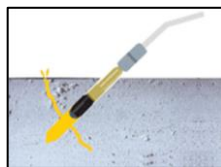
2. Insert the packer into the hole. Ensure the packer is inserted as deep as possible, allowing enough of the nut exposed to attach a wrench



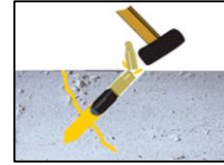
3. Fix the packer by fastening the nut. As the nut is fastened, the rubber around the packer will fit tightly inside the hole. DO NOT over tighten as this will damage the packer



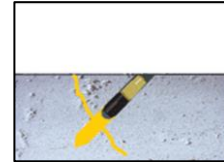
4. Mix the desired amount of CHEMRITE® CILV in a separate mixing container (mix 2 parts of Part A with 1 part of Part B at low speed for 3 minutes). Add the CHEMRITE® CILV to the CHEMRITE® High Pressure pump.
5. Waste the first 200-300ml pumped to ensure the high-pressure hose is free of contaminants
6. Attached the coupler to the packer and commence injection



7. Injection should continue until sufficient pressure is reached, or desired quantity is injected.
8. Clean high-pressure pump immediately after use.
9. Once the epoxy has cured, remove the nut.



10. The remaining hole and packer can now be filled with CHEMRITE® Epoxy Gel.



11. Grind off the remaining CHEMRITE® Gel.

Cleaning

All tools and spillages can be cleaned before the curing process has started using the CHEMRITE® Epoxy cleaner (A011).

Packaging

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Product Disclaimer

This Technical Data Sheet (TDS) summarises to the best of our knowledge the product and how to use and apply the product based on the information available to us at the time. It is recommended that you read this TDS and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied. If you are uncertain about any content herein, it is strongly recommended that you contact one of our technical experts for advice. Our responsibility for products sold is subject to the CHEMRITE Technologies standard terms and conditions of sale. We do not accept any liability for any losses suffered for damages of any nature whatsoever resulting from the use of or reliance upon information or the product to which information refers.

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