

Related Bulletins:

Data Sheets 6D12,
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Specification Bulletin 6S12

Master Builders Technologies
Repair Products
INSTALLATION BULLETIN 6I12



CONCRESE[®] 1210, 1230 & 1250 URETHANE INJECTION RESINS

- Description:** One component, polyurethane injection resins for sealing fine cracks and joints to control water flow or to seal large voids or openings in concrete or shotcrete structures to stop gushing water leaks. The resins react with water to form a rigid, closed cell foam that is resistant to most organic solvents, mild acids, alkali, microorganisms and fungi growth. Desired rate of expansion and reaction to water can be altered by temperature or the amount of accelerator used (CONCRESE 1230 and 1250).
- Application:** Sealing leaking hairline cracks and joints in concrete and masonry structures, stopping gushing water from rock faults or gravel layers, sealing large leaking cracks and joints in concrete and masonry structures, and repair of tunnels, manholes, culverts, dams and water treatment plants.
- Packaging:** CONCRESE[®] 1210 is packaged in 5 gal (19 L) pails. CONCRESE[®] 1230 is packaged in 5 gal (19 L) pails, accelerator is available in 0.2 gal (0.76 L) bottles. CONCRESE[®] 1250 is packaged in 5 gal (19 L) pails, accelerator is available in 0.2 gal (0.76 L) bottles.
- Storage Life:** CONCRESE 1210, 1230 and 1250 are sensitive to moisture and somewhat sensitive to elevated temperatures. They should be stored in dry conditions less than 80°F (27 °C) and ideally between 40° and 60 °F (4° and 16 °C). The shelf life is significantly reduced once the container is opened.
- Yield:** Volume depends on mix ratio of water to resin and moisture in concrete and surrounding soil.

IMPORTANT: READ THIS FIRST

Master Builders warrants the performance of this product only if the instructions of this document and other related Master Builders documents are adhered to in all respects.

DIRECTIONS:

Surface Preparation:

1. Clean crack with a wire brush and seal surface with a sealing material, when applicable (i.e. hydraulic cement – EMACO[®] 503, epoxy gel – CONCRESE[®] PASTE SPL, oakum rope soaked in CONCRESE 1210, 1230 or 1250).
2. Drill injection holes at a 45 degree angle to the surface of the concrete, intersecting the crack and penetrating the concrete through 1/2 its thickness. Space between injection ports should be equal to 1/2 the thickness of the concrete. When concrete is 6 in. thick or less, ports may
3. Install injection ports or packers in 1/2 in. to 5/8 in. (13 to 16 mm) holes so that the top of the sleeve is just below the concrete surface. Flush the cracked concrete or joint with potable water prior to pumping.

Mixing:

1. CONCRESLIVE 1210 – No mixing is required.
2. CONCRESLIVE 1230 – Mix the pre-determined accelerator dosage with the CONCRESLIVE 1230. Amount of accelerator is determined by the chart below:

Reactivity (approximates)

Temperature °F (°C)	% of activator used	Reaction Time
50 (10)	1	8.0 minutes
	3	3.5 minutes
	5	2.5 minutes
90 (32)	1	5.5 minutes
	3	2.0 minutes
	5	0.5 minutes

2. CONCRESLIVE 1250 – Mix the pre-determined accelerator dosage with the CONCRESLIVE 1250. Amount of accelerator is determined by the chart below:

Reactivity (approximates)

Temperature °F (°C)	% of activator used	Reaction Time
50 (10)	2	19.0 minutes
	6	7.5 minutes
	10	4.5 minutes
90 (32)	2	5.5 minutes
	6	2.0 minutes
	10	0.5 minutes

NOTE: It is advisable to run a small test if time to gel is critical. Reaction or gel time can be adjusted using the accelerator provided.

Application:

1. Apply CONCRESLIVE 1210, 1230 and 1250 using single or plural component injection equipment.
2. Inject the concrete beginning at the lowest packer or beginning with the first packer that was flushed on the horizontal crack. Move to the next adjacent port when material appears from a packer.
3. Repeat the injection of the first packer after pumping a number of ports. Pressure will vary from 200 to 2,500 psi (1.4 to 17.2 MPa) depending on crack thickness, concrete thickness and contamination.
4. Re-inject water into the crack to cure resin left behind the drill hole.
5. CONCRESLIVE 1210, 1230 and 1250 should be installed in work areas that are well ventilated. Avoid contact with eyes and repeated contact with skin. Use of rubber gloves and safety face shield is recommended. Familiarization with MSDS guidelines is critical. Follow all procedures in MSDS.

Clean-Up:

1. Remove all CONCRECIVE 1210, 1230 and/or 1250 from equipment and tools using acetone or other solvents. Follow proper waste disposal methods for solvents.
2. Cured resin is an inert material and can be disposed of by standard means.

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