



The Chemical Company

MASTERFLEX[®] 3000

Tape for MASTERFLEX[®] sealing system for irregular and unconventional joints

Description

MASTERFLEX[®] joint sealing system consists of two products MASTERFLEX[®] 3000 and CONGRESIVE 2200 epoxy.

The MASTERFLEX[®] 3000 is a highly elastic, rot-proof and chemically resistant sealing membrane. CONGRESIVE 2200 is a two part epoxy compound which establishes a strong bond to various types of substrate.

Fields of application

Sealing of construction joints, expansion joints, connecting joints, cracks and crevices, etc. Adheres to many types of substrate such as concrete, mortar, plaster work, steel iron, aluminum, stoneware, glass and epoxy.

Typical uses are for concrete tanks, cast and cement-pipe connections, bridge decks, tunnels, water towers and reservoirs, ponds, silos, containers, secondary tanks. MASTERFLEX[®] 3000 can be applied on dry or slightly humid substrates. It is ideal for joints with very large expansion or irregular, broken joint flanks. MASTERFLEX[®] 3000, is Grey coloured, weather and waterproof.

Benefits

- Durable
- Long lasting elasticity, even at high temperatures
- Root resistant
- Resistant to a wide range of chemicals
- Cost effective
- Approved for use with potable water
- Easy to apply
- User friendly heat welding of tape overlaps
- Can be applied horizontally, vertically and even overhead.

Application

Surface preparation:

Contact surfaces must be clean and free from dust, grease, water, oil, and other contaminants impairing adhesion. Concrete should be at least 4 weeks old. In order to provide maximum adhesion, concrete surfaces should be mechanically abraded.

Application:

Mix CONGRESIVE 2200 adhesive thoroughly, following the guidelines of the manufacturer. Apply the well-mixed CONGRESIVE 2200 on both sides along the joint or crack on the prepared substrate, preferably with a notched trowel or spatula. Layer thickness should be about 1-2 mm. When sealing cracks, or narrow joints the MASTERFLEX[®] 3000 should not be bonded along the centre line of the tape. A minimum unbonded width of 20mm is recommended to allow for expansion and contraction.

Wipe the edges of the tape with SOLVENT NO. 2, then place the clean and well-aired tape immediately into the adhesive layer and press well in with a roller. For very wide joints draw the tape suitably into the joint so that a hollow is formed. Holes punched at the edges provide added anchorage.

By warming up the membrane, it can be stretched over slight irregularities of the substrate. The same method can be used in case of corners, cavities, pipe crossing.

If individual tapes have to be connected into longer pieces (also T-pieces, etc.) they can easily be welded using a hot air blower.

In case of negative water pressure (more than 0.3 bar) back up the membrane with an adequate support, e.g. steel sheet, etc., in particular if joints are subject to large movement.

MASTERFLEX[®] 3000

*Typical properties

Physical properties	1mm	2mm
Total thickness	1.0 (± 5%)	2.0 (± 5%)
Specific Weight	920 g/m ² (± 5%)	1842 g/m ² (± 5%)
Shore A	92	93
Resistance to temperature	-30 °C to +90 °C	-30 °C to +90 °C
Burst pressure max.	> 4 bar	> 4 bar
Breaking load longitudinal, ASTM D638 Type IV	> 10.5 N/mm ²	> 10.5 N/mm ²
Breaking load lateral, ASTM D638 Type IV	> 11.0 N/mm ²	> 11.0 N/mm ²
Extension break longitudinal, ASTM D638 Type IV	380 ± 30%	380 ± 30%
Extension break lateral, ASTM D638 Type IV	610 ± 30%	610 ± 30%
Power absorption at 25% Elasticity lateral, DIN EN ISO 527-3	4.0 N/mm	7.9 N/mm
Power absorption at 50% Elasticity lateral	4.5 N/mm	8.9 N/mm
Resistance to water pressure, DIN EN 1928 (Version B)	> 4,0 bar	> 4,0 bar
Peel test on wooden platelet, DIN EN ISO 527-3	> 100 N/50 mm	> 100 N/50 mm
Bonding strength, DIN EN 1348	Greater than 1 Mpa	Greater than 1 Mpa
Resistance to tearing longitudinal, ASTM D624 Type C	47.3	104.5
Resistance to tearing lateral, ASTM D624 Type C	50.2	105.3
UV-Resistance: min, DIN EN ISO 4892-3	6.500 h	6.500 h
Fire classification, DIN EN 4102	B2	-
Aging through heat (70 °C, 28h)	The requirements are met	The requirements are met
Resistance to impact, DIN EN 12691	The requirements are met	The requirements are met
Chemical Properties , (Resistance after storage over 28 days by room temperature in following chemicals)		
Hydrochloric acid 3%	+	
Sulphuric acid 35 %	+	+
Citric acid 100g/l	+	
Lactic acid 5%	+	
Potassium hydroxide 3% / 20%	+ / +	
Salt water (20g/l Sea water salt)	+	+
+ = resistant, 0 = weakened, - = non resistant		

MASTERFLEX[®] 3000

Supply form

MASTERFLEX[®] 3000 dimensions:

Thickness: 1 mm	Thickness: 2 mm
Width 100 mm and 150 mm	Width 150 mm

Storage

In rolls of 20m length (all sizes)
Store MASTERFLEX[®] 3000 well protected against sunlight at ambient temperature in dry conditions.

Typical applications

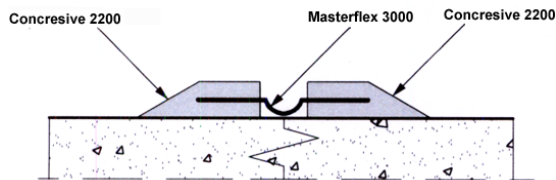


Fig 1. Sealing of cold joints

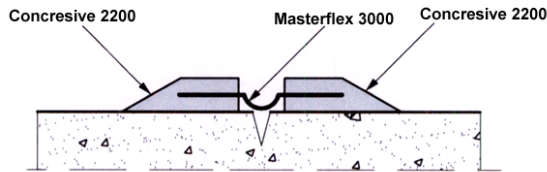


Fig 2. Sealing of cracks

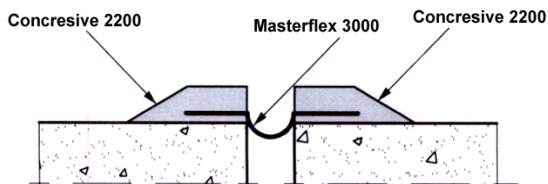


Fig 3. Sealing of expansion joints

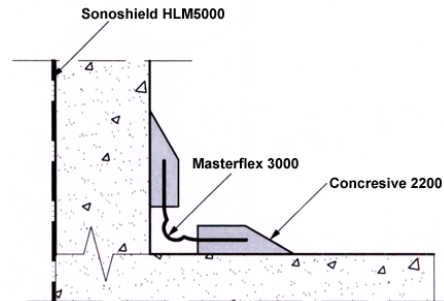


Fig 5. Sealing of a 90° construction joint

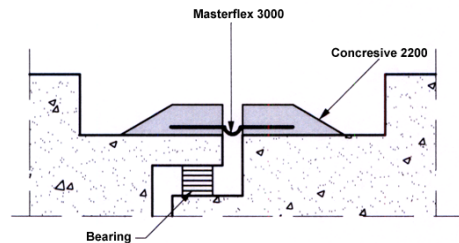


Fig 6. Waterproofing of specific joints

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* Properties listed are based on laboratory controlled tests.

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