

Conflex® Band

HIGH PERFORMANCE WATERPROOFING JOINT SEALING SYSTEM

DESCRIPTION

The **Conflex Band** joint sealing system consists of two components;

Conflex Band flexible polyolefin : a strip available in 1 mm and 2 mm thicknesses and a range of standard widths including 100 mm, 150 mm and 200 mm.

Conflex Band Adhesive: a moisture tolerant, non-sag, two part epoxy adhesive specifically formulated to give optimum adhesion to the **Conflex Band** and construction materials. **Conflex Band Tape** is supplied in rolls 20 m in length. When the length of joint exceeds the roll length, the **Conflex Band** strip is joined by heat welding with a hot air gun. **Conflex Band Tape** is bonded to the structure on both sides of the joint using **Conflex Band Adhesive**.

USES & ADVANTAGES

Conflex Band is a waterproofing tape membrane which is designed to be bonded over movement joints or cracks in a structure to prevent the ingress of water and chemicals. It is bonded in position with **Conflex Band Adhesive**, a two part epoxy adhesive specifically formulated for the purpose.

Conflex Band may be used to seal joints in car park decks, podiums, balconies, walkways and other elevated structures, where the **Conflex Band** can be protected from mechanical damage by a cover plate. It is also used for sealing joints in basements, subways, tunnels, refineries and sub-structures in general. **Conflex Band** is also used on silos, roofs as well as water immersed applications such as tanks, sewers, reservoirs, pipelines and swimming pools where the joint movement may exceed the capability of conventional gun applied elastomeric sealants.

Advantages include:-

- Forms a tough, flexible joint flashing.
- Accommodates continuous, and pronounced cyclic movement.
- Range of sizes available to suit most applications.
- Excellent resistance to UV and weathering.
- Application to dry and damp surfaces.
- Excellent adhesion to most construction materials.
- Performance not affected by climatic extremes.
- Rot resistant.
- **Conflex Band** can be heat welded for the continuity of long joint lengths.
- Perforations along the edges of the **Conflex Band** provide a mechanical fixing element in addition to the excellent chemical bond offered by the **Conflex Band**
- Root penetration resistance.
- UV resistant.
- Can be applied over joints containing joint sealants.
- Resistant to a wide range of chemicals and salt water.
- Non toxic. Suitable for use with potable water.

PROPERTIES

The data quoted below is typical for the product but does not constitute a specification

Conflex Band Tape	1 mm	2 mm
Colour :	White or concrete grey	
Service temperature :	minus 10°C to plus 80°C	
Tear resistance - lengthwise : DIN EN 12311-2 Method B	≥ 12.5 N/mm ²	≥ 8 N/mm ²
Tear resistance - across : DIN EN 12311-2 Method B	≥ 12.5 N/mm ²	≥ 8 N/mm ²
Elongation at break - lengthwise : DIN EN 12311-2 Method B	≥ 500 %	≥ 500 %
Elongation at break - across : DIN EN 12311-2 Method B	≥ 500 %	≥ 500 %
Tear resistance (nail shank)-lengthwise : DIN EN 12310-1	≥ 200 N	≥ 400 N
Tear resistance (nail shank)-across : DIN EN 12310-1	≥ 200 N	≥ 400 N
Water vapour permeability : DIN EN 1931 Method B	≥ 40 m	≥ 80 m
Shore A hardness :	approx. 87	approx. 87
Bonding strength : DIN EN 1348	≥ 4.0 N / mm ²	≥ 4.0 N / mm ²
Peel test on wood carrier :	≥ 100 N	≥ 100 N
Water tightness : DIN EN 1928-A- 60 kPa/24 Std.	watertight	watertight
Water tightness : DIN EN 1928-A- 400 kPa/72 Std.	watertight	watertight
Burst pressure :	> 4.0 bar	> 5.0 bar
UV-Resistance : DIN EN ISO 4892-3	≥ 6500 h	≥ 6500 h
Reaction to fire : DIN ISO 11925-2 EN 13501-1	Class E	Class E
Chemical Resistance :	To Hydrochloric acid, Sulphuric acid, Citric acid, Lactic acid, Potassium hydroxide, Sodium hypochlorite, salt water, waste water & bitumen emulsions.	

Conflex Band Adhesive

Colour :	Concrete grey
Specific gravity :	Approx. 1.7 (mixed)
Application temperature :	5°C to 50°C
Pot life :	60 min @ 25°C, 1.5 litre pack
Initial cure :	24 hours
Full cure :	7 days
Adhesive bond strength :	exceeds tensile strength of concrete

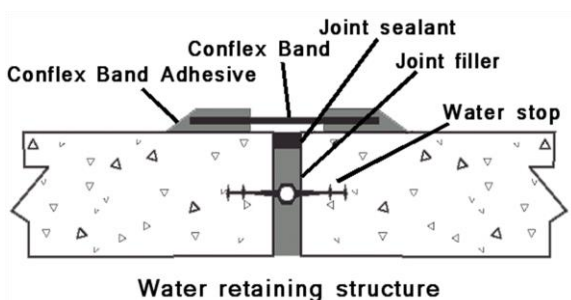
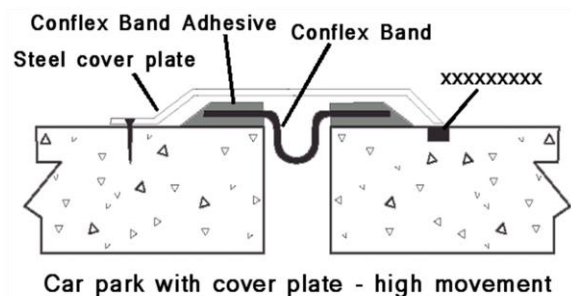
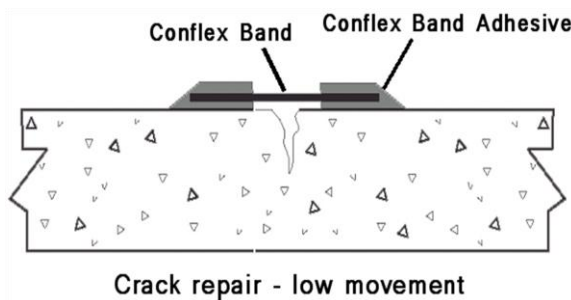
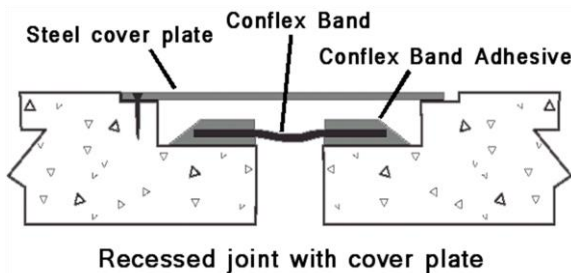
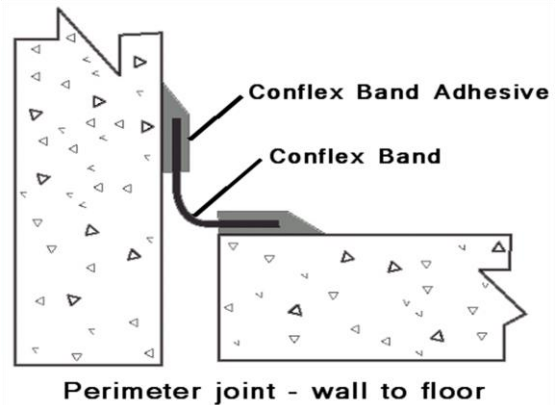
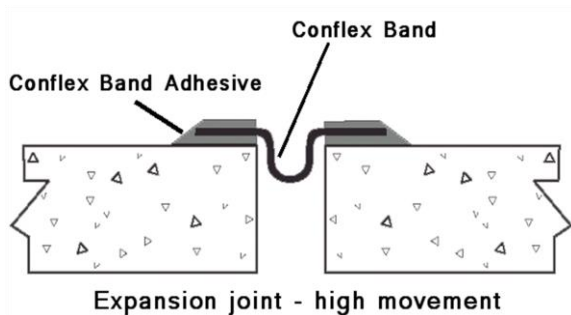
Movement accommodation :

Conflex Band used in conjunction with **Conflex Band Adhesive** can accommodate continuous cyclic movements which result in the debonded area being extended up to 100% of the debonded width e.g. application with 50 mm. unbonded area can accommodate 50mm. movement.

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TYPICAL APPLICATIONS



MAINTENANCE

There are no special requirements, however, any damage should be repaired by exposing the damaged area, cleaning the surface and replacing the strip.

SPECIFICATION CLAUSES

Where indicated on the drawings joints shall be sealed with a flexible Thermoplastic Tape Elastomer membrane having a tensile strength greater than 5.5 MPa and an elongation greater than 1000% according to DIN EN ISO527-3. Such a bandage membrane is **Conflex Band** supplied by Cormix International. **Conflex Band** shall be installed strictly in accordance with the manufactures printed instructions.

APPLICATION INSTRUCTIONS

Width selection

Conflex Band width selection is based on the width of the joint plus the width of the required bond area either side of the joint. In the case of narrow joints and cracks the minimum width of the unbonded area must be 20 mm.

Where the quality of the concrete on either side of the joint is poor and porous, wider **Conflex Band** tape profiles should be used to ensure a leak free joint. In the case of a 20 mm wide joint with good quality concrete either side, a 100 mm wide **Conflex Band** tape can be used. On good quality, sound concrete, the bond area on each side of the joint should not be less 30-40 mm.

The 200 mm width should be used where the condition of the concrete is such that porosity adjacent or close to the joint edges is suspect, where the joint is excessively wide or misaligned and when the **Conflex Band** is to be permanently immersed.

Joint preparation

Expansion joints must be packed with a firm, consolidated joint filler, such as **Conflex Cell**, prior to laying the **Conflex Band** system. If necessary joints may be presealed using an elastomeric sealant prior to laying the **Conflex Band** system. Ensure that any sealant used is capable of accommodating the anticipated joint movement. Where **Conflex Band** is to be turned up parapets and the like, a splay should be provided either cast insitu or formed with **Conflex Band Adhesive** so that the change in direction is smooth and progressive.

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Surface preparation

Concrete surfaces onto which the **Conflex Band** is to be laid must be sound and dust free, with no frost or free surface water. New concrete must be fully cured and free from curing compound. The concrete surface ideally should be wood float finished for the width of the **Conflex Band** and free from irregularities, with well-defined arrises and no vertical misalignment between each side of the joint. Prepare a suitable width of substrate slightly wider than the membrane width selected. Sharp arrises should be ground down pencil round. Remove all dirt, dust and laitance by rigorous wire brushing, grit blasting or grinding. Any spalling or honeycombing must be repaired using **Conflex Band Adhesive** resin mortar and allowed 24 hours to cure prior to the application of the **Conflex Band** system. If the concrete is wetter than SSD, dry it gently with a gas torch or hot air blower. If required, a maximum 25 mm width of bond breaker tape applied adjacent to either arrises will provide an increased debonded width and greater movement potential if required.

Priming of concrete

For most applications the use of a primer is unnecessary, however, in cases where **Conflex Band** is being used in immersed conditions or in critical situations such as friable substrate or maximum movement, the concrete must be primed with **Floorgard Primer 903**. Mix the **Floorgard Primer 903** and apply by brush, working well in, to a width of 25 mm either side of the **Conflex Band** membrane. **Floorgard Primer 903** should be left for about 40-60 minutes (depending upon temperatures) to allow evaporation of the primer solvent prior to the application of the **Conflex Band Adhesive**. If the primer has been left longer than 8 hours or has become contaminated with dust, the surface must be reprimed. The rate of cure of **Floorgard Primer 903** is temperature dependent. Ideally the substrate should be above 10°C to ensure a reasonable cure rate, however, this primer can be applied when substrate temperatures are 5°C and rising. Gentle warming of the concrete will assist in the application of the primer.

Priming of metal surfaces

Prior to the application of **Conflex Band** to metal surfaces, all surface contamination, rust and dirt must be removed. Wipe out all the rust using a cloth soaked with **Cormix Cleaner**, before application of the **Conflex Band Adhesive**.

Welding

Conflex Band can be joined by hot air welding to cater for any joint length. An electric hot air gun of the type used by vinyl flooring applicators is generally suitable for the task.

The hot air gun should have a nozzle with a slot shaped outlet to spread the hot air across a broad fan.

This will allow for more effective bonding and prevent localised overheating and charring of the **Conflex Band Tape**. Before bonding, create an overlap of at least 40 mm.

The ambient air temperature should be taken into account when welding by adjusting the welding speed to ensure that the tape is neither scorched nor under heated with no weld forming.

Preparation of the membrane

This operation is vital to the adhesion and performance of the **Conflex Band** system.

When all substrate preparation has been carried out and the joints are ready for application of the **Conflex Band**, measure and cut the length of **Conflex Band** to suit the joint.

Carry out any welding of the **Conflex Band Tapes** as required to cater for the length of joint to be bonded during this application session.

Lay the **Conflex Band** with the bond face up on a clean surface. Clean the face of the **Conflex Band** with a dry or wet cloth.

Mixing and application of the adhesive

Conflex Band Adhesive is a two part epoxy resin based adhesive designed for maximum bond strength with the **Conflex Band Tape** and is tolerant of damp concrete substrates. Transfer the entire contents of the hardener component into the base component can and mix thoroughly using a slow speed drill and paddle stirrer for a full 4 minutes stopping occasionally to scrape the sides of the tub. Mixing is complete when a uniform colour is achieved. Prior to applying the adhesive in the case of expansion joints or cracks install a backer rod inside the joint and apply masking tape on top at least the width of the joint to ensure this area remains unbonded. In addition put masking tape at each side of the joint at least, half the width of **Conflex Band Tape** + 1 cm. Apply the adhesive onto the substrate using a spreader, making sure that an even spread of adhesive approximately 2 mm thick is applied to an area wider than the **Conflex Band Tape**. Once this has been done lay the bond face of the **Conflex Band Tape** onto the adhesive and align as required pressing it firmly over its full area ensuring complete contact. Finish along each edge of the **Conflex Band Tape** with a small triangular fillet of adhesive and remove any excess.

The membrane should be applied no more than 20 minutes after cleaning the bond face of the **Conflex Band Tape**. If the **Conflex Band Tape** cannot be placed in contact with the adhesive within 20 minutes of cleaning, it should be cleaned again prior to placement. Allow the **Conflex Band Adhesive** to cure for 2 hours before applying a layer of **Conflex Band Adhesive** along the edges of the top surface of the tape. Application of the adhesive serves to encapsulate the edges as shown in the diagrams on page 2. Immediately after application of the adhesive to the top face of the tape, remove the masking tape.

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LIMITATIONS

Joint layouts incorporating **Conflex Band** should be kept as simple as possible to allow for site joints to be restricted to straight butt joints. Avoid complex changes of angle or skew giving rise to difficulty in jointing and installation.

TAPE SECTION

Tape Section Negative Pressure

Movement	Joint Width			Overlapping
	1-50 mm	50-75 mm	75-100 mm	
Conflex Band 1 mm only for low water pressure <1.5 bar				
0 mm	150 mm	/	/	Chemical bonding Hot welding**
Up to 20 mm	200 mm	/	/	Hot welding**
Up to 50 mm	/	/	/	
Up to 75 mm	/	/	/	
Conflex Band 2 mm only for low and high water pressure				
0 mm	150 mm	250 mm	300 mm	Chemical bonding Hot welding**
Up to 20 mm	200 mm	250 mm	300 mm	Hot welding**
Up to 50 mm	/	300 mm	350 mm	Hot welding**
Up to 75 mm	/	/	400 mm	Hot welding**

**only if welding done perfectly

If expected movement > 20 mm it is suggested to install an omega curve.

Tape Section Positive Pressure

Movement	Joint Width			Overlapping
	1-50 mm	50-75 mm	75-100 mm	
Conflex Band 1 mm only for low water pressure <1.5 bar				
0 mm	150 mm	200 mm	200 mm	Chemical bonding Hot welding**
Up to 20 mm	150 mm	200 mm	200 mm	Hot welding**
Up to 50 mm	/	/	300 mm	Hot welding**
Up to 75 mm	/	/	/	
Conflex Band 2 mm only for low and high water pressure				
0 mm	150 mm	200 mm	200 mm	Chemical bonding Hot welding**
Up to 20 mm	150 mm	200 mm	250 mm	Hot welding**
Up to 50 mm	/	250 mm	330 mm	Hot welding**

ESTIMATING

Supply

Conflex Band : 1 mm thick, 20 m roll length perforated
Widths : 100 mm, 200 mm, custom widths to order.

Conflex Band : 2 mm thick, 20 m roll length perforated
Widths : 100 mm, 200 mm, custom widths to order.

Conflex Band Adhesive :

1.5 kg (Part A : 1 kg and Part B : 0.5 kg) and 6 kg pack (Part A : 4 kg and Part B : 2 kg)

COVERAGE RATE

Conflex Band Adhesive :

Approx. 3.4 kg/m² at 2 mm thick (approx. 0.5 kg/linear metre 35 mm bonded width with encapsulation)

Floorgard Primer 903 : 5 m² /litre

Notes : the coverage figures for liquid products are theoretical - due to wastage factors and the variety and nature of possible substrates, practical coverage figures may be reduced.

STORAGE & SHELF LIFE

All components of the **Conflex Band** system must be stored in a cool dry location at a temperature between 5°C and 30°C.

HEALTH & SAFETY

Conflex Band : there are no known hazards associated with this product in normal use.

Conflex Band Adhesive : Prolonged use and repeated skin contact may cause dermatitis in persons sensitive to epoxy resins and hardeners.

Gloves, barrier creams, protective clothing and eye protection should be worn when handling these products. If poisoning occurs, contact a doctor. If swallowed, do NOT induce vomiting - give a glass of water. If in eyes, hold eyes open and flood with water for at least 15 minutes.

If skin contact occurs, remove contaminated clothing and wash skin thoroughly.

Material Safety Data Sheets are available to users of Cormix Products on request from their nearest Cormix branch. Read the MSDS, data sheet and product labels carefully before first use of any product.

TECHNICAL SERVICE

The Cormix International Technical Service Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

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QUALITY ASSURANCE

ISO 9001 : 2015 verified by TUV Nord.
ISO 14001 : 2015 verified by Lloyd's Register
International.

DISCLAIMER

Performance data is achieved testing in accordance with International Standards. Testing by others may result in different results from those published as a result of external factors such as poor sampling, incorrect mixing, varying temperatures, curing, crushing procedures etc. Cormix does not take responsibility nor need to defend others testing that does not achieve the published data. The user must test the products suitability for the intended application and purpose. Cormix reserves the right to change the properties of the product. Site conditions and differences in materials are such that no warranty or fitness for a particular purpose, nor liability can be inferred from the published data sheet, written recommendations or from other advise offered.

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