

Application Guide

FPO Tape for Joint Waterproofing
MasterJoint 930 System



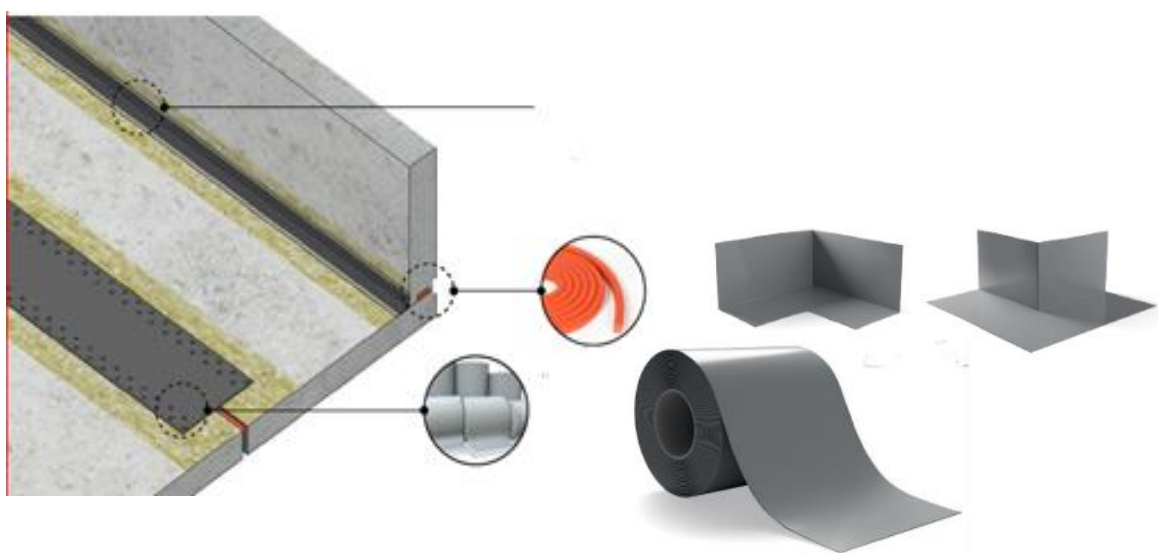
GENERAL.....	2
Products and Packaging	2
Application Requirements.....	3
APPLICATION	4
Surface Preparation	4
Applying Adhesive	6
Application of the MasterJoint 930 Tape	6
Penetrations.....	9
Overview.....	10
MasterJoint 930 System	10
Other construction systems application guides	11

GENERAL

This application guide applies to the MB Solutions Australia Ltd Sealing FPO tape system, known as **MasterJoint 930**. This application guide shall be read in conjunction with all project specifications (including drawings), by others, and the current material technical data sheets (TDS) and safety data sheets (SDS).

Products and Packaging

Renamed Brand	Formerly as	Description	Size
MasterJoint 930	MasterSeal 930	Flexible Polyolefin tape (FPO)	20Lm rolls. 2mm thickness widths 100mm-1000mm made to order
MasterStrength 1444	MasterBrace 1444	Two component, thixotropic epoxy adhesive	1 kg kit (Part I: 0.25kg Part B: 0.75kg)
MasterStrength 1446	MasterBrace 1446	Two component, thixotropic epoxy adhesive	10kg kit (Part I: 5kg Part B: 15kg)



Application Requirements

Training: All work must be conducted by adequately trained and skilled subcontractors under appropriate supervision.

Safety: Always ensure the appropriate use of adequate PPE (gloves, goggles, long sleeves etc) and comply with all other safety related requirements when applying Master Builders materials.

Quality Systems: The applicator shall operate under a fully compliant quality system, to ensure the on-site quality of applied material. The applicator shall keep fully documented work records for all works undertaken.

Quality Control: If after application and/or testing, any applied material is deemed as unsatisfactory by the specifying consulting engineer and/or MB Solutions Australia Ltd, it may need to be rectified at the applicator's cost.

Weather: No product application work is to be carried out in temperatures below 5°C or above 35°C, unless special precautions are taken.

Continuity of Process: All applications shall be done in continuous operations.

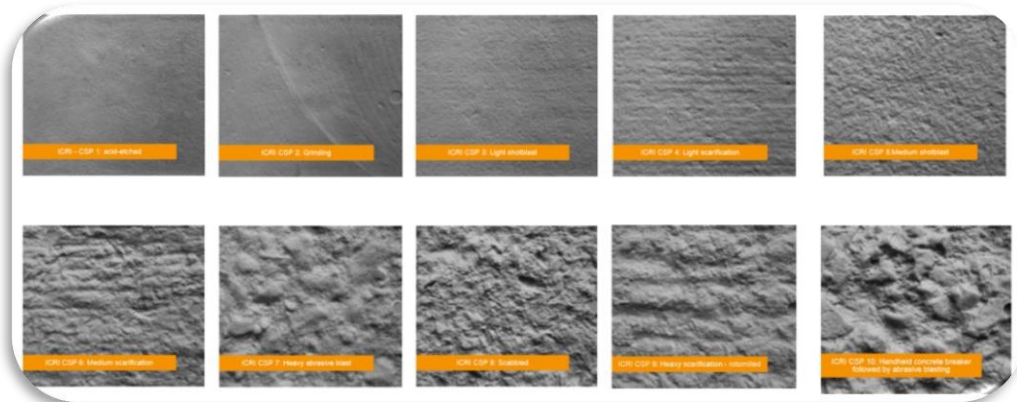
Useful Sources: ICRI (International Concrete Repair Institute) Concrete Surface Profile Chips (CSP I-10)- Technical Guideline No. 310.2R-2013

APPLICATION

Surface Preparation

Concrete Substrate

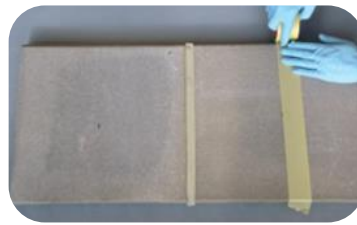
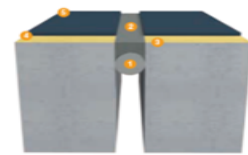
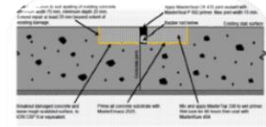
- Concrete substrate shall be of at least 28 days old. A tensile bond strength of the substrate of > 1.5 MPa is required. A Tensile Pull-Off Test should be done prior to work proceeding and to verify the contractor's chosen preparation procedures.
- All cement laitance must be removed prior to application. The surface layer of the concrete shall be removed to expose small particles of sound aggregate such that the minimum roughness or surface profile to be achieved is CSP 3.



- The optimum mean surface roughness or profile is 0.5 – 1.0 mm and must expose soundly bonded aggregate with a surface presenting like 60-grit sandpaper.
- The surface shall not be roughened excessively, or in a manner that will create unnecessary damage to the substrate concrete. Ideal surface preparation methods are grit blasting, shot peening or grinding.
- Any additional water must be avoided. Dirt, oil, grease, and other contaminants must be removed.
- Immediately prior to the application of the MasterJoint 930 system including epoxy primer, levelling mortar and/or adhesive, the surface must be cleaned with a brush or a vacuum cleaner to remove all loose particles and dust. Ensure the substrate has properly cured and the concrete is profile free, no ridges or troughs, etc. Mechanically remove efflorescence before proceeding.



- Bag up blowholes, especially on vertical surfaces, and carry out any necessary repairs in good time prior to application of adhesive. "Bagging up" should be carried out using a suitable MasterCrete repair mortar or MasterStrength epoxy adhesives.
- To vertical surfaces, all form release agent must be removed prior to applying any adhesive.
- A suitable PU joint sealant such as MasterJoint CHR 195 recommended for application inside the joints. Its critical application for joints inside water tanks or any other situation exposed to water pressure.
- Apply a masking tape on top of the joint / crack (masking tape = twice the width of the joint). Ensure adequate masking off the outside edges of the joint and that joint is clear of any debris. This masking allows the joint edge to be regular and clean to make the joint look neater. The distance to the joint should be approx. once the full size of the tape.



Metal Substrate

- Remove dust, debris, and other contaminants from vent, drainpipe, and post penetrations; reglets; and other metal surfaces.
- The steel should be cleaned to an SA Class 2.5 accordance to ISO 8501-1/ISO 12944-4 class SA 2.5 and all rust removed. For small patches this can be done by wire brush. On larger jobs a needle gun or captive grit blasting will be effective.



- Prime the prepared surface with MasterStrength 2525 and apply the adhesive whilst the MasterStrength 2525 is still tacky.

Applying Adhesive

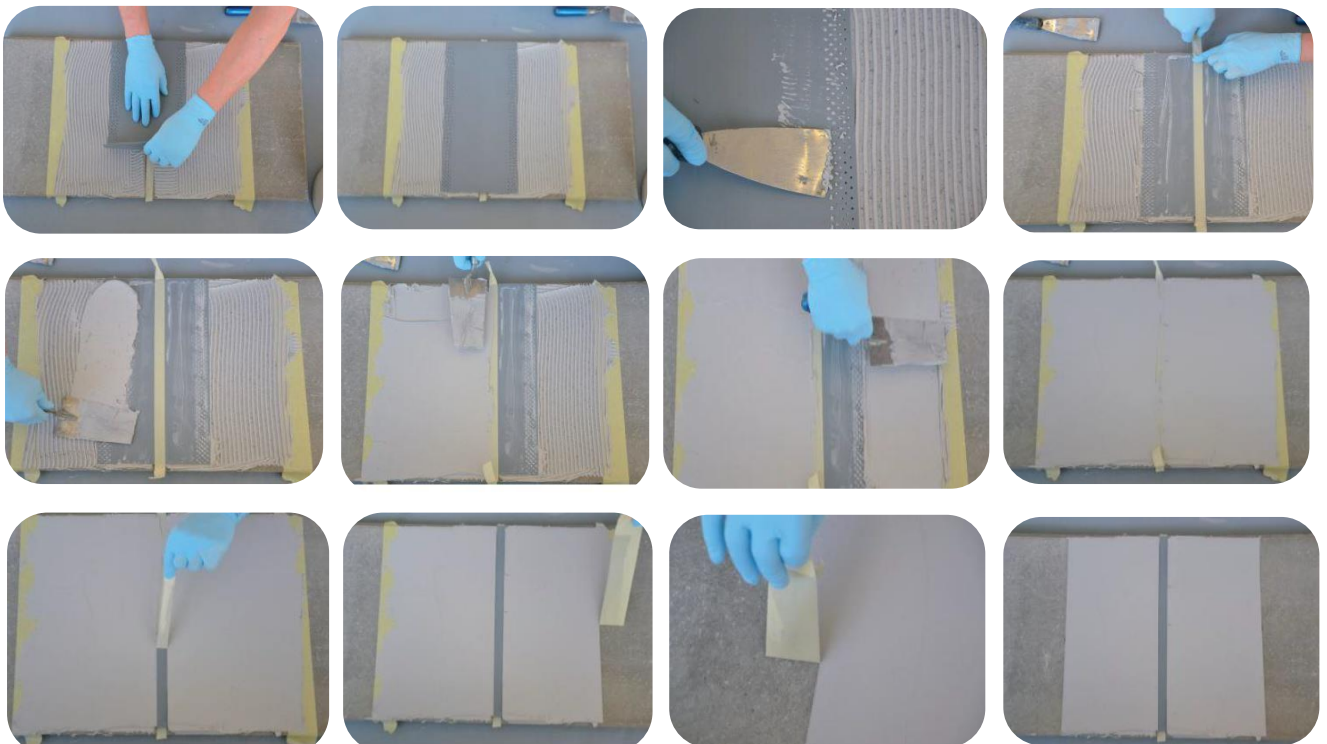
- Apply MasterStrength I 446 or I 444 as the first layer of adhesive.
- Ensure both Part A and Part B are pre-conditioned to a temperature between 15°C and 25°C before mixing.
- Transfer the full contents of Part B into the container of Part A.
- Mix mechanically using a slow-speed drill with a suitable paddle (approx. 300 rpm) for at least 3 minutes until a uniform grey colour is achieved.
- Frequently scrape the sides and bottom of the container during mixing to ensure complete blending.
- Keep the paddle fully submerged during mixing to minimise air entrapment.
- Do not mix by hand.
- Do not apply directly from the original container.
- After achieving a homogeneous mix, transfer the contents into a clean container and mix for an additional 1 minute.
- Apply the mixed adhesive to the prepared substrate using a trowel or scraper, ensuring a minimum thickness of 2–3 mm.
- Smooth the adhesive to eliminate air pockets and create a flat, even surface for MasterJoint 930 tape installation.
- Do not fill or bridge the joint with adhesive.
- The adhesive should extend 30–50 mm beyond the final edge of the tape on each side of the joint.
- Apply MasterJoint 930 immediately; do not allow the adhesive to set prior to application.



Application of the MasterJoint 930 Tape

- Ensure the MasterJoint 930 tape is clean and free of dust, debris, or any contaminants before application. If contaminated, clean thoroughly prior to use.
- Apply masking tape along both sides of the adhesive path to clearly define the bonding area.

- This ensures the centre of the tape remains free of adhesive, except at overlap joints where adhesive is required.
- Starting from the top of the joint, place the MasterJoint 930 tape onto the fresh adhesive layer.
- Use a rubber roller to press the tape firmly into the adhesive, ensuring full contact and avoiding air pockets.
- Apply an additional layer of MasterStrength I 446 or I 444 to encapsulate the edges of the tape.
- Follow by applying a second, full-width layer of adhesive over the tape, extending to the edges of the lateral masking tape.
- Smooth the adhesive layer to achieve a clean, even finish with no visible tape underneath.
- Remove masking tape immediately after the final adhesive layer is applied to avoid damaging the cured surface.
- If left until after curing, masking tape removal may require mechanical means.
- Allow the adhesive to fully cure (typically overnight) before putting the structure back into service.



▪

- MasterJoint 930 is flexible enough to accommodate bends at floor-to-wall transitions. At corner junctions, avoid forcing the tape to bend in three directions. Instead, terminate wall-to-wall corners at the floor level for best results.



- It is advisable to do the floor joints, then the floor wall joints and finally the wall-wall joints to minimise the stress of the tape.
- It is also advisable to fabricate T-junctions using wider tape - min 200mm wider than the original tape.



Connecting the Tapes

- New tapes can be joined to existing tapes however the existing tape should be lightly abraded with fine sandpaper to ensure there is a clean surface.
- Ensure surface for application is dry, free from dust, debris and all other contaminants which may inhibit adhesion between the two tapes.
- Lightly abrade the surface to ensure an open surface to heat and weld the tapes.
- Ensure there is an overlap of 50 to 100mm between the two tapes to be joined.
- Using a heat gun with suitable output around 360°C for the 2mm thick tape. Suitable welders are made by Leister.



- Heat between the overlaps until the MasterJoint 930 becomes pliable and then using a rubber roller roll the two sides together. A weight can be used to hold the pieces together whilst it cools.
- After allowing the join to cool before you test it for adhesion.
- By warming up the membrane, it can be stretched over slight irregularities of the substrate. The same method can be used in case or corners, cavities, pipe crossing.



Penetrations

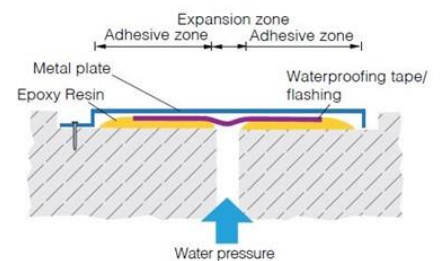
- Cut a suitably sized square as well as a sleeve section; and roughen the overlapping areas.
- Then prepare the tape; pre-heat the tape and pull the preheated tape over the pipe.
- Pull the tape square completely down to the concrete substrate.
- Put the sleeve around the primed pipe and weld the sleeve onto the bottom section around the pipe; weld the seams vertically together. If the pipe is galvanised that will need to be removed and if its black iron no need to go to the same degree of preparation, just a clean-up and remove any surface rust etc.



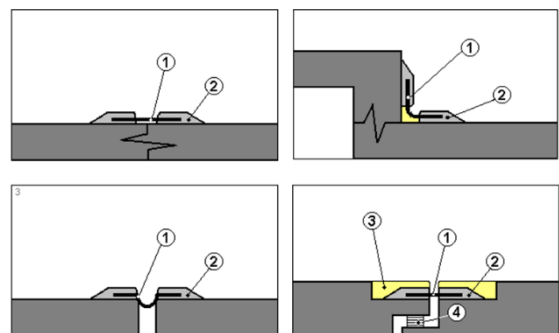
Overview

MasterJoint 930 System

- Designed for use on wide movement joints requiring waterproof sealing.
- consists of two products - **MasterJoint 930** tape and **MasterStrength I446** or **I444** epoxy which are used to adhere this to the substrate.
- To be applied down to around 5°C and up to 35°C.
- Suitable for use with both potable and non-potable water and for vertical and horizontal joints. All components have been tested to conform to AS 4020:2018
- Not suitable for vehicle traffic and should be protected with a suitable cover plate system. If this is not possible then a weight (like a dowel) should be used to create a dip in the **MasterJoint 930** or have a backer rod sitting proud to create a bulge.
- In case of higher water pressure > 1.5 bar up to 3 bars or negative pressure, protect the joint with a metal plate.
- At low temperatures welding is the preferred as the bond is not affected by the curing of the adhesive.
- should be installed when the joint is at its widest to reduce the stress on the curing adhesive.



- 1: MasterJoint 930
 2: MasterStrength I446 or I444
 3: MasterCrete FC 545 or similar
 4: Bearing



Other construction systems application guides

- MasterCrete: "Cementitious concrete repair" Application Guide
- MasterStrength/MasterFill ER: "Epoxy Crack repair & Injection" Application Guide
- MasterStrength LAM/FIB/BAR/ANC: "CFRP structural strengthening" Application Guide
- MasterFill PR: "PU injection methods" Application Guide
- MasterFlux: "Cementitious grouts" Application Guide
- MasterFlux ER: "Epoxy grouts" Application Guide
- MasterJoint CHR: "Joint sealants" Application Guide
- MasterJoint 910: "Hydro-swelling waterbars for construction joints" Application Guide
- MasterShield AKS: "Chemical resistant HDPE liner" Application Guide
- MasterShield CHR 360: "Chemical resistant Novalac coating" Application Guide
- MasterShield AC: "Anti-carbonation coatings" Application Guide
- MasterShield CI: "Impregnants and corrosion inhibitors" Application Guide
- MasterShield CP: "Galvanic cathodic protection systems" Application Guide
- MasterShield WR: "Pre-applied basement waterproofing membrane" Application Guide
- MasterGeo: "Geotechnical Soil nails and anchors" Application Guide

Disclaimer

Application Guide MasterJoint 930-ANZ VI-1224

STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this MB Solutions Australia Pty Ltd publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use and for ensuring that the application and use of the product is in accordance with the manufacturer's guidelines and recommendations.

NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by MB Solutions Australia Pty Ltd either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not MB Solutions Australia Pty Ltd, are responsible for carrying out procedures appropriate to a specific application.

<p>MB Solutions Australia Pty Ltd ABN 69 634 934 419 Suite 102, 2 Burbank Place Norwest NSW 2153</p> <p>Freecall: 1300 227 300 www.master-builders-solutions.com/en-au</p>	<p>MB Solutions New Zealand Ltd 45C William Pickering Drive Albany, Auckland New Zealand</p> <p>Freecall: +64 9414 7233</p>	<p>Emergency Advice: 1300 954 583 within Australia (24hr) 0800 001 607 within New Zealand</p>
---	---	--