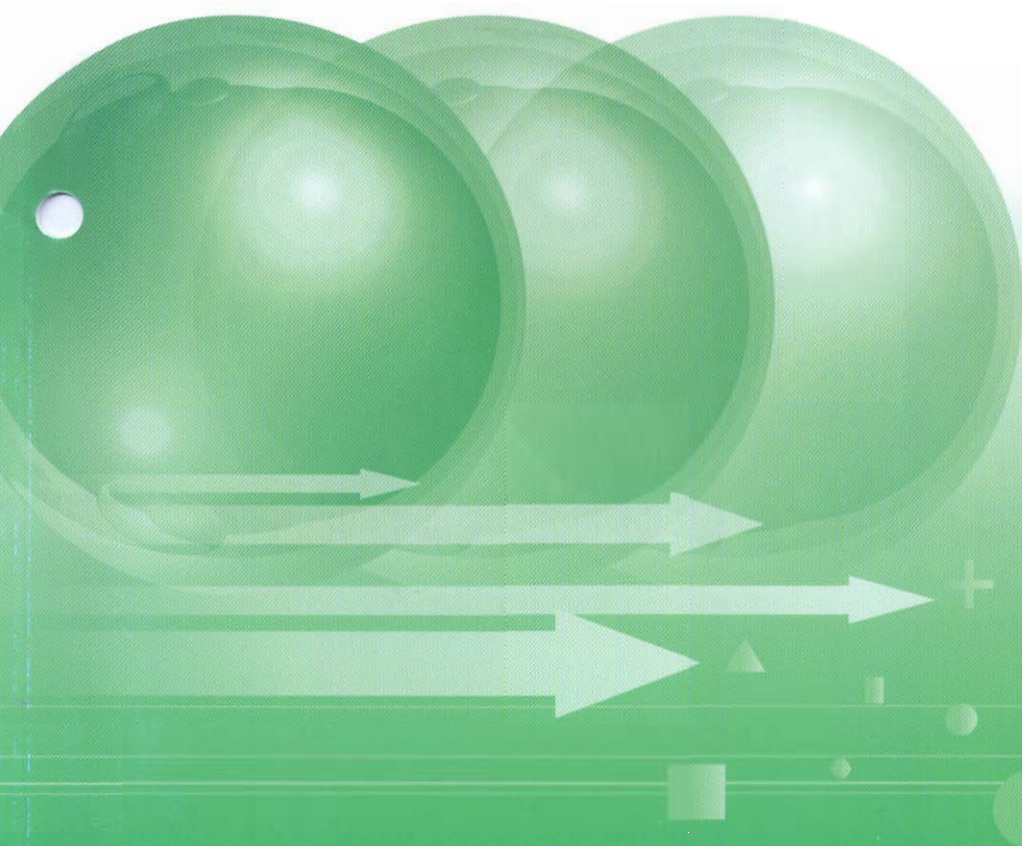
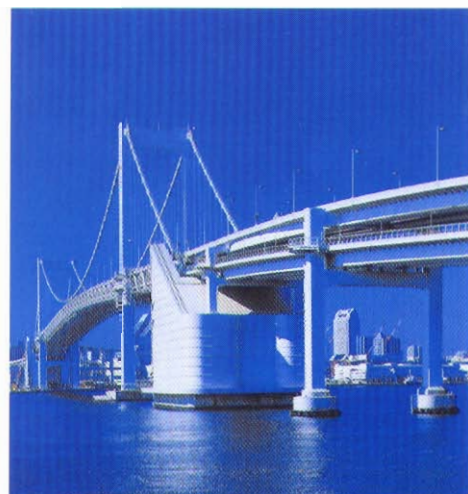


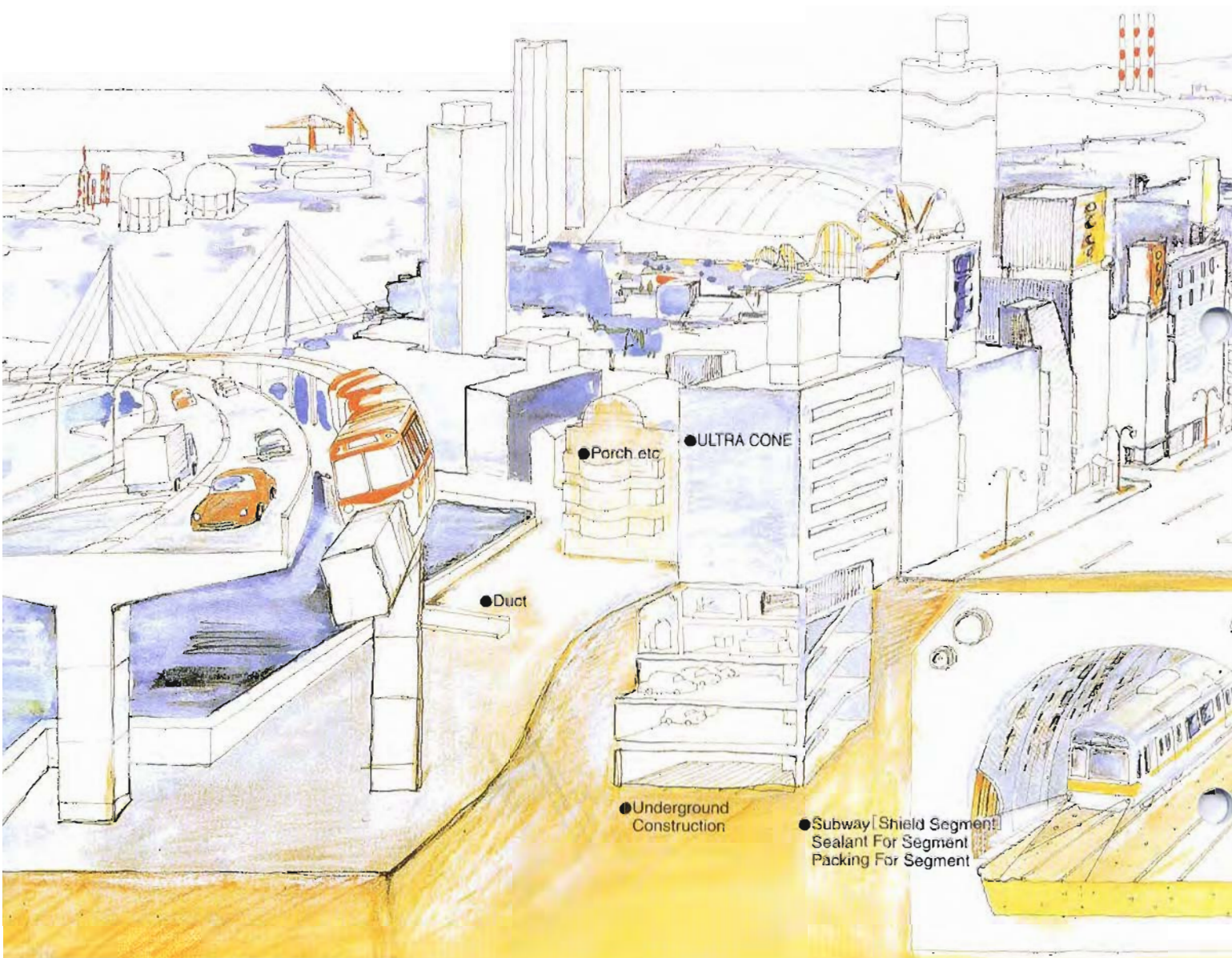
WATER-SWELLING RUBBER ELASTIC TYPE SEALING MATERIALS

ADEKA ULTRASEAL

Products List



VARIOUS APPLICATION OF



ADEKA ULTRASEALS WATER-SWELLING RUBBER SEALING MATERIALS

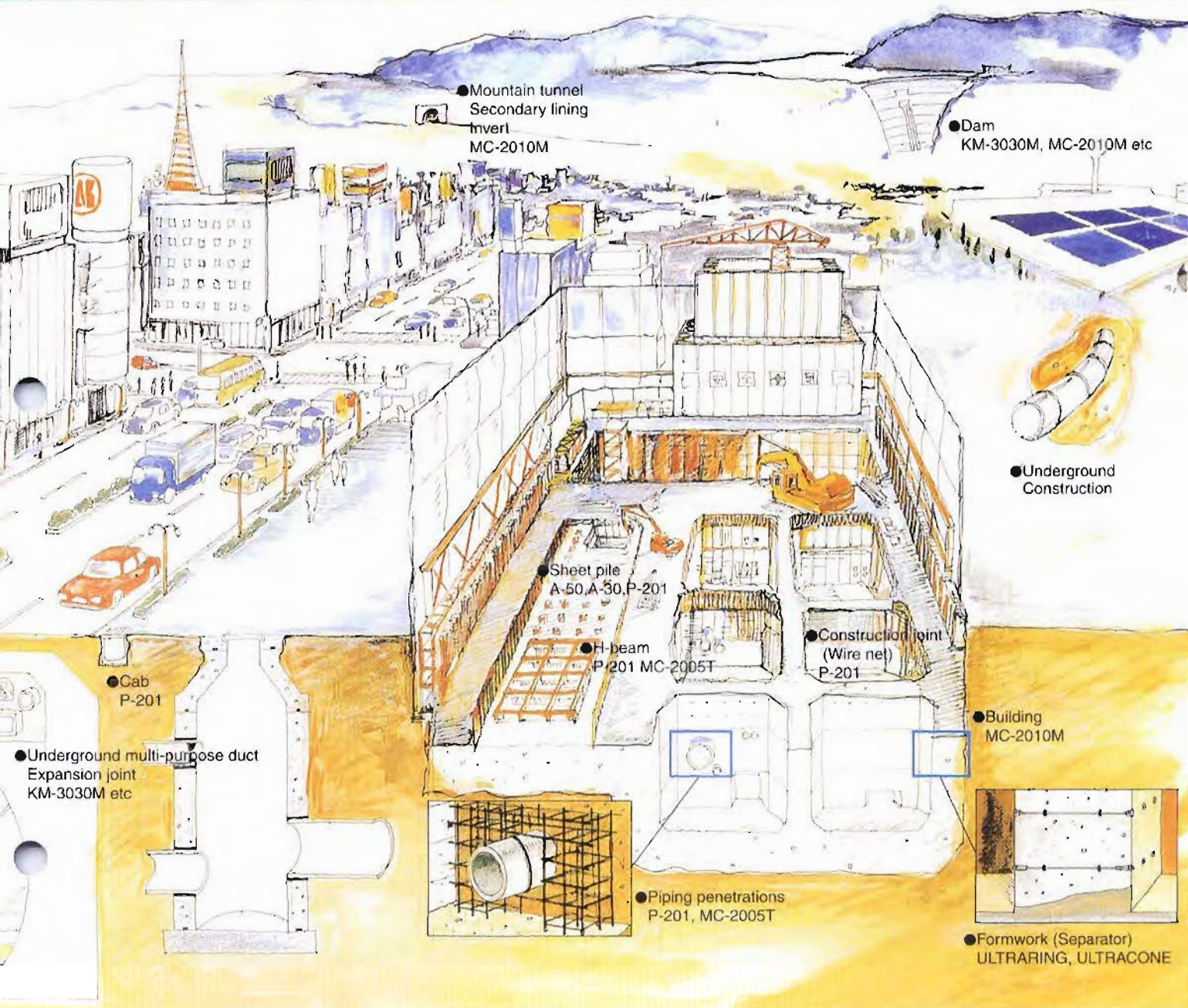
ADEKA ULTRASEALS are the new generation of waterstops for construction joints, cold joints, or segment seals. Ultraseal waterstops are designed to stop water penetration in new and efficient ways.

ADEKA ULTRASEAL is an innovative "DOUBLE-LOCKING" hydrophilic rubber waterstop. Ultraseal stops water by compression of the rubber and by hydrophilic action (expansion pressure) when the seal is exposed to water.

ADEKA ULTRASEALS will expand to fill any gap or void within the limits of its expansion when exposed to water.

ADEKA ULTRASEALS have a long and successful track record. They have been in use since 1977. ADEKA ULTRASEALS are available in preformed rubber strips, paste or liquid to provide a waterstop for most construction projects.

ADEKA ULTRASEAL



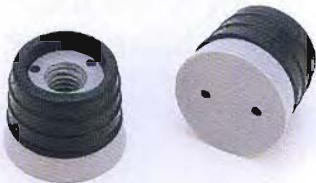
CHARACTERISTICS

1. Controlled expansion when exposed to water.
2. Easy installation.
3. Stop water leakage by volume (expansion) pressure.
4. Stable expansion ability in a variety of water conditions.
(Example seawater, cement water.)
5. Excellent elasticity.

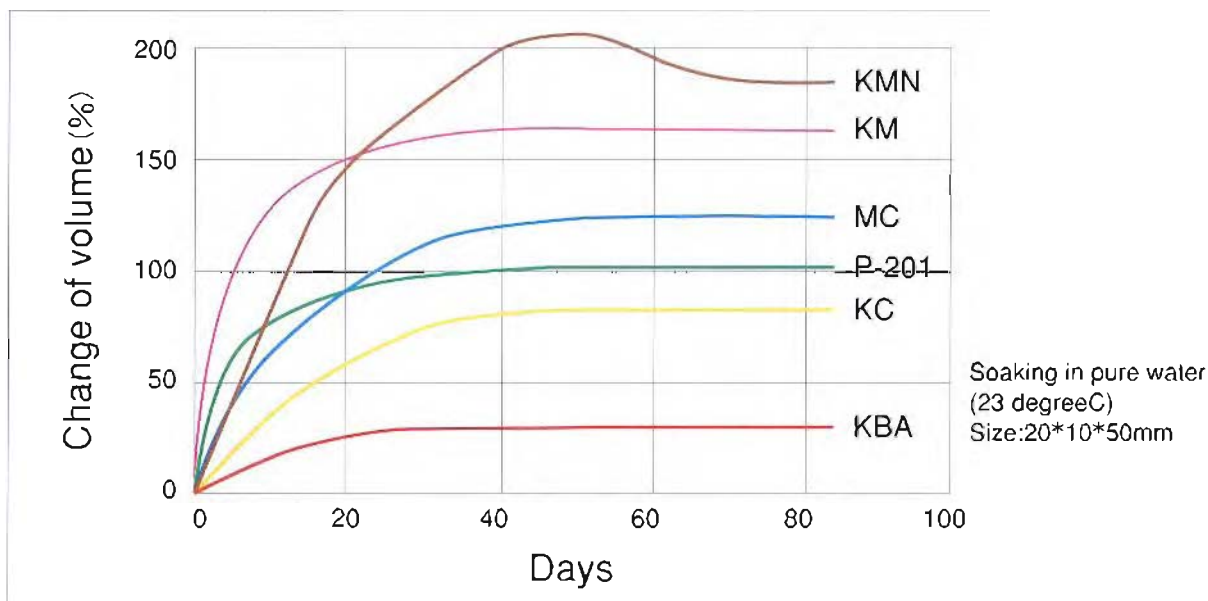


WATER-SWELLING PRODUCTS LIST

	PRODUCTS	CHARACTERISTICS & BASIC USE
	ADEKA ULTRASEAL MC-2010M MC-2010MN MC-2005M etc	<ul style="list-style-type: none"> ● Characteristics Water induced expansion prevents leakage or infiltration. Easy installation. Light weight. Stainless steel mesh controls expansion direction. ● Basic use Waterstop for construction joint MC-2010MN : NSF61 Certified
	ADEKA ULTRASEAL P-201 P-101	<ul style="list-style-type: none"> ● Characteristics Water-swelling, single component elastic sealant Adheres to concrete, metals, glass, PVC, fiberglass, etc ● Basic use Pre-cast concrete product Piping penetrations Wire net (Expanded metal forms)
	ADEKA ULTRARING	<ul style="list-style-type: none"> ● Characteristics Water-swelling, molded rubber ● Basic use Waterstop for separator
	ADEKA ULTRASEAL KM-2020M~4040M	<ul style="list-style-type: none"> ● Characteristics Easy installation Stainless steel mesh controls expansion direction. ● Basic use Waterstop for expansion joint
	ADEKA ULTRASEAL A-50 A-30, etc	<ul style="list-style-type: none"> ● Characteristics Liquid water swelling waterstop Easy installation ● Basic use Waterstop for sheet pile interlocks
	ADEKA ULTRASEAL KM-2005S KMN-2005S, etc	<ul style="list-style-type: none"> ● Characteristics Waterstop between segments Easy installation ● Basic use Waterstop for tunnel segment
	ADEKA ULTRASEAL KBA-1510FP, etc	<ul style="list-style-type: none"> ● Characteristics Water swelling rubber foam prevent water migration through joints Easy installation Lightweight ● Basic use Dike Pre-cast concrete product Water stop for construction joint (minimum 2.54cm of concrete coverage)

	PRODUCTS	CHARACTERISTICS & BASIC USE
	ADEKA ULTRACONE	<ul style="list-style-type: none"> ● Characteristics Easy installation
	25-8	
	25-9	<ul style="list-style-type: none"> ● Basic use Waterstop for plastics cone holes

CHANGE OF VOLUME OF ADEKA ULTRASEAL



ADEKA ULTRASEAL TYPES AND PHYSICAL PROPERTIES

		MC	KC	KM	KMN	KBA	P-201	A-50	A-30	Method
General physical properties		Unvulcanized rubber	Vulcanized rubber	Vulcanized rubber	Vulcanized rubber	Vulcanized foam	One component paste	Liquid	Liquid	
Hardness	—	A30	A50	A33	A48	HsC22*	A45	A20	A30	JIS K 6253
Tensile strength	MPa	0.9	9.0	6.0	9.5	0.8	4.0	5.0	3.7	JIS K 6251
Elongation	%	560	680	800	660	350	850	1000	1000	JIS K 6251
Change of volume	vol%	120	80	170	220	30	100	400 (5.0)	200 (3.0)	In House
Specific gravity	—	1.18	1.42	1.18	1.37	0.60	1.25	1.05	1.04	JIS K 6350

Physical property values are representative of measurements and not standard values.

1 MPa=10.2kgf/cm²

Physical property values of P-201 A-50 and A-30 (excluding specific gravity) are after curing.

Specific gravity valve is before curing. (P-201 JIS A 5758, A-50 and A-30: Hydrometer)

*JIS K 7312

*JIS . Japanese Industrial Standard.

INSTALLATION

INSTALLATION for concrete joints

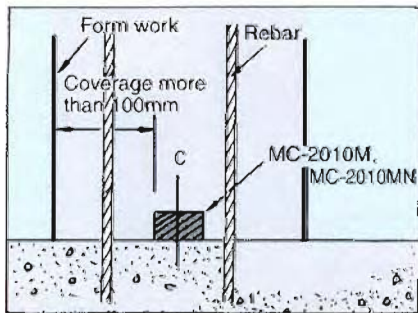
1. Best applied to a smooth concrete surface.
2. Place a small bead of ADEKA ULTRASEAL P-201 on any rough or scarred area prior to attaching ADEKA ULTRASEAL.
3. Attach ADEKA ULTRASEAL MC-2010M, MC-2010MN to the concrete by one of the following methods:
 - 1) Attach with nails or concrete screws placed every 250mm (10 inches) approximately.
 - 2) Attach with adhesives.
4. Keep ADEKA ULTRASEAL taut and flat against the concrete during the attaching process. Do not allow any gap between the concrete and the ADEKA ULTRASEAL.
5. Keep 100mm (4 inches) concrete coverage. ADEKA ULTRASEAL MC-2010M, MC-2010MN must be placed between two rows of rebar. ADEKA ULTRASEAL MC-2010M, MC-2010MN require 100mm (4 inches) of concrete coverage. Insufficient concrete coverage could result in cracked concrete. (See Figure #1)
6. Splice ADEKA ULTRASEAL waterstops by a parallel overlap (side by side). Overlap a minimum of 50mm (2 inches) (See Figure #2)
7. Apply P-201 on all corner joints and parallel (side by side) splices.

CAUTION

ADEKA ULTRASEAL must be entirely encapsulated by concrete to function. Use a concrete vibrator to remove any voids around the waterstop. MC-2010M, MC-2010MN must be placed between two rows of rebars. Maintain the minimum concrete coverage 100mm (4 inches). See the concrete coverage chart for coverage based on concrete strength.

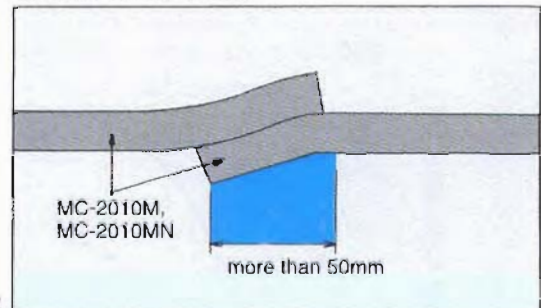
MC-2010M, MC-2010MN(stainless steel mesh)

Stainless steel mesh controls the expansion direction. Because of the stainless steel mesh, expansion is greater in thickness direction. Since expansion is restricted in length direction, snaking or winding will not occur between nails/screws if the product is prematurely exposed to water.



Figure#1

SPlicing METHOD



Figure#2

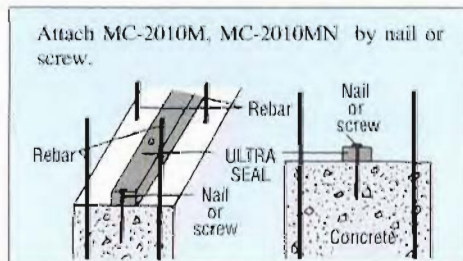
INSTALATION OF MC-2010M,MC-2010MN

DRY SURFACES
ADHESIVE

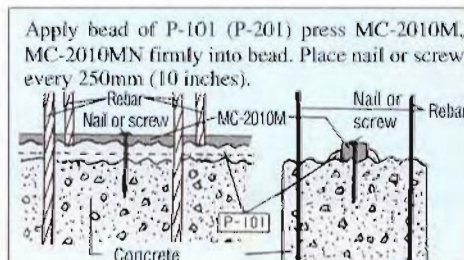
Apply adhesive to concrete and MC-2010M, MC-2010MN and allow to set until tacky (approximately 10~15 minutes). Press MC-2010M, MC-2010MN firmly into place.



DAMP SURFACES
NAIL OR SCREW



ROUGH SURFACES
NAIL OR SCREW AND
P-101 (P-201)

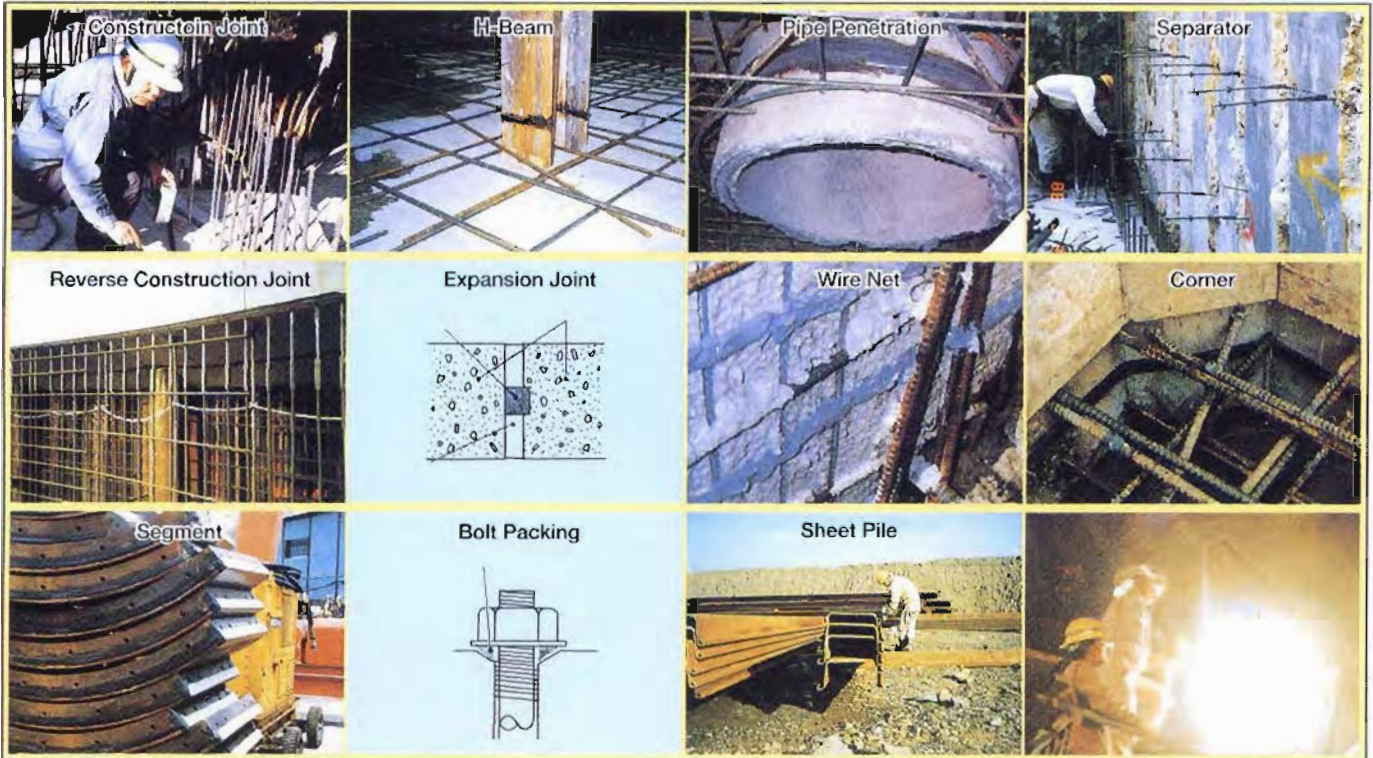


USE AND PACKAGING OF PRIMARY PRODUCTS

LOCATION WHERE USED	PRODUCTS		FORM (m/m)	PACKING
Construction joint	ULTRASEAL	MC-2010M	20w × 10 t (Embedded stainless steel mesh)	25m / case
		MC-2010MN (NSF61 Certified)	20w × 10 t (Embedded stainless steel mesh)	25m / case
		KBA-1510FP (For Dike etc.)	20w × 10 t (Embedded stainless steel mesh)	25m / case
			15w × 10 t	
Pipe penetration H-beam	ULTRASEAL	MC-2005T	20w × 5 t (With adhesive tape)	100m / case
		P-201, P-101	320ml (400g) / pcs. (Cartridge)	24pcs / case
Separator	ULTRARING		φ 8, 9, 12	1,000pcs / case
			φ 16, φ 19	500pcs / case
			φ 22	400pcs / case
Expansion joint	ULTRASEAL	KM-2020M	20w × 20 t (Embedded stainless steel mesh)	10m / case
		KM-3030M	30w × 30 t (Embedded stainless steel mesh)	10m / case
		KM-4040M	40w × 40 t (Embedded stainless steel mesh)	6m / case
Construction joint (Wire net) (Expanded metal forms)	ULTRASEAL	P-201	320ml (400g) / pcs. (Cartridge)	24pcs / case
Segment Bolt hole Secondary lining	ULTRASEAL	KMN-2003S	20w × 3 t	250m / case
		KMN-2005S etc	20w × 5 t	200m / case
		OF-PACKING (M-22~M-33)	For Bolt of M-22,24,27,30,33	1,000pcs / case
		MC-2010M	(Embedded stainless steel mesh)	25m / case
Cone Taper tie hole	ULTRACONE	25-8		500pcs / case
		25-9		500pcs / case
Pre-cast concrete product	ULTRASEAL	KBA-2012FP etc	20w × 12 t	20m / case
Pre-cast manhole joint	ULTRASEAL	P-201	320ml (400g) / pcs. (Cartridge)	24pcs / case
Seal sheet pile interlocks	ULTRASEAL	A-50, A-51, A-30, etc	Liquid	15kg / can etc

Products described above are basic sizes. Other sizes available for specific uses. Consult your local distributor for additional information

EXAMPLES OF INSTALLATION



Product Warranty

Products are warranted under the following policy

All recommendations, statements and technical data contained herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty either expressed or implied. User shall rely on his or her own information and tests to determine suitability of the product for the intended use and user assumes all risk and liability resulting from his or her use of the product.

Seller's and manufacturer's sole responsibility shall be to replace that portion of the product of this manufacturer which proves to be defective. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use of or inability to use the product. Recommendations or statements other than those contained in a written agreement signed by an officer of the manufacturer shall not be binding upon the manufacturer or seller.

Notes

Review MATERIAL SAFETY DATA SHEET (MSDS) before using ADEKA® products.

The data contained in this brochure is based on specific methods and typical analysis.

The data contained in this brochure may change without notice.

The data and applications shown in this brochure do not warrant any specific applications.

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