



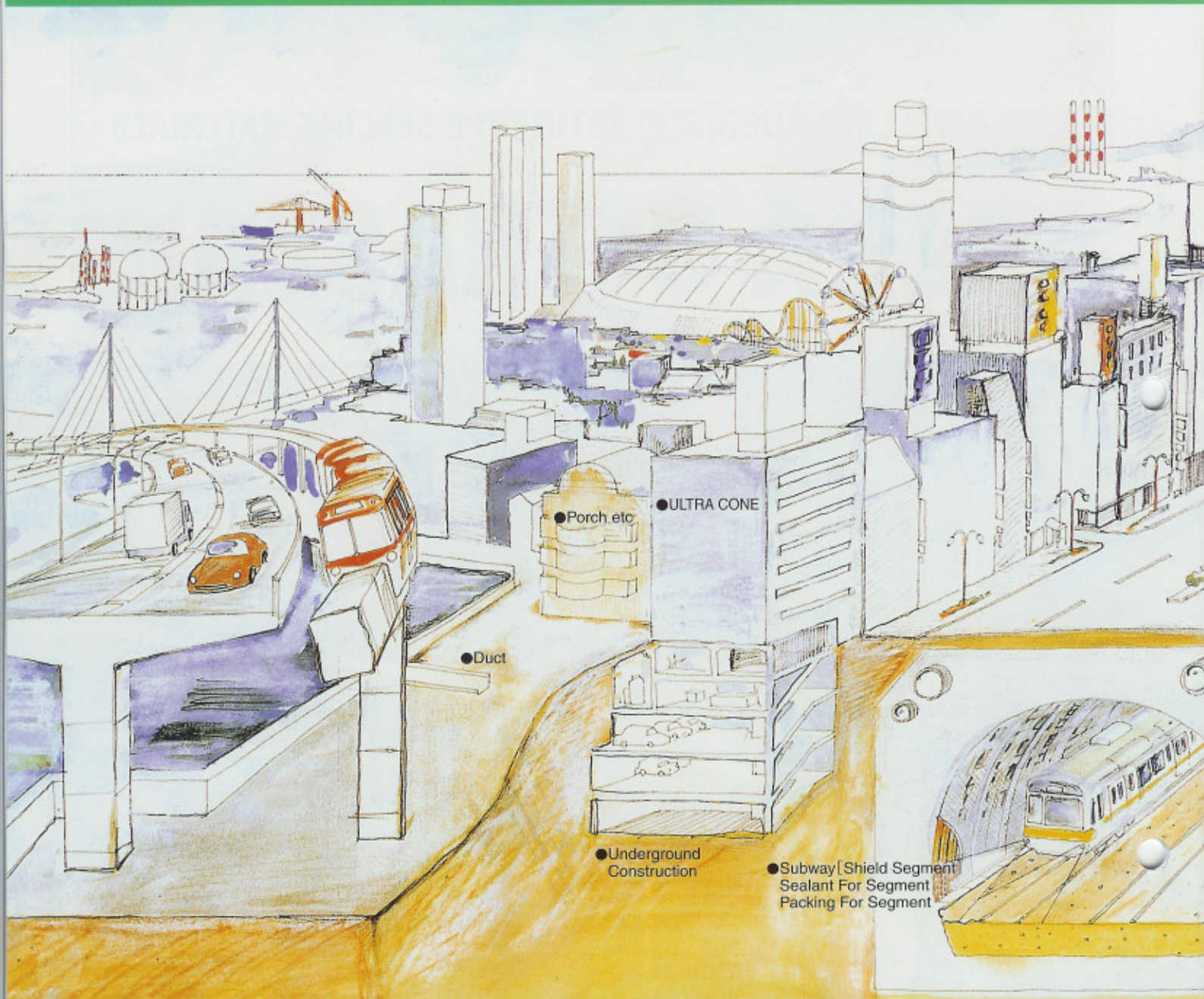
WATER-SWELLING RUBBER ELASTIC TYPE SEALING MATERIALS

ADEKA ULTRASEAL®



ASAHI DENKA

THE VARIOUS APPLICATION OF



WATER-SWELLING RUBBER ELASTIC TYPE SEALING MATERIALS ADEKA ULTRASEAL

ADEKA ULTRASEAL is a new generation waterstops for construction joints, cold joints, or segment seals. ULTRASEAL waterstops are designed to stop water penetration based on an understanding of the mechanism of water leakage.

ADEKA ULTRASEAL is an innovative "DOUBLE-LOCKING" rubber waterstop.

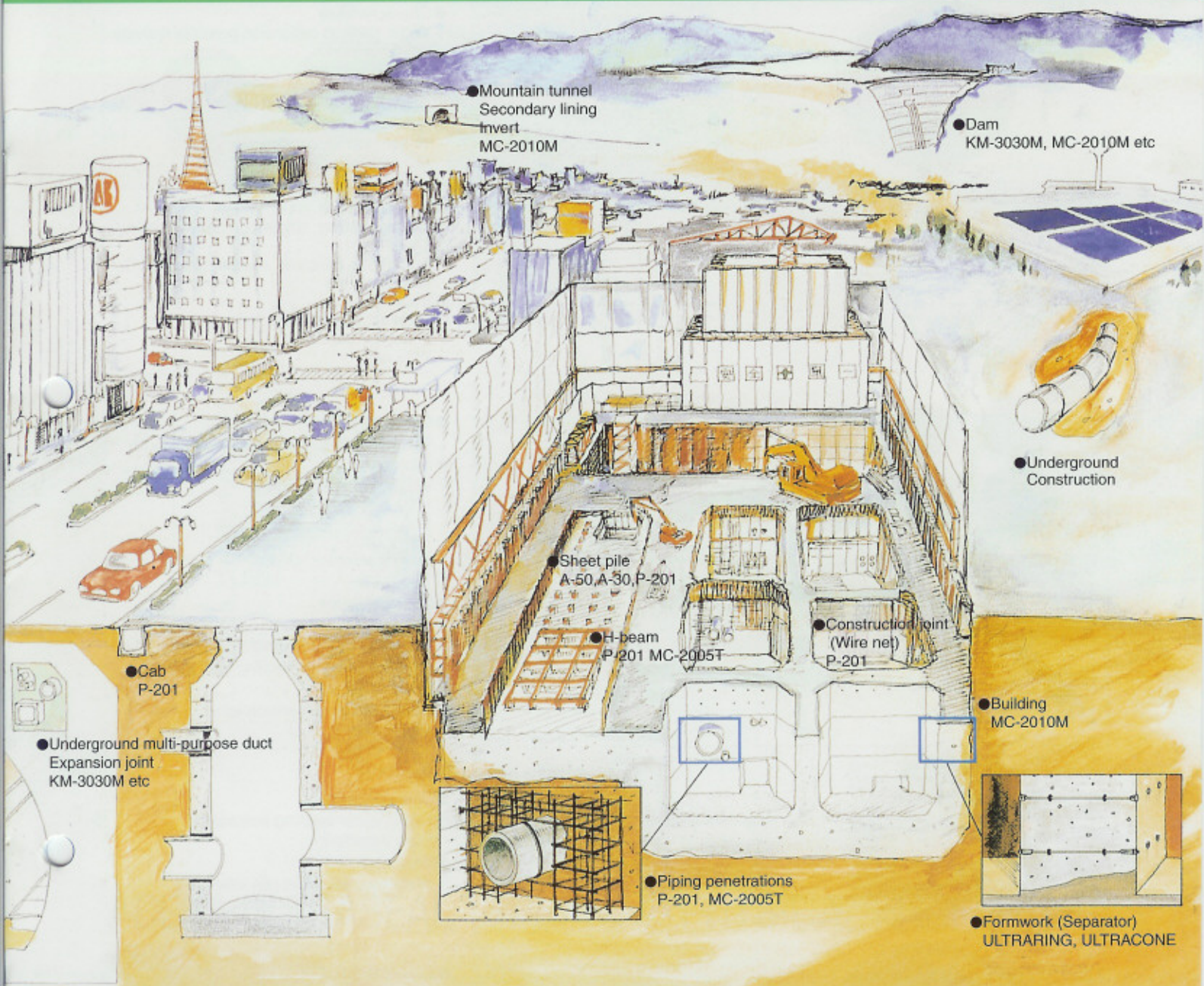
The two mechanisms to stop water are elasticity (compression) and hydrophilic action (expansion pressure).

Water leakage is stopped by compression of the rubber hydrophilic waterstop and by expansion pressure when the seal is exposed to water.

When ADEKA ULTRASEAL waterstops are exposed to water, they will expand to fill any gap within the limit of their expansion.

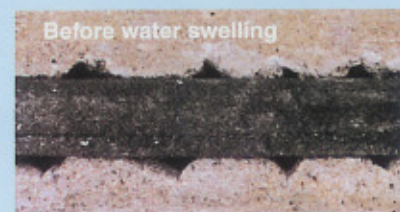
ADEKA ULTRASEALS have a long and successful track record. They have been in use since 1977. ADEKA ULTRASEALS are available in preformed rubber strips, paste or liquid, to provide a waterstop in any construction project.

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.

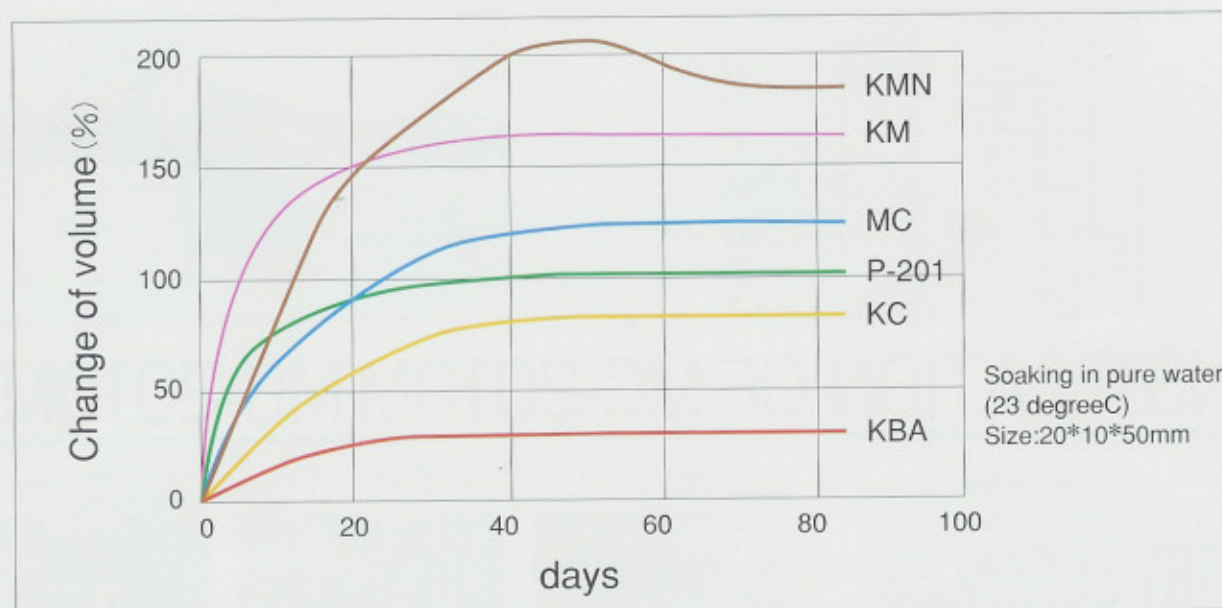


WATER-SWELLING PRODUCTS LIST

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

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

The physical properties values are the example of the representative of measurements, and no standard values.

The physical properties values of P-201 A-50 and A-30 (Excluding the specific gravity) are the after moisture curing.

The specific gravity is a value before it curing. (P-201:JIS A 5758, A-50 and A-30: Hydrometer)

*JIS K 7312

*JIS : Japanese Industrial Standard.

1 MPa=10.2kgf/cm²

INSTALLATION

INSTALLATION for concrete joints

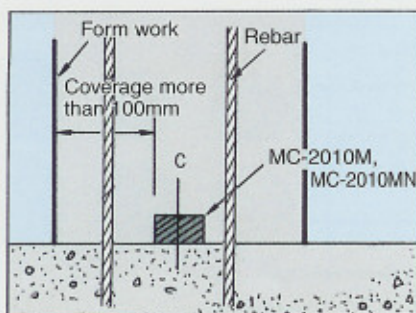
1. Best applied to a smooth concrete surface.
2. Place a small bead of ADEKA ULTRASEAL P-201 on any rough or scarred area prior to attaching ADEKA ULTRASEAL.
3. Attach ADEKA ULTRASEAL MC-2010M, MC-2010MN to the concrete by one of the following methods:
 - 1) Attach with nails or concrete screws placed 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. Generally ADEKA ULTRASEAL MC-2010M, MC-2010MN require 100mm (4 inches) of concrete coverage. Insufficient concrete coverage could result in cracked concrete.
6. Joint ADEKA ULTRASEAL waterstops by overlapping side by side a minimum of 50mm (2 inches) or more.
7. Apply P-201 on all corner joints and parallel (side by side) splices.

CAUTION

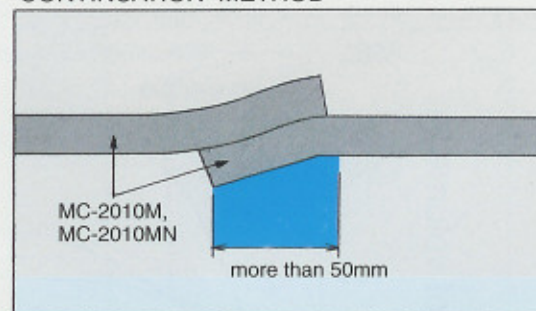
ADEKA ULTRASEAL must be entirely encapsulated by concrete to function. Use a concrete vibrator to remove any voids around the waterstop. MC-2010M, MC-2010MN must be placed between two rows of rebars. Maintain the minimum concrete coverage 100mm (4 inches). See the concrete coverage chart for coverage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

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

Stainless mesh controls the expansion direction. Because of the stainless 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.



CONTINUATION METHOD



INSTALLATION OF MC-2010M, MC-2010MN

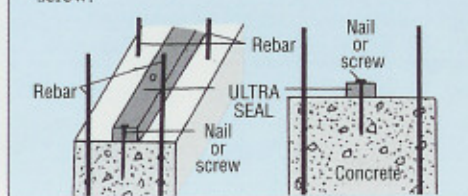
DRY SURFACES ADHESIVE

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.



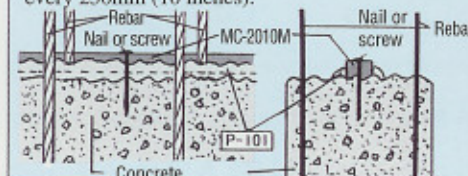
DAMP SURFACES NAIL OR SCREW

Attach MC-2010M, MC-2010MN by nail or screw.



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

Apply bead of P-101 (P-201) press MC-2010M, MC-2010MN firmly into bead. Place nail or screw every 250mm (10 inches).

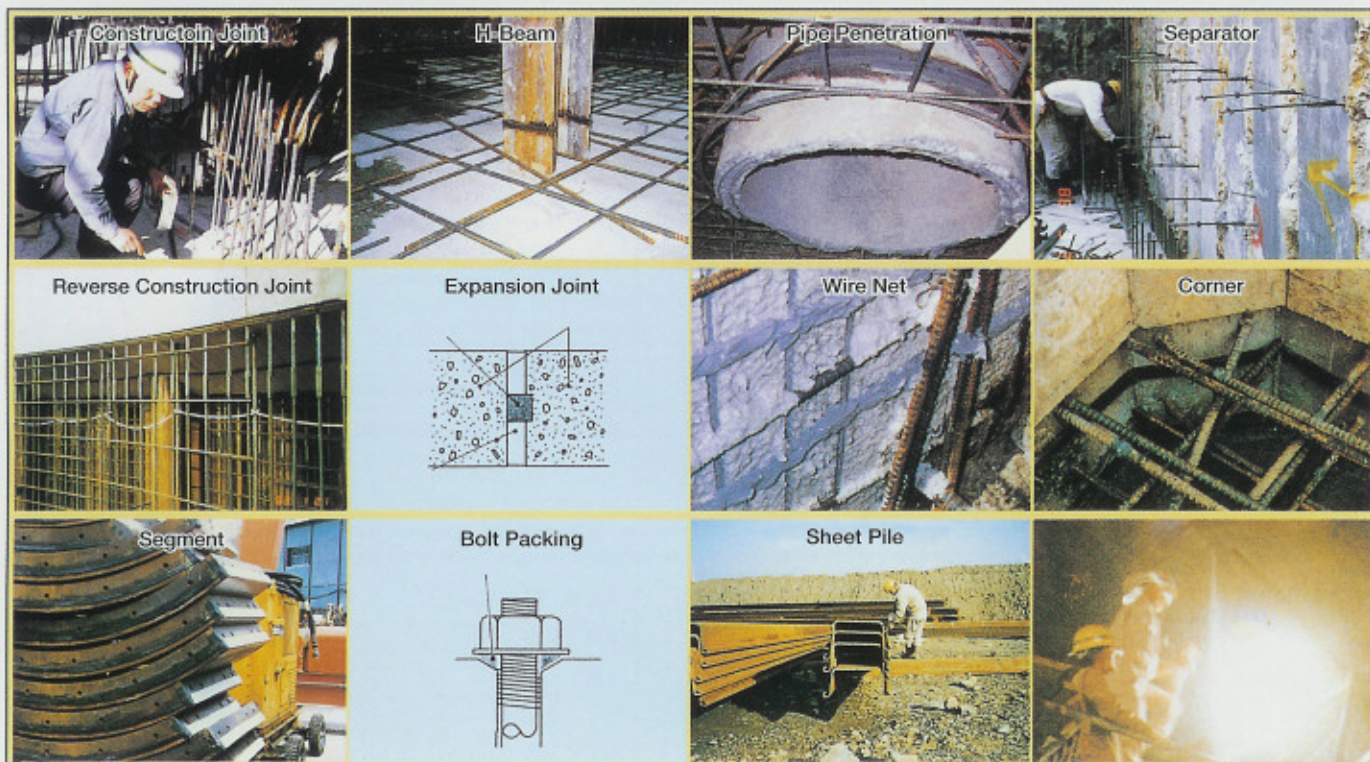


USAGE AND STYLE OF PACKING OF THE MAIN PRODUCTS

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

The above-mentioned described the main product. Other sizes exist according to the usage. Please consult.

THE 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 containing in this brochure are based on specific method and typical analysis.

The data containing in this brochure may be changed without notice.

The application and the data in brochure do not warrant final function of your application.

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ADEKA®
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CREATIVE &
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