

SECTION 03150 — WATERSTOPS FOR CONCRETE JOINTS

***** MasterFormat™ 2004 — Section 03 15 13 *****

PART 1 - GENERAL

1.01 SUMMARY

- a. Provide Adeka Corporation non-bentonite hydrophilic rubber waterstop where shown or specified for the following applications (provided by OCM, Inc. Chicago, IL):

Sealing cold joints and construction joints between structural elements against penetration of water from wet-face of structure.

Sealing piping penetrations against water penetration from wet-face of structure

1.03 SUBMITTALS

- a. Comply with pertinent provisions of Section 01340.
- b. Product Data: Within 15 calendar days after the contractor has received the owners notice to proceed, submit:
1. Materials list of items proposed to be provided under this section.
 2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements.
 3. Show drawings in sufficient detail to show fabrication, installation, anchorage, and interface of the work of this section with the work of adjacent work.
 4. Manufacturer's recommended installation procedures which, when approved by the architect, will become the basis for accepting or rejecting actual installation procedures used on the work.

1.04 DELIVERY, STORAGE & HANDLING

- a. Delivery & storage:
1. Deliver materials to job site in manufacturer's unpacked containers with all labels intact and legible at time of use.
 2. Maintain products in a dry condition during delivery, storage, handling, installation and concealment.
- b. Comply with pertinent provisions of Section 01620.

PART 2 – PRODUCTS

2.01 MANUFACTURER

Provide products manufactured by Adeka Corporation. Supplied by OCM, Inc. Chicago, IL
Phone 800.999.3959 - International number 303.904.4624 www.adeka.com

2.01 WATERSTOP MATERIALS

1.MC-2010MN use when wall/slab thickness greater than 9.0". Minimum 4" concrete coverage from edge of waterstop to surface of concrete wall/slab. Place between double row of rebar. Use in piping penetration when pipe diameter exceeds 24".

The product shall be a 20mm X 10mm flexible hydrophilic natural rubber strip composed of non-vulcanized rubber and urethane polymer hydrophilic agent. The product shall have a stainless steel wire mesh embedded in the product to direct expansion in the thickness direction and to restrict expansion in the longitudinal direction. The product shall develop no less than 400 psi expansion pressure and withstand a minimum 150 foot hydrostatic head. The product shall be NSF Certified for potable water use and shall meet the minimum performance requirements as shown in the official literature (www.adeka.com).

Physical properties of the swelling rubber waterstop MC-2010MN material:

PHYSICAL PROPERTIES	Adeka MC-2010MN
Hardness	A30
Tensile Strength (MPa)	0.9
Elongation (%)	560
Specific Gravity	1.18
Mass Change	Not greater than 5%
Vulcanization	No
Volume Expansion (%)	120
Restorability	Average
General Physical Properties	Unvulcanized rubber, follows compression pressure

Physical properties of the gun grade swelling rubber waterstop (Adeka P-201):

PHYSICAL PROPERTIES	GUN GRADE
Hardness	A45
Tensile Strength (MPa)	4
Elongation (%)	850
Specific Gravity	1.25
Volume Expansion (%)	100
Restorability	Excellent

PART 3 – EXECUTION

3.01 EXAMINATION AND PREPARATION

Ensure rebar does not interfere with proper position of waterstop.

Protect waterstops during progress of work.

Clean joints of dirt and debris.

3.03 INSTALLATION

SMOOTH DRY CONCRETE

1. Surface of the concrete must be clean dry, clean and free of oil, dust and laitance
2. Press OCM 75BRTAPE onto the substrate and remove the release paper. Press the appropriate ADEKA product very firmly onto the Butyl tape. Check for any gaps between the product and the substrate. If gaps are present, fill the gaps using ADEKA P-201 applied to the side of the strip. Use ADEKA P-201 on concrete joints and on side-by-side splice joints as usual. You can place concrete immediately, no waiting for curing time.

OR

Apply small bead of P-201 approximately $\frac{1}{4}$ " X $\frac{3}{8}$ ". Press MC-2010MN into bead of P-201. Smooth excess P-201 against side of MC-2010MN as shown. Allow curing time (estimate 1~2 days) before placing concrete. Place a nail or screw every 12~14 inches if concrete must be placed immediately.

3. Place concrete without displacing or disturbing the position of the waterstop.

The expanding rubber waterstop is placed as shown on the Drawings. The expanding water stop must be placed no closer than 4 inches from the edge of the concrete pour to ensure it will not spall the concrete edge. The expanding rubber waterstop ends are placed with a parallel side by side bypass. A good and uniform contact of the strip to the concrete surface is of the utmost importance.

ROUGH CONCRETE - (hydrophilic strip does not have intimate contact with the concrete surface along the entire length of the strip)

1. Surface of the concrete must be clean dry, clean and free of oil, dust and laitance.

Place a small bead of hydrophilic Adeka P-201 paste on the concrete. Press the hydrophilic strip waterstop onto the bead of P-201. Press firmly. Place nail or screw every 10~12 inches.

Check for any gaps between the product and the substrate. If gaps are present, fill in using appropriate gun grade hydrophilic material applied to the side of the strip.

2. Place concrete without displacing or disturbing the position of the waterstop.

END OF SECTION