



# HDPE WATERSTOP

## For Corrugated HDPE Pipes and Concrete Structures

### What It Is

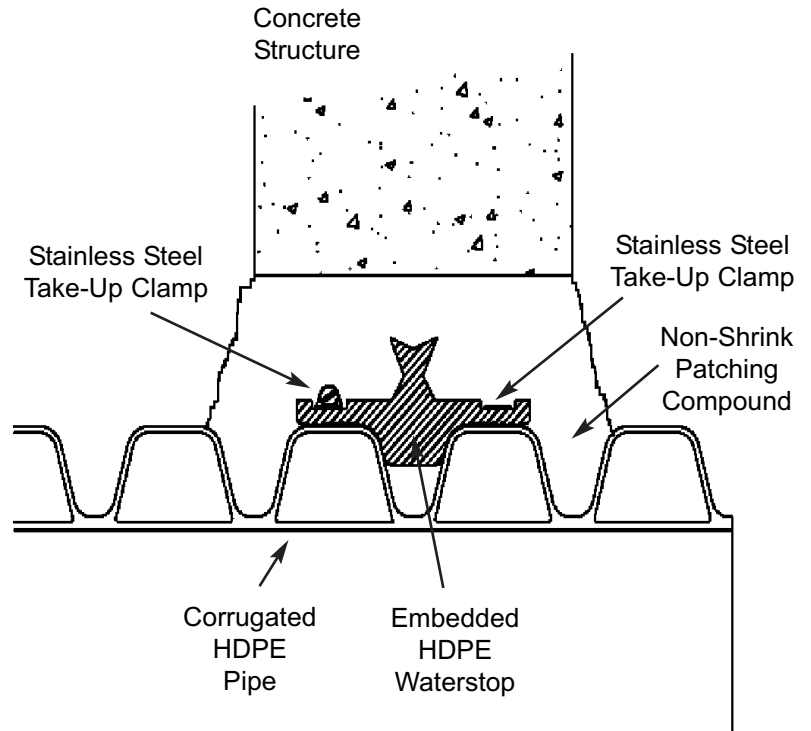
HDPE WATERSTOP is a rubber ring which is compressed around the pipe circumference using Stainless Steel Clamps, preventing infiltration and exfiltration between the **HDPE WATERSTOP** and the pipe. It is then either grouted into an existing structure, or has a new structure poured around it.

### How It Works

- The rubber ring is placed so that it lies between two adjoining corrugations of the pipe
- Stainless Steel clamps secure the rubber ring to the pipe circumference
- The pipe is placed in position and grouted in place using non-shrink patching compound or
- The pipe is placed in position in the formwork and the structure is poured around it
- After the mortar or concrete has set, the structure can be backfilled

### Why It's Better

- Provides better seal than mortar joint alone
- Can be used with existing structures, new precast structures, or new poured-in-place structures
- Easily adapts to field conditions
- Provides flexibility in installation
- Prevents infiltration/exfiltration between pipe and HDPE WATERSTOP
- Available for most common brands and sizes of corrugated HDPE pipe



### How It Performs

HDPE WATERSTOP meets or exceeds the requirements of

**ASTM D 2321- Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications, para. 7.10 - Manhole Connections**

HDPE WATERSTOP *meets or exceeds the Physical Property requirements of the following Specifications:*

**ASTM C 923**  
**ASTM C 1478**  
**ASTM F 2510**

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# HDPE WATERSTOP

# PRODUCT SPECIFICATION

## Submittal Specification

A rubber waterstop shall be employed in the connection of sanitary sewer or stormwater pipes to precast concrete or poured-in-place structures. The waterstop shall be HDPE WATERSTOP as manufactured by Press-Seal Gasket Corporation, Fort Wayne, Indiana, or approved equal. The waterstop shall be the sole element relied on to assure the seal of the pipe to the structure. The waterstop shall consist of a rubber gasket and two external take-up clamps.

The rubber gasket element shall be constructed solely of synthetic or natural rubber, and shall meet or exceed the physical property requirements of ASTM C-923, ASTM C 1478, and ASTM F 2510. Key lock and water stop shall extend into the concrete a minimum of 1.5-inches to provide an adequate anchorage and watertight seal through the cast-in-place or grouted annular space. Non-shrink grout shall be placed around the entire waterstop and maintain a minimum thickness of 2-inches between the rubber gasket and structure opening to permit proper consolidation

around the gasket.

The external take-up clamps shall be constructed of Series 300 non-magnetic stainless steel and shall utilize no welds in their construction. The clamps shall be installed by torquing the adjusting screw using a torque-setting wrench available from the connector manufacturer.

Selection of the proper size waterstop for the structure and pipe requirements shall be in strict conformance with the recommendations of the connector manufacturer. Testing of completed field joints, if required, shall be conducted in strict conformance with the requirements of the connector manufacturer.

The installed waterstop, pipe, and structure shall conform with the requirements of ASTM D 2321 paragraph 7.10 for ManoleConnections.

### PRODUCT PERFORMANCE

#### INSTALLATION PERFORMANCE:

**ASTM D 2321 - Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications**

**HDPE WATERSTOP meet and/or exceed the Physical Property requirements of the following specifications:**

- ASTM C 923 *Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals*
- ASTM C 1478 *Standard Specification for Storm Drain Resilient Connectors Between Reinforced Concrete Storm Sewer Structures, Pipes and Laterals*
- ASTM F 2510 *Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures and Corrugated High Density Polyethylene Drainage Pipes*

TYPICAL TEST RESULTS for HDPE WATERSTOP (as in ASTM C 923 and C 1478)			
Test	ASTM Test Method	Test Requirements	Typical Result
CHEMICAL RESISTANCE; 1N SULFURIC ACID and 1N HYDROCHLORIC ACID	D 534, AT 22°C FOR 48 HRS	NO WEIGHT LOSS NO WEIGHT LOSS	NO WEIGHT LOSS NO WEIGHT LOSS
TENSILE STRENGTH	D 412	1200 PSI, MIN.	1450 PSI
ELONGATION AT BREAK	D 412	350%, MIN.	540%
HARDNESS	D 2240 (SHORE A DUROMETER)	±5 FROM THE MANUFACTURER'S SPECIFIED HARDNESS	<2
ACCELERATED OVEN-AGING	D 573, 70± 1°C FOR 7 DAYS	DECREASE OF 15%, MAX. OF ORIGINAL TENSILE STRENGTH, DECREASE OF 20%, MAX. OF ELONGATION	-13% TENSILE CHANGE, -14% ELONGATION CHANGE
COMPRESSION TEST	D 395, METHOD B, AT 70°C FOR 22 HRS	DECREASE OF 25%, MAX. OF ORIGINAL DEFLECTION	13%
WATER ABSORPTION	D 471 IMMERSE 0.75 BY 2-IN. SPECIMEN IN DISTILLED WATER AT 70°C FOR 48 hrs	INCREASE OF 10%, MAX. OR ORIGINAL BY WEIGHT	3.50%
OZONE RESISTANCE	D 1171	RATING 0	PASS
LOW-TEMP. BRITTLE POINT	D 746	NO FRACTURE AT -40°C	PASS
TEAR RESISTANCE	D 624, METHOD B	200 LBF/IN. (MIN.)	215 LBF/IN.

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# SELECTION GUIDE

For Corrugated HDPE Pipes and Concrete Structures

MANUFACTURER	12"	15"	18"	24"	30"	36"	42"	48"	54"	60"
ADS/HANCOR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CRUMPLER	✓	✓	✓	✓	✓	✓	✓	✓	NA	NA
HAVILAND	✓	✓	✓	✓	✓	✓	✓	✓	NA	NA
LANE	✓	✓	✓	✓	✓	✓	NA	NA	NA	NA
QUALITY	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PRINSCO	✓	✓	✓	✓	✓	✓	✓	✓	NA	✓

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