

## PVC WATERSTOPS

### TYPES OF CONCRETE JOINTS

#### Expansion (Isolation) Joint

A joint that separates the slab structurally from other building elements such as walls, columns, foundations, drain pipes, to accommodate differential horizontal and vertical movement.

#### Contraction (Control) Joint

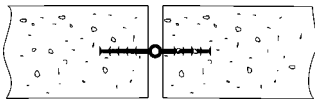
A formed, sawed or tooled groove in a concrete structure to create a weakened plane and regulate the location of cracking resulting from the dimensional change of different parts of the structure.

#### Construction Joint

A joint placed in concrete where construction operations are concluded for the day.

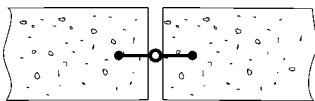
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### WATERSTOPS FOR MOVING JOINTS



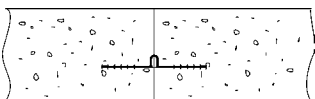
#### Ribbed Center Bulb

Used in expansion joints where normal movement between members is anticipated. Also available in split shapes.



#### Dumbbell with Center Bulb

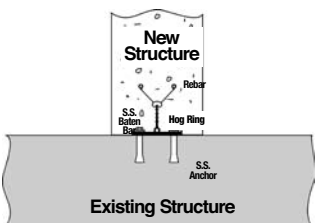
Used in expansion joints where longitudinal and transverse movement is anticipated.



#### Tear Web

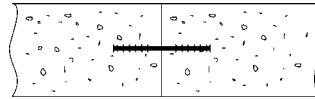
Used in expansion joints where large joint movements are expected.

### RETROFIT APPLICATIONS



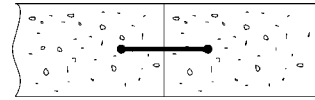
Used to provide a watertight seal when attaching a new construction project to an existing one.

### WATERSTOPS FOR NON OR LIMITED MOVEMENT JOINTS



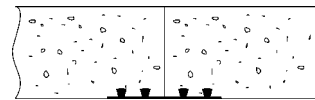
#### Flat Ribbed

Used in construction joints where little or no movement is anticipated and where high bond strength is desired.



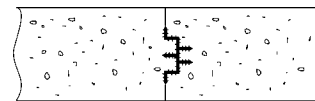
#### Dumbbell

Used in construction joints where little or no movement is anticipated. Also available in split shapes.



#### Base Seal

Used in grade construction between concrete walls and slabs, in backfilled retaining walls and in keyed construction joints in walls and slabs.



#### Multi Rib

Used in construction joints in vertical applications where key action is desired.

### TYPICAL PHYSICAL PROPERTIES OF PVC WATERSTOPS

Typical Properties	Nominal Value	ASTM
Water Absorption	0.15%	D-570
Tear Resistance, psi / kg per cm <sup>2</sup>	350 / 24.5	D-624
Specific Gravity, (+/-0.02)	1.33	D-792
Hardness, Shore A (+/-3, 10 sec. delay)	74	D-2240
Tensile, psi / kg per cm <sup>2</sup>	2075 / 145.25	D-638, Type IV
Elongation, %	435	D-638, Type IV
100% Modulus, psi / kg per cm <sup>2</sup>	725 / 50.75	D-638, Type IV
Brittle Point (Tb), °F	-37 (Passed)	D-746
Stiffness in Flexure, psi / kg per cm <sup>2</sup>	1440 / 100.8	D-747
Ozone Resistance	No Failure	D1149
<b>Accelerated Extraction, CRD-C572</b>		
Tensile, psi / kg per cm <sup>2</sup>	2025 / 141.75	D-638, Type IV
Elongation, %	420	D-638, Type IV
<b>Effect of Alkali, CRD-C572</b>		
Weight Change, %	.05	-----
Change in Hardness, Shore A	-3	D-2240

IMPORTANT: The technical data herein is believed to be accurate. It is offered for your consideration, investigation and verification. All testing and test data has been prepared by independent laboratories. NO WARRANTY, EXPRESS OR IMPLIED, IS MADE as to the accuracy or completeness of the technical data herein and the use thereof for any particular purpose.



## PVC WATERSTOPS FOR MOVING JOINTS

### Ribbed Center Bulb

Catalog Number	Head Pressure	Lbs./ LF	Profile
RCB-4316	50'	.40	
RCB-4316LB	65'	.74	
RCB-6316	100'	.73	
RCB-614	125'	.98	
RCB-638	125'	1.16	
RCB-638BR	125'	1.19	
RCB-638LB	125'	1.60	
RCB-612	150'	1.90	
RCB-9316	150'	1.20	
RCB-938	175'	1.68	
RCB-938NT	175'	2.40	
RCB-938LB	175'	2.25	
RCB-938BR	175'	2.41	
RCB-12316	150'	1.56	
RCB-1212	225'	3.84	
RCB-1212T	225'	3.60	

### Split Rib

Catalog Number	Head Pressure	Lbs./ LF	Profile
SR-4316	65'	.52	
SR-6316	100'	.75	
SR-638	100'	1.54	
SR-938	150'	2.04	

### Dumbbell With Center Bulb

Catalog Number	Head Pressure	Lbs./ LF	Profile
DBCBC-614	100'	1.20	
DBCBC-938	150'	3.10	
DBCBC-938L	150'	3.70	

### Tear Web

Catalog Number	Head Pressure	Lbs./ LF	Profile
CTW 1-2	150'	1.10	
TW-618	65'	.78	
TW-918	100'	1.00	
TW-938	150'	3.78	

**PAGE 3 & 4 PVC PROFILES AVAILABLE IN TPER**



## PVC WATERSTOPS FOR NON OR LIMITED MOVEMENT JOINTS

### Flat Ribbed

Catalog Number	Head Pressure	Lbs./ LF	Profile
FR-4316	65'	.45	
FR-6316	100'	.76	
FR-638	125'	1.50	
FR-638T	125'	1.30	
FR-638RT	125'	1.55	
FR-9316	150'	1.20	
FR-938	175'	2.37	
FR-938T	175'	2.07	

### Base Seal

Catalog Number	Head Pressure	Lbs./ LF	Profile
BS-618	100'	.89	
BS-718	75'	.81	
BS-72518	160'	.88	 <small>Texas Highway Type E</small>
BS-9316	150'	1.55	 <small>Texas Highway Type A</small>
BS-9532	100'	1.53	
CU-912	n/a	4.46	

### Multi Rib

Catalog Number	Head Pressure	Lbs./ LF	Profile
MR-314	10'	.84	
MR-412	50'	1.24	

### Retro Fit

Catalog Number	Head Pressure	Lbs./ LF	Profile
RF-4316	n/a	.85	
RF-638	n/a	2.15	

### CUSTOM SPLICES

An important factor in the watertightness of any waterstop is the reliability of splices. With BoMetals fittings, you are guaranteed greater strength and efficiency with ease of field installation. The following factory made splices are available in PVC & TPER.

### Dumbbell

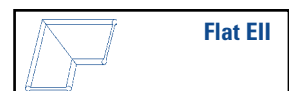
Catalog Number	Head Pressure	Lbs./ LF	Profile
DB-4316	65'	.49	
DB-6316	100'	.71	
DB-6316LB	100'	.84	
DB-614	100'	.98	
DB-638	150'	1.50	
DB-9316	100'	1.01	
DB-938	150'	2.17	
DB-938LB	150'	2.55	
DB-1238	150'	2.99	

### Split Dumbbell

Catalog Number	Head Pressure	Lbs./ LF	Profile
SD-638	125'	1.51	
SD-938	150'	2.20	



Vertical EII



Flat EII



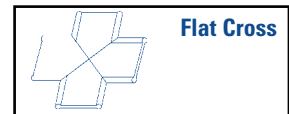
Vertical Tee



Flat Tee



Vertical Cross



Flat Cross



## CHEMICAL RESISTANT (TPER) WATERSTOPS

Chemical Resistant Waterstop is available in every PVC profile. TPER (Thermoplastic Elastomeric Rubber) should be used to provide a fluid tight diaphragm in primary, secondary and tertiary above and below ground containment facilities. This is accomplished by offering a product for concrete expansion and construction joints that greatly expands its resistance to petrol-chemical, solvents, aqueous acids, gasoline, jet fuel, and chemicals listed as hazardous by the EPA. BoMetals' many selections will allow precise waterstop design for each critical application. The physical design and the field installation adversities should be considered when specifying and designing waterstop installation.

**TPER AVAILABLE  
IN EVERY PVC  
PROFILE FOUND  
ON PAGES 3 & 4**

### Physical Properties

Properties	Nominal Value	ASTM
Hardness, Shore A	85.0 (+/-5)	D-2240
Tensile Strength @ break, ft-lb/cm <sup>2</sup> , psi	2310	D-412
Elongation, @ break	850%	D-412
Brittle Point	-70 F	D-746
Specific Gravity, g/cm <sup>3</sup>	0.93	D-792
	1073psi	D-638

Stock Number	Lbs./LF	Profile
TCB-4316	.31	
TCB-6316	.45	
TCB-6316NT	.55	
TCB-638LB	1.05	
TDCB-614	.73	
TDCB-938	2.00	
TFR-4316	.33	
TFR-6316	.53	
<b>POPULAR TPER PROFILES</b>		
TDB-4316	.34	
TDB-638	1.04	
TRF-638	1.32	
TTW-618	.40	
TTW-9316	1.08	

# Balbeck S.A.

Soluciones Innovadoras para la Construcción



**SYNKO-FLEX** Waterstop is a specially formulated preformed adhesive joint sealant that provides a lasting, watertight bond to both fresh and cured concrete surfaces.

**SYNKO-FLEX** is designed as an alternative to conventional waterstops that are used in cold joints at footings, walls or slab joints. Synko-Flex does not rely on swelling upon contact with fresh concrete or water to achieve its water tight seal and waterstop capabilities. Because of this, there is never a danger of a joint "blow out" due to over expansion or improper positioning.

**SYNKO-FLEX** Waterstop is a non-expansive, single-component, self-sealing plastic adhesive compound, extruded in a square cross-section between two quick-release protective wrappers. It bonds to cured concrete surfaces and fuses with fresh concrete during the hydration and curing process to achieve a watertight seal. Once adhered, Synko-Flex is unaffected by rain, snow or infiltrating ground water which may be present during the installation period.

**SYNKO-FLEX's** unique formula and packaging provides a simple, easy-to-install solution for effective waterstop sealing. It is also resistant to acids, alkalis and hydrogen sulfide gases over the life of the structure.

**SYNKO-FLEX** has been used since 1968 as a waterstop for cold joints in highway tunnels, airport terminals, marine animal theme parks, hospitals, performing art theaters, parking garages, hotels, office buildings, fish hatcheries, enclosed potable water reservoirs, warehouses sports complexes and wastewater plants.

## Primer

**SYNKO-FLEX PRIMER** is a thin penetrating solution for premium selected asphalt base in a petroleum solvent. The primer readily penetrates the pores and seals dusty concrete surfaces to provide an optimal surface for the adhesion and bonding of Synko-Flex performed adhesive waterstop. Primer is designed for application by brush.

**Packaging:** 1 gallon cans

## Hydro-Flex® Waterstop

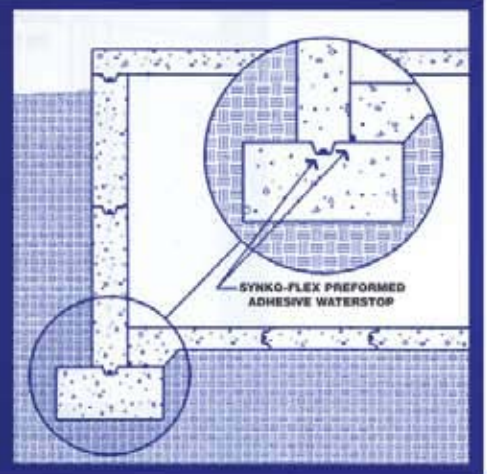
**HYDRO-FLEX** is a flexible, preformed adhesive coil specially formulated butyl rubber. It swells in the presence of water, filling voids in unfinished or poorly consolidated concrete surfaces providing a lasting, watertight compression seal in non-moving joints. Because of its special butyl rubber composition it remains flexible and easy to handle during cold weather conditions.

**Packaging:** 1 carton contains 100 lineal feet (6 coils, 16'8" each)

## Preformed Plastic Adhesive Waterstop

### SYNKO-FLEX ADHESIVE WATERSTOP APPLICATION DETAILS...

- UNDERGROUND STRUCTURES
- TANKS
- TUNNELS
- FOUNDATION WALLS



### Packaging

Size	1"x1"x3ft.
No Strips	35 Strips
Lineal Ft/Carton	105 ft.

## SYNKO-FLEX® Waterstop

The approved alternative to conventional waterstops with tremendous labor savings!



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