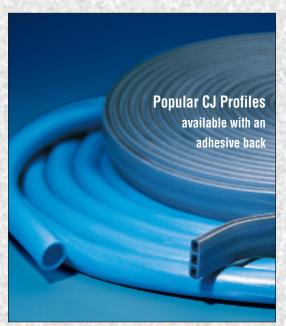


The Benchmark for Expandable Waterstops



Hydrotite is a state-of-the-art hydrophilic waterstop with unmatched durability and watersealing capacity. Comprised of NON-BENTONITE, modified chloroprene rubber, Hydrotite expands up to EIGHT TIMES its original volume when exposed to water. This expansion creates an effective compression seal within joints of limited movement. Recognized worldwide, Hydrotite has a proven track record as a high quality and cost effective solution to your water containment needs.

Since 1950, GREENSTREAK has maintained its position of industry leadership by responding to the unique needs of our customers. Hydrotite is one more example of our continued dedication to the construction market and to the advancement of joint sealing technologies.

TYPICAL STRUCTURES UTILIZING HYDROTITE:

- Water and waste water treatment facilities
- Primary and secondary containment structures
- Tunnels and culverts
- Dams, locks, canals, water reservoirs and aqueducts
- Pipe penetrations
- **■** Swimming pools
- Storage tanks
- Retaining walls
- **■** Foundations
- Slabs on grade



Water and Waste Water Treatment Plants



Hydroelectric and Flood **Control Projects**



Tunnels

GREENSTREAK

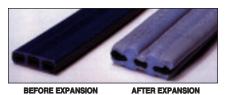
3400 Tree Court Industrial Blvd., St. Louis, Missouri 63122 Phone: 800. **325-9504** or 636. **225-9400** Fax: 800. 551-5145 or 636. 225-9854

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HYDROTITE: The Benchmark for Expandable Waterstops

Hydrotite® is a state-of-the-art hydrophilic waterstop now available from GREENSTREAK®. Comprised of a modified chloroprene rubber, **Hydrotite** has unmatched durability and water sealing capacity. **Hydrotite** expands up to EIGHT TIMES its volume when exposed to water. This remarkable hydrophilic property enables **Hydrotite** to reliably seal joints.



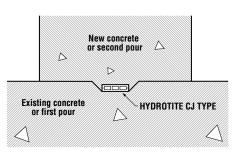
Note: Hydrotite CJ-Type is not a sealing material for expansion joints and should not be used as such.

Exceptional Qualities to Ensure Unparalleled Performance

- Swells up to EIGHT times its volume when exposed to water
- Comprised of <u>NON-BENTONITE</u>, modified chloroprene rubber
- Outstanding physical properties
- Available as a co-extruded profile to provide directional expansion (also available as a single extrusion)
- Special expansion delay coating to allow concrete cure prior to expansion
- Reliable and durable (lifespan up to 100 years)
- ISO 9002 certified
- CJ-0725-3K-ADH and CJ-1020-2K-ADH offered with an adhesive back
- Simple, low cost installation
- Available in a multitude of sizes and shapes for numerous applications
- Appropriate for retro-fit as well as new construction
- Can withstand high hydrostatic pressures
 (150' head minimum for most profiles)
- International acceptance
- 15 years of service

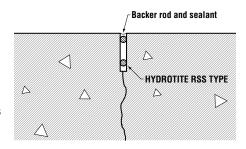
HYDROTITE CJ: A Superior Waterstop for Concrete Joint Gaps

As this innovative product absorbs water and expands, it conforms to gap variations along the joint. This action ensures complete sealing even under extraordinary hydrostatic pressures. Due to its slim profile, it won't project like conventional waterstops and trap air or become displaced by the second pour. The result is optimum concrete placement. **Hydrotite CJ**, is treated with a special expansion-delay coating to prevent it from reacting to the fresh, moist concrete and expanding before curing takes place.



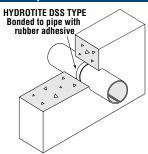
HYDROTITE RSS: Seal for Sawed Control Joints/Joint Repairs

Hydrotite RSS profiles create effective seals in sawed control joints and in the repair of failed joints. Hydrotite eliminates hydrostatic pressure below the sealant, thus extending the sealant's life. Select solid profiles with slightly larger diameters than the joint width for joints of consistent widths. Hollow profiles should be selected based on the maximum width of joints with varying widths. Compress both profiles slightly on initial insertion.



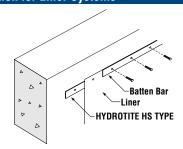
HYDROTITE DSS: Pipe Penetrations/Pipe Thimbles

The DSS profiles can be bonded to various piping materials, including concrete, steel and plastic. Bond **Hydrotite DSS** to the pipe prior to concrete placement. Installation in existing walls requires an oversize cutout be made and **Hydrotite** installed both on the pipe and the outside diameter of the cutout. Fill the annulus with a non-shrink grout. Embedded pipe thimbles can also be sealed with **Hydrotite DSS**.



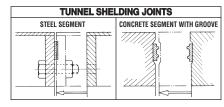
HYDROTITE HS: Termination for Liner Systems

Hydrotite HS-0540-30 is used to complete liner systems. Placed under a batten bar, between the liner and concrete wall, Hydrotite HS effectively terminates the liner. Dual composition prevents the profile from expanding out from under the batten bar. The HS profile can be supplied solid or with 3/8 inch diameter prepunched holes on 6 inch centers for ease of installing anchors.



HYDROTITE DS: Ideal In Shield Segment Tunnel Lining Systems

The outstanding hydrophilic performance of **Hydrotite DS** enables it to follow the expansion and contraction of joint gaps, creating an effective seal even under high water pressure. In contrast, conventional compressive seals tend to lose their elasticity and restoring force over time and, therefore, their water-sealing effectiveness. Furthermore, conventional seals must be thicker compared to **Hydrotite DS** to have the same gap-sealing ability.



MATERIAL TYPE AND DESIGN SELECTION (800) 325-9504

PROPERTIES OF <i>HYDROTITE</i>						
Property	Test Method	Unit	Hydrophilic Minimum	Rubber Typical	Chloropreno Minimum	Rubber Typical
Tensile Strength	ASTM D412	lb/in2	350	366	1300	1570
Elongation	ASTM D412	%	600	670	400	450
Hardness	ASTM D2240	Shore A	52+/-5	54	50+/-5	50
Tear Resistance	ASTM D624	lb/in	50	60.3	100	123
Specific Gravity	ASTM D792		1.32+/-0.1	1.32	1.38+/-0.1	1.38

INSTALLATION GUIDELINES

- 1. For best results, apply **Hydrotite** to smooth, even surfaces to ensure good bonding.
- 2. Provide 2" minimum concrete cover.
- Hydrotite can be installed to the plain surface of concrete or in a formed keyway.



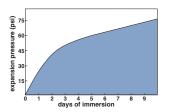
4. **Hydrotite** should be spliced by cutting ends square (or mitered) with a sharp knife or shears. Bond the prepared ends together with a cyanacrylate (super glue) adhesive. **Leakmaster** can be used to further protect the splice area.



- 5. Remove all dust, oil, etc. From concrete surface prior to adhering **Hydrotite**.
- 6. CJ-0725-3K-ADH and CJ-1020-2K-ADH are available with an adhesive back for adhering to the concrete surface. Bonding of other **Hydrotite** profiles can be accomplished using a contact adhesive compatible with chloroprene rubber. On rough concrete surfaces, **GREENSTREAK 7300 Epoxy** or **Leakmaster** should be used to smooth the surface and to adhere **Hydrotite**.
- Concrete nails, in conjunction with adhesives, are recommended for vertical or overhead applications.

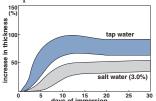
EXPANSION CHARACTERISTICS

Typical expansion pressures of **Hydrotite** are shown below.



SWELLING CHARACTERISTICS

Swelling characteristics of **Hydrotite** depend on the water quality as typical examples shown below.



SHAPE AND APPLICATION						
	ITEM		NOMINAL mm (inch		PACKAGINO METERS/REEL (FT/BO)	x REELS
	FOR CO	NSTRUCT				
	CJ-0725-3K		<u>H</u> .28)	<u>W</u> 25 (.98)	10m x 4	(131)
W 1	CJ-0725-3K-ADH	Same as	s above wi	th pressure sensi	tive adhesive b	acking
H	CJ-1020-2K	10	(.39)	20 (.79)	10m x 5	(164)
₩ T	CJ-1020-2K-ADH	Same as	s above wi	th pressure sensi	tive adhesive b	acking
H W	CJ-1030-4M	10	10 (.39)		10m x 4	(131)
T _H	CJ-3030-M		30 (1.18)		10m x 1	(33)
FOR PIPE PEN	IETRATIONS, COI	NCRETE CI	JRBS, TU	NNEL LINING SE	GMENTS	
<u>н</u> w	SS-0215 SS-0220 SS-0320 SS-0520	<u>H</u> 2 (.08) 2 (.08) 3 (.12) 5 (.20)	<u>W</u> 15 (.5 20 (.7 20 (.7 20 (.7	9) – 9) –	25m x 4	(328) (328) (328) (328) (262)
H 	RS-0520-3.51 RS-0723-3.51	5 (.20) 7 (.28)	20 (.7 23 (.9	9) 3.5 (.14)	20m x 5	(328) (196)
H	DS-0415-2.51 DS-0420-2.51 DS-0520-3.51 DS-0615-4.51	4 (.16) 4 (.16) 5 (.20) 6 (.24)	15 (.5 20 (.7 20 (.7 15 (.5	9) 2.5 (.10) 9) 3.5 (.14)		(328) (328) (328) (328) (245)
H W	DSS-0320 DSS-0420	3 (.12) 4 (.16)	20 (.7 20 (.7		25m x 4 25m x 5	(328) (328)
H	HS-0540-30	5 (.20)	40 (1.5	•		(196)
FOR JOIN	T REPAIR, CONT	ROL JOI	NTS, SPE	CIAL APPLICAT	TIONS	
B	RSS-1006 D RSS-1208 D RSS-1409 D RSS-1610 D RSS-2014 D RSS-2519 D		<u>D</u> 10 (.3 12 (.4 14 (.5 16 (.6 20 (.7 25 (.9	7) 8 (.31) 5) 9 (.35) 3) 10 (.39) 9) 14 (.55)	20m x 3 20m x 2 10m x 2 10m x 2 10m x 2 5m x 2	(196) (131) (65) (65) (65) (65)
Б В	RSS-0806 C RSS-1007 C RSS-1209 C RSS-1410 C		8 (.3 10 (.3 12 (.4 14 (.5	9) 7 (.28) 7) 9 (.35)	20m x 3	(320) (196) (131) (98)
	RSS-040 P RSS-050 P RSS-060 P RSS-080 P RSS-100 P RSS-120 P RSS-140 P RSS-160 P		4 (.1 5 (.2 6 (.2 8 (.3 10 (.3 12 (.4 14 (.5 16 (.6	0) - 4) - 1) - 9) - 7) - 5) -	20m x 10 20m x 10 20m x 10 20m x 5 20m x 3 20m x 2 15m x 2 10m x 2	(656) (656) (656) (320) (196) (131) (98) (65)



SINGLE COMPONENT WATER-SWELLING SEALANT

LEAKMASTER

LEAKMASTER LV-1 is a single component water-swelling sealant with excellent and unique properties.

Its development was based on C.I. Kasei's technology and long experience in waterswelling sealants.

LEAKMASTER may be applied in locations where conventional solid sealants cannot be easily applied. This includes irregular shaped joints, rough surfaces, odd penetrations, etc.

After curing, LEAKMASTER has excellent physical properties. The rubber-like elasticity of the material and expansion characteristics create an effective watertight seal.

ADVANTAGES

EASY APPLICATION – As a moisture-cure single component water-swelling sealant, standard caulking guns can be used.

PHYSICAL PROPERTIES – After curing, LEAKMASTER has better physical properties than those of conventional sealants.

EXPANSION – LEAKMASTER expands approximately two times its original volume when exposed to water. It provides excellent water sealing properties while retaining its rubberlike elasticity.

ADHESION – Before swelling, LEAKMASTER adheres to various materials such as concrete, metal, glass, etc.

MAIN APPLICATION

- Water sealing at joints of in-situ cast concrete
- Water sealing around H-section steel joints and bars
- Caulking for water distribution systems
- Pipe penetrations
- Irregular joint surfaces
- Waterproofing work

WARRANTY: These specifications are to be used only as a general guideline by engineers in formulating preliminary specifications, and should not be relied upon without site-specific product testing; Greenstreak assumes no responsibility for the improper reliance upon or misuse of such data. In addition, product design and specifications are subject to change without notice.

All statements regarding this product are based upon procedures and tests which the manufacturer believes are reliable, and may be changed for improvement of quality without notice; but it will be the sole responsibility of the customer and/or end user to use this product properly, and therefore assume all risk and liability in connection herewith.



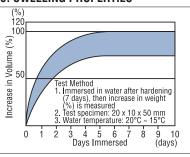
() CHARACTERISTICS

1. GENERAL PROPERTIES			
Appearance	Putty-Like		
Color	Grey		
Specific Gravity	1.30		
Extrudability	Within 20 seconds (at 23°C)		
Slump	3mm max. (at 23°C)		
Tack-Free Time	Within 8 hours (at 23°C, 60% R.H.)		
	JIS-A-5758		

2. PROPERTIES AFTER HARDENING

Hardness	35 Shore A
Tensile Strength	30 kgf/cm ² (425 psi)
Elongation	1250%
Tear Strength	10 kgf/cm (56 lb/in)
	.IIS-K-6301

3. SWELLING PROPERTIES



4. ADHESION PROPERTIES

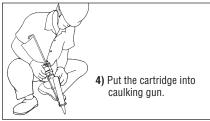
	Steel	Aluminum	Mortar
50% Modulus (kgf/cm ²)	4.5 64 psi	6.5 92 psi	6.5 92 psi
Max. Tensile Strength (kgf/cm ²)	7.0 99 psi	12.2 173 psi	11.1 157 psi
Elongation at Break (%)	330	580	570
			JIS-A-5758

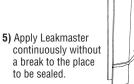
APPLICATION





3ø 6ø	NOZZLE DIAMETER	LENGTH	
	3mm∅ (1/8 in)	35-40m (125 ft)	
<u></u> 10ø	6mm∅ (1/4 in)	8-10m (30 ft)	
	8mm∅ (3/8 in)	4-5m (15 ft)	
	10mm∅ (1/2 in)	Approx. 3m (8 ft)	
3) Average extrudable length vs. nozzle diameter.			







PACKAGING

Item No.	LEAKMASTER LV-1
Cartridge	320 cc
Carton	24 cartridges



3400 Tree Court Industrial Blvd., St. Louis, Missouri 63122 Phone: 800. **325-9504** or 636. **225-9400** Fax: 800. **551-5145** or 636. **225-9854** www.greenstreak.com



