

## Hydrotite - Hydrophilic Water Swelling Material –

### Features



Hydrotite is well known as a superior water sealant. Unlike conventional water sealants, Hydrotite has a unique double action system. First, the rubber elasticity forms a seal between the two surfaces. Second, unique to Hydrotite, the rubber absorbs water thus expanding within the joint gap, increasing sealing pressure water leakage is prevented as any joint opening due to external forces is automatically sealed by Hydrotite's water absorption.

Hydrotite products are world renowned for their long term stability and durability. Hydrotite seals can vary in their expandability depending on the required design and specific application.



Hydrotite continues to be used in a variety of applications from under water tunnels and water supply/drainage systems to civil engineering construction projects. Hydrotite prevents leakage problems before they occur.



■ **Products**

**Varied Product Range provides a Wide Variety of Applications**

Hydrotite is suitable for a variety of applications. Hydrotite has an extensive product range applicable to many operating conditions and meeting a wide range of requirements.



For Segment Lining Tunnels

Hydrotite SS, RS, DS series

- Various shapes, compositions and properties.

For Concrete Construction Joints

Hydrotite CJ series

- Composite sealing material with holes.



For Concrete Pipe Joints

Hydrotite BH, JH series

- Composite sealing material.

For In-situ Concrete Joints

LEAKMASTER

- Water Swelling Sealant

For Regular shaped joints

Hydrotite O-ring and washer

- Molded Seal and Packing

## Typical Profiles

■ For Segment Lined Tunneling



SS Type



RSType



DS Type

■ For Poured Concrete Joints



CJ Type

■ For Concrete Pipe Joints



BH Type

■ For Leak Repairing



RSS Type

## For Segment Lining Tunnels

### <Super-Low expansion type>

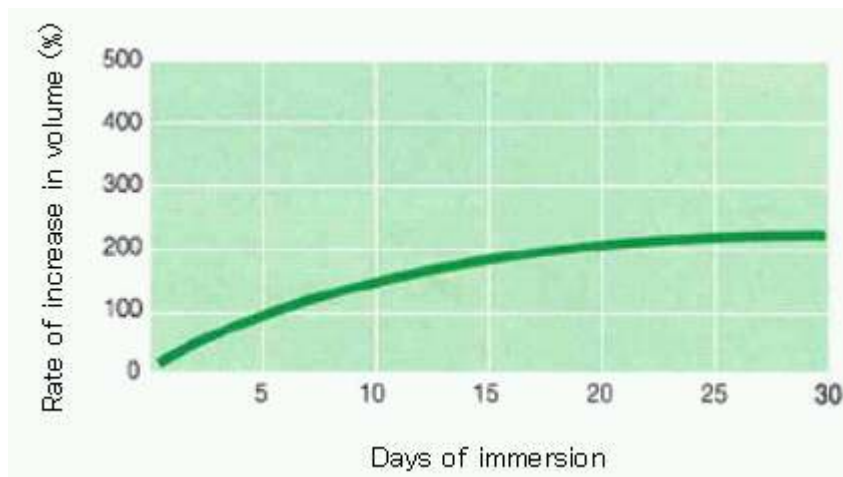
#### ■ Properties

Test item	unit	Hydrophilic Rubber	Non-hydrophilic Rubber	Standard
Hardness	-	A40±5	A45±5	JIS K 6253
Tensile strength	MPa	min. 3.9	min. 3.9	JIS K 6251
Elongation	%	min. 600	min. 500	JIS K 6251
Expansion rate	%	min. 100	-	in-house test*

\*: Expansion condition is at 23C in distilled water for 28 days

Note: Specimen: Pressed rubber sheet made of the same compound of the products

Note: The specifications shown above may be changed without notice to improve product quality.

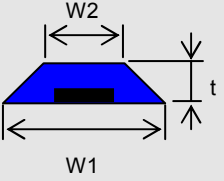
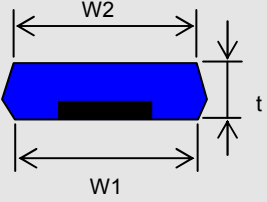
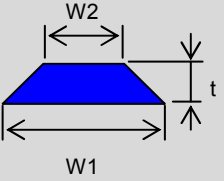


Test water: Distilled water  
 Water temp.: 23C  
 Expansion type: Free expansion

Specimen: Pressed rubber sheet made of the same compound of products

Note: The data is only measured value, not guaranteed value.

**■ Main Items**

	Shape	Item Code	Dimensions (t×W1×W2)	Packing unit (M x rolls/carton)
Composite structure		DTRO-03515-10	3.5×15×10	20×5
		DTRO-0415-10	4×15×10	20×5
		DTRO-0518-12	5×18×12	20×5
Composite structure		DSHO-03514-13	3.5×14×13	20×5
		DSHO-0418-14	4×18×14	20×5
		DSHO-0518-16	5×18×16	20×5
		DSHO-05520-15	5.5×20×15	20×5
Single structure		DTRO-03515-10	3.5×15×10	20×5
		DTRO-0415-10	4×15×10	20×5
		DTRO-0518-12	5×18×12	20×5

 Hydrophilic rubber
  non-Hydrophilic rubber

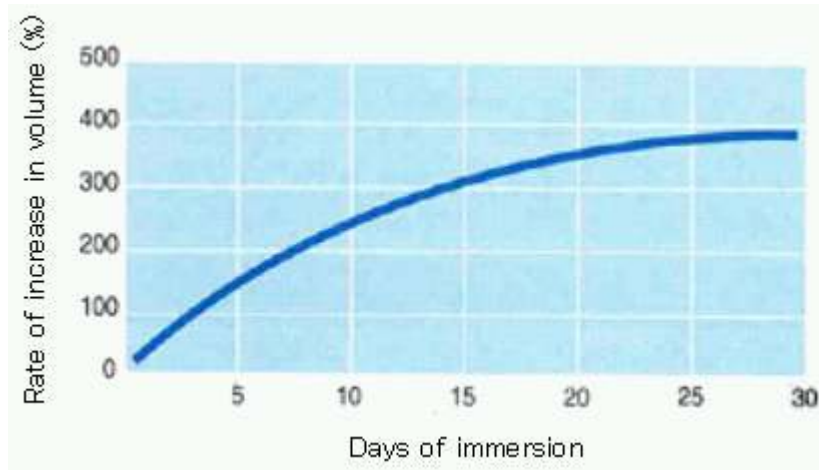
**<Low expansion type>**
**■ Properties**

Test item	unit	Hydrophilic Rubber	Chloroprene Rubber	Standard
Hardness	-	A50±5	A50±5	JIS K 6253
Tensile strength	MPa	min. 3.9	min.8.8	JIS K 6251
Elongation	%	min. 600	min. 400	JIS K 6251
Expansion rate	%	min. 200	-	in-house test*

\*: Expansion condition is at 23C in distilled water for 28 days

Note: Specimen: Pressed rubber sheet made of the same compound of the products

Note: The specifications shown above may be changed without notice to improve product quality.



Test water: Distilled water  
 Water temp.: 23C  
 Expansion type: Free expansion

Specimen: Pressed rubber sheet made of the same compound of products.

Note: The data is only measured value, not guaranteed value.

■ Main Items

	Shape	Item Code	Dimensions (txW1xW2)	Packing unit (M x rolls /carton)
Composite structure		DST-0420-25-I	4x2.5x20	20x5
		DST-0520-35-I	5x3.5x20	20x5
Composite structure		RST-0320-20-I	3x2x20	20x5
		RST-0520-35-I	5x3.5x20	20x5
		RST-0515-35-I	5x3.5x15	20x5
		RST-05515-40-I	5.5x4x15	20x5
Single structure		SST-0215	2x15	25x4
		SST-0218	2x18	25x4
		SST-0220	2x20	25x4

Hydrophilic rubber non-Hydrophilic rubber

**■Durability**
**■Ongoing long term water sealing test**

As of Dec/2005 the tests are ongoing.

No.	Dimensions (thick x width mm)	Gap of both flanges (mm)	Year. Month										
			'82.1	'83.1	'84.1	'85.1	'86.1	'87.1~'03.1	'04.1	'05.1	'05.12		
1	3X20	2	-----										
2	5X20	4	-----										
3	5X20	5	-----										

\*water pressure: 0.15MPa

\*No.1-2: Specimen is stuck on bottom flange that has no groove.

\*No.3: Specimen is stuck on both flanges that have grooves (2mm depth)

**Warranty**

All statements regarding this product are based upon procedures and tests which we believe are reliable, and may be changed for improvement of quality without any 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 therewith.

C. I. Kasei Co., Ltd. Warrants its products to be of good quality and will replace product proved to be defective. In no instance will C. I. Kasei Co., Ltd. be liable for labor costs or incidental damage associated with the use of this product, unless stated in a warranty for a specific project.