



**CONSEAL**  
CONCRETE SEALANTS INC.

*Don't Just Seal It, ConSeal It!*

**ConSeal™ CS-231**

Controlled Expansion  
Waterstop Sealant

## Controlled Expansion Hydrophilic Waterstop for Poured-in-Place and Precast Concrete



### Applications

For concrete joints in: Manholes, Box Culverts, Double Pours, Containment Structures, Concrete Slabs, Bridge & Deck Abutments, Large Septic Tanks, Wall or Floor Penetrations, Tunnels, Cold Joints, Retaining Walls, Controlled Environment & Utility Vaults, Water & Wastewater Treatment Facilities. **Not intended for use in expansion joints or joints that move.**

NSF Standard 61 Certified, Safe for Drinking Water Applications

### Adhesive Sealing Gasket

ConSeal CS-231 Waterstop is a rubber-based product that has been formulated with hydrophilic compounds that allow it to expand in a controlled fashion when exposed to moisture, thereby sealing off leaks and restoring long-term, watertight joint integrity. Traditional, clay-based waterstop products, on the other hand, expand uncontrollably and eventually deteriorate, causing a complete loss of joint integrity.

### Hydration-Dehydration Cycle Testing

The test evaluates the integrity of CS-231 Waterstop when exposed to cycles of hydration and dehydration. A cycle consists of nine days full immersion in water followed by five days air-drying. ConSeal CS-231 showed no visible signs of deterioration at the conclusion of 10 cycles of exposure.

### Physical Properties

Description	Spec	CS-231
Color:		Black
Specific Gravity:	ASTM D71	1.40 ± 5
Hydrocarbon Content:	ASTM D4	47% min.
Volatile Matter:	ASTM D6	1% max.
Penetration, cone 77°F, 150 gm. 5 sec.:	ASTM D217	43 - 46 dmm
Application Temperature Range:		-10°F to 125°F (-22°C to 52°C)
Service Temperature Range:		-30°F to 180°F (-34°C to 82°C)

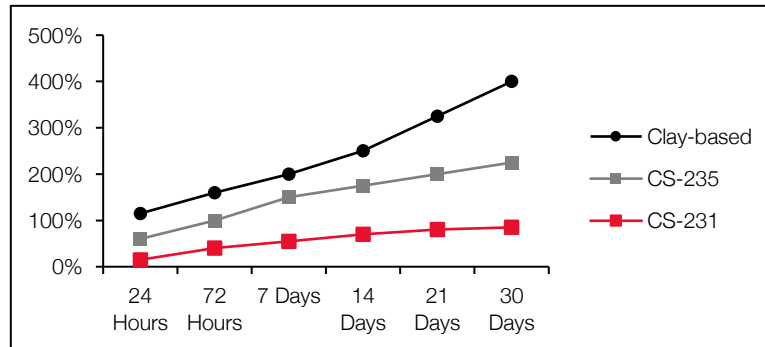
### Performance Characteristics

Description	CS-231
Maximum Swelling – Freshwater:	145%
Maximum Swelling – Saltwater (3%):	12%
Hydrostatic Pressure Resistance	
Standard Precast Concrete Joint:	30 psi (2 bars)
Cast-In-Place Construction Joint:	100 psi (6.8 bars)

### Immersion Testing

#### Freshwater Exposure Results:

24 Hours: 15% Expansion  
72 Hours: 40% Expansion  
7 Days: 55% Expansion  
14 Days: 70% Expansion  
21 Days: 80% Expansion  
30 Days: 85% Expansion



### Limited Warranty

This information is presented in good faith, but we cannot anticipate all conditions under which this information and our products, or the products of other manufactures in combination with our products, may be used. We accept no responsibility for results obtained by the application of this information or the safety and suitability of our products, either alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each such product or product combinations for their own purposes. It is the **users' responsibility** to satisfy himself as to the suitability and completeness of such information for this own particular use. We sell this product without warranty, and buyers and users assume all responsibility and liability for loss or damage arising from the handling and use of this product, whether used alone or in combination with other products.

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