

# INSTALLATION INSTRUCTIONS

## **SWELLSEAL® WA**

Sheet Pile Applications  
Surface Preparation and Installation

### **Overview:**

**SWELLSEAL® WA** may be used for stopping the ingress of water through sheet piling knuckles in two ways. **SWELLSEAL® WA** can be applied to the female opening of the piles, and allowed to fully cure before driving. This method is useful if the piles are to be pretreated in the contractor yard or plant prior to shipping them to the jobsite. **SWELLSEAL® WA** can also be applied in the field and the sheets drive before the material is cured. This “wet driving” method allows the contractor to drive the sheet immediately after installation of the **SWELLSEAL® WA**.

### **PREFERRED “WET” METHOD:**

#### **Surface preparation and installation (Wet method):**

1. Lay sheets out with the female side of the pile accessible.
2. Clean all foreign material and the surface layer of oxidation from the knuckle by OSHA approved chemical, flame, or abrasive method.
3. Immediately before applying sealant, blow the knuckle clean with compressed air.
4. Apply an 3/8” bead of **SWELLSEAL® WA** into the female knuckle. Do not overfill knuckle.
5. Drive the sheet pile.

### **ALTERNATE APPLICATION METHOD:**

#### **Surface preparation and installation (Cured method):**

1. Lay sheets out with the female side of the pile accessible.
2. Clean all foreign material and the surface layer of oxidation from the knuckle by OSHA approved chemical, flame, or abrasive method.
3. Immediately before applying sealant, solvent wipe the knuckle.
4. After the solvent flashes off, apply an 3/8” bead of **SWELLSEAL® WA** into the female knuckle. Do not overfill knuckle.
5. Tool the **SWELLSEAL® WA** in the knuckle to roughly the shape of the male interlocking member of the sheet pile.
6. Store sheet piles in such a way that they will not get standing water in the knuckle.

# TECHNICAL INFORMATION

## WATERSTOPS

### PRODUCT NAME

## Swellseal® WA

Gungrade Polyurethane Waterstop

### MANUFACTURER

De Neef Construction Chemicals, Inc.  
5610 Brystone Drive  
Houston, TX 77041  
1(800) 732-0166

### PRODUCT DESCRIPTION

**Swellseal® WA** is a single component hydrophilic mastic, designed for sealing smooth to very irregular construction joints and pipe penetrations. **Swellseal® WA** is supplied in cartridge or sausage. Material cures and swells in the presence of moisture or water. Curing Time is dependent on temperature and humidity, i.e. curing time will decrease if temperature and RH are higher. **Swellseal® WA** will become firm in 24-36 hours. Performance is not affected by the curing time.

### APPROPRIATE APPLICATIONS

- Sealing of rough and smooth construction joints of cast in-place or precast concrete in wet and underwater applications.
- Sealing joints between pre-cast segments in wet or underwater applications (e.g. manholes, box culverts, cable ducts and pipes)
- Sealing of the joints between sheet piles.

### ADVANTAGES

- Solvent free
- Due to its special formulation, **Swellseal® WA** can be applied to wet surfaces or in underwater applications.

### TYPICAL PROPERTIES

Property	Value	Test Standard
Solids	100%	
<b>Uncured</b>		
Viscosity	Paste	
Density (at 20°C, 68°F)	Approx. 90 lbs/cu.ft.	ASTM D 3574 95
Slump in vertical applications	1/8 inch	
Hand dry (at 68°F and 60% rel. humidity)	10 hr	
Flash Point	> 266 °F	ASTM D 93
<b>Cured (7 days at 25°C (77°F) 1cm Thick)</b>		
Elongation at break	Approx. 625%	ASTM D 3574 95
Tensile strength	Approx. 312 psi	ASTM D-412
Resistance to hydrostatic pressure	>330 feet of head	DNCC
Swelling capacity in contact with water	200%	DNCC

### Appearance

During application: pasty, Cured: rubbery  
Color: white

- **Swellseal® WA** adheres to concrete, PVC, HDPE, steel, and fibreglass
- In contact with water **Swellseal® WA** will expand to more than 200% of its original cured volume.
- Flexible system, which adapts to the irregular surfaces
- Easy application with standard caulking guns
- Durable cured material will exceed the life of the structure.
- Good chemical resistance (\*).
- Resistant to petroleum products, greases, mineral and vegetable oils

(\*) For Chemical resistance contact the Technical Service Department @ 800-732-0166

## Consumption

The consumption of **Swellseal® WA** per linear foot depends on the quality of the surface of the concrete.

	Width (of the joint)	Consumption
Cartridges 10.5 oz.	1/4 inch	25 – 35 ft.
	5/16 inch	12 – 15 ft.
	3/8 inch	approx. 10 ft.
Sausages 20 oz.	1/4 inch	50 – 70 ft.
	5/16 inch	24 – 30 ft.
	3/8 inch	approx. 20 ft.

## PACKAGING

10.5 oz. cartridge	20 oz. sausage
12 per carton 6 lbs. net	12 per carton 24 lbs. net
1 pallet = 105 cartons 630 lbs.	1 pallet = 60 cartons 1500 lbs.
Weight per cartridge:	Weight per sausage:
1.2 lbs. gross	2.2 lbs. gross
1.1 lbs. net	2.0 lbs. net

## LIMITATIONS

Applied at temperatures below 40°F the material will take approx. 10 to 15 days to cure (material cures slower at cooler temperatures and conversely working and cure times will be substantially reduced at higher temperatures).

## SURFACE PREPARATION

Refer to DeNeef Surface Preparation Guidelines for more details.

## INSTALLATION PROCEDURES

**Swellseal® WA** should be applied onto a dust-free concrete surface. The surface can be rough or smooth, moist or dry.

**Application Method for 10.5 oz. Cartridges:** Break the moisture proofing aluminum foil on the top of the cartridge and remove the plug from the bottom. Screw on the nozzle and

cut diagonally at the appropriate position. Place the cartridge into the caulking gun.

**For 20oz. Sausages:** Put the sausage in the empty tube of the bulk caulking gun and cut 1/8 inch off the top of the sausage. Close the tube and install the nozzle. Nozzles are supplied with the appropriate opening. **Swellseal® WA** must be applied in an uninterrupted band (minimum 3/8 inch wide and thick), gunned in the middle of the joint or prefab element. Concrete cover should be at least 3 inches on both sides, in order to avoid cracks from the pressure of material swelling. If **Swellseal® WA** is to be installation under water or during heavy rain the concrete operation should begin within 2 hours of application to provide confinement for the material or premature swelling may result lowering the effectiveness of the material.

## STORAGE & HANDLING

Store in dry area for up to 12 months from date of production at temperatures between 40°F and 85°F for best performance. See shelf life details on the material packaging.

## PRECAUTIONS

Always use protective clothing, gloves and goggles consistent with OSHA regulations during use. Avoid eye and skin contact. Do not ingest. Refer to Material Safety Data Sheet for detailed safety precautions.

## SAFETY INFORMATION

In the event of an EMERGENCY call  
CHEM-TREC 800-424-9300.

## WARRANTY INFORMATION

De Neef Construction Chemicals, Inc. products are warranted under the policy set forth under the WARRANTY section of the DeNeef Construction Chemicals Inc., product catalog. Warranty information can also be obtained via the DeNeef Construction Chemicals Inc. website at [www.deneef.com](http://www.deneef.com), or by calling 713-896-0123 or toll free at 1-800-732-0166.

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