

Q-SEAL 290S

DETECTOR LOOP SEALANT

DESCRIPTION

Q-Seal 290S Detector Loop Sealant is a one component thixotropic moisture curing polyurethane sealant. It is designed for use in both asphalt and concrete pavement to provide a weather and chemical resistant waterproof seal.

USES

Q-Seal 290S is primarily used as a protective seal for traffic detector wire loops employed in actuated intersections. It may be used as a sealant for saw cuts in concrete or asphalt surfaces.

CURING

Q-Seal 290S will skin over in approximately 3 hours at 77°F and 50% R.H. At temperatures below 77°F this product will take proportionately longer time to cure. At temperatures above 77°F it will take a proportionately shorter time to cure.

SURFACE PREPARATION

The substrate should be dry, dust free and as smooth as possible before installation of Q-Seal 290S. It is recommended that ambient temperatures at time of sealant application should not exceed 100°F or fall below 36°F. It is recommended that Q-Seal 290S be applied by using a pressurized dispensing system, allowing for positive injection of Q-Seal 290S into the saw cut to properly encapsulate the loop wire. Normally the dispensing system consists of a 10:1 ratio pump with air regulator, gauge and air valves. The primer is an elevator with a follower plate that should be resistant to aromatic hydrocarbons. The hoses used should be Teflon lined with stainless steel cover. The flow gun itself should be a 6000 psi extrusion flow gun with various wand attachments.

To apply the 30 fl. oz. cartridge, use a manual or air-operated caulking gun.



PHYSICAL PROPERTIES:

Q-SEAL 290S

PROPERTY	VALUE	ASTM METHOD
Brookfield Viscosity	9,000 – 14,000 cps	
Color	Grey or Black	
Solids	85%	
Hardness	55 - 65 Shore A	D 2240-91
Elongation	300 – 600%	D 412
Specific Gravity	1.25	
Tensile Strength	500 psi	D 412

The above properties are typical characteristics and not to be considered as specifications.

PACKAGING

Q-Seal 290S Grey or Black is available in 5 gallon pails and 30 fl. oz. cartridges. Shelf Life is 1 year from date of manufacture.

CLEAN UP

Use Chemque solvent S-235. Caution: Clean equipment after use. Use Chemque Q-CLEAN to remove sealant from your hands.

NOTES

In cases where the loop is to be installed in the road structure prior to the placement of the final asphalt wearing course, please contact Chemque for recommendations.

Q-Seal 290S Detector Loop Sealant exhibits exceptional chemical resistance to the following chemicals:

- De-icing salts
- Gasoline
- Hydraulic Brake Fluid
- Motor Oil
- Sodium Chloride (5%)

SAFETY AND HANDLING PRECAUTIONS

Contains MDI (methylene diisocyanate). Keep away from heat and open flames. Use only in well ventilated areas. Do not breath vapours. In case of contact, immediately flush eyes or skin with plenty of water for at least ten minutes. If contact is made with eyes, get immediate medical attention.

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Q-SEAL™ 295

2 Component, Polyurethane,
Detector Loop Sealant
Summer Grade (S) and Winter Grade (M)

Technical Data Sheet

July 2017
North America

Product Description

Q-Seal™ 295 is two component polyurethane, detector loop sealant. It is designed for use in both asphalt and concrete pavement to provide a weather and chemical resistant waterproof seal.

Q-Seal™ 295S, Summer Grade is designed for use in hot weather (ie. above 60°F/15°C). For temperatures below 65°F/18°C, Q-Seal™ 295M Winter Grade is recommended.

Q-Seal™ 295 Detector Loop Sealant exhibits exceptional chemical resistance to de-icing salts (including 50% by weight potassium acetate), gasoline, hydraulic brake fluid and motor oil. Q-Seal™ 295 requires no clean up since the mixing tips are disposable.



Uses

Q-Seal™ 295 is primarily used as a fast cure, protective seal for traffic detector wire loops employed in actuated intersections. It may be used as a sealant for saw cuts in concrete and asphalt surfaces.

Curing

Q-Seal™ 295 will gel in only 8 - 10 minutes at 77°F (25°C). This product will take longer to gel at temperatures below 77°F (25°C). See the "Gel Time in Saw Cut" chart below. The cure will also depend on the volume of material applied. Contact your Royal Adhesives & Sealants Canada Ltd. representative for more information.

Superior Features

Q-Seal™ 295 has no reaction with the asphalt and concrete and therefore will not deteriorate them. It exhibits no "bubbling" or "mushrooming". Q-Seal™ 295 will not expand or flow above the joint. Refer to Use and Handling Instructions. Q-Seal™ 295 is a 100% solids system that contains no solvents and is zero V.O.C.

Surface Preparation

It is the responsibility of the installer to ensure that the substrate are clean and dry (free of dust, water and ice) before installation of Q-Seal™ 295. If the substrate is not dry or if it is coated with a thin layer of ice, the surface may be heated with a torch or hot air gun to dry.

Packaging

Q-Seal™ 295S and Q-Seal™ 295M are available as follows:

- 21 fl. oz. (600 mL) ratio pack tubes[®] to be dispensed through a manual gun dispenser
- 51 fl. oz. (1500 mL) ratio pack tubes[®] to be dispensed through a compressed air gun dispenser
- Twin packages of 10 gallon (38L) kits to be dispensed through a meter-mix air pump dispenser
- 55 gallon (200L) drums

Shelf Life is 1 year from date of manufacture. Order must exceed a minimum quantity.

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MANUFACTURING
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QUALITY PRODUCT LINES

Q-SEAL™ 295

2 Component, Polyurethane,
Detector Loop Sealant

Summer Grade (S) and Winter Grade (M)

Technical Data Sheet

July 2017

North America

Physical Properties

Property	295S Mixed	295M Mixed
Brookfield viscosity	4000 – 6000 cps	1200 – 1700 cps
Color	Grey	Grey
Solids	100%	100%
Hardness, Shore A (ASTM D-2240)	65 – 75	70 – 80
Elongation (ASTM D-412)	175 – 225%	175 – 225%
Tensile strength (ASTM D-412)	600 – 800 psi	600 – 800 psi
Adhesion to concrete (canvas to concrete - ASTM D-903)	170 lb/in width	170 lb/inch width

Note: The above properties are typical characteristics and not to be considered as specifications.

Safety and Handling

Please refer to the Material Safety Data Sheet for Q-Seal 295™ for more information.

GEL TIME IN SAW CUT†		
Temperature*	295S (minutes)	295M (minutes)
23°F (-5°C)	N/A	120
41°F (5°C)	N/A	45
59°F (15°C)	21	15
77°F (25°C)	8	N/A
95°F (35°C)	5	N/A

† 1" deep x ¼" wide saw cut.

* Temperature of material and substrate.

For loop applications, the tack free time is not critical to opening of lanes for traffic if saw cut joint is filled 1/8 inch below pavement/concrete surface. Also, if Q-Seal™ 295M Winter Grade is kept at a warmer temperature, (i.e. placed in truck cabin while heater is on) the cure time in saw cut will become close to that of Q-Seal™ 295S Summer Grade.

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