

PRODUCT BULLETIN DLS-1



**Proven Professionally
...Everyday**

DESCRIPTION

Ruscoe Permanent Sealer 974 is a one part, elastomeric, nitrile rubber material that readily extrudes over a wide temperature range and cures to produce a tough, flexible rubber loop sealant unaffected by water, chemicals, fuels or incompressibles.

FEATURES

- Easy application—one part ready to use as supplied; no mixing or heating required; dispensed directly from container by caulking guns or air powered pump.
- No tooling—self leveling when applied to a horizontal roadway but non-running on inclined road.
- No priming—not required for good bond to either asphalt or portland cement concrete.
- Fast dry—skins over immediately, tack free in 2-3 minutes; no pick up or tracking will occur.
- Total encapsulation—wires protected against breaking, grounding of a wire rubbed bare and moisture, the penetration of which causes capacitive leakage and changing frequency.

INFORMATION

**PERMANENT SEALER™
TRAFFIC DETECTOR LOOP SEALANT 974**

TYPENitrile Rubber

SPECIAL PROPERTIESTotal Encapsulation, Remains Flexible, Fast Drying, No Mixing, Long Shelf Life, Moisture, Chemical and Jet Fuel Resistant. No Tooling, Resealable to Itself, Adheres to both Asphalt, and PCC.

PRIMARY USESealing inductive loop saw cuts to totally encapsulate loop wires.

USES

Ruscoe Permanent Sealer 974 nitrile rubber loop sealant is designed primarily for sealing the saw cuts for inductive loop wire installations.

It effectively seals saw cuts in asphaltic concrete and portland cement concrete.

The sealant is paintable simplifying striping operations.

PERMANENT SEALER 974 will seal wire installations for privacy gates, parking lot entries, parking ramp entries, toll gates or wherever wires need sealing.

RUSCOE PERMANENT SEALER 974 has been used effectively as a random crack filler in both portland cement concrete and asphalt concrete.

Encapsulation of loop wires and lead-in wires at the pull boxes with PERMANENT SEALER 974 eliminates water damage when boxes fill with water.

- Resealability—will reseal to itself when needed.
- Flexibility—remains flexible to withstand pavement movement.
- No curing expansion—loop slot can be filled to within 1/16" of road surface.
- Chemical resistant—jet fuel and hydrol fluids have no effect.
- No waste—unused portions in a securely sealed container can be used at a later date.
- Superior adhesion—will adhere to asphalt or portland cement concrete whether dry or damp.
- Good weatherability—nitrile rubber sealant unaffected by salts, oils, greases, transmission fluids, gasoline, rain, snow, ozone or temperature extremes.
- Long life reliability—remains rubbery from -60°F to 350°F.

RUSCOE TRAFFIC DETECTOR LOOP SEALANT No. 974

INSTALLATION

1. Make saw cut for the placement of necessary wires.
2. Flush out sludge with water.
3. Blow out water with compressed air. Air used should be filtered to assure that it is oil and moisture free.
4. Surfaces should be clean and dust free.
5. When slot is clean, place a 1/4" bead of sealant in the bottom of the saw cut prior to the installation of the wire. (Helps provide total wire encapsulation as recommended by the FHWA's "Traffic Detector Handbook" dated April, 1985, report No. FHWA-IP-85-1.)
6. Install the wire while seating it into the sealant with a rounded wood tool such as a tongue depressor. This method will prevent any cutting of wire insulation.
7. Fill remaining void in saw cut with sealant from bottom to top.
8. Sealant is self leveling so no tooling is necessary.
9. Traffic may be resumed within 10 minutes without pick up or tracking.

LIMITATIONS

RUSCOE PERMANENT SEALER 974 nitrile rubber loop sealant should not be used as a joint sealant. It's free flowing characteristics are superior for loop wire encapsulation. RUSCOE PERMANENT SEALER 983 should be used for joint sealing. Information on 983 can be found in PRODUCT BULLETIN HP-1.

WHERE TO USE

PERMANENT SEALER TRAFFIC DETECTOR LOOP SEALANT 974 is ideal for use in any electrical situation. Airfield lighting can be sealed with 974. Security gates with exposed wire can be held in place with it.

PERMANENT SEALER 974 will seal any type of inductive loop as well as the loop connections between loop wires and the lead-in wires at the pull box where problems occur due to the boxes filling with water.

HOW TO USE

PERMANENT SEALER 974 when packaged in cartridges can be applied with hand held cartridge guns, available in manual, air and rechargeable battery pack type guns. When using 5-gallon pails, a follower plate air pump is necessary. There are a number of manufacturers of these pumps. Additional information is available by contacting our office.

Manufacturers of air pumps also produce 55-gallon drum pumps for larger production needs.

COLOR

RUSCOE 974 LOOP SEALANT adheres to both asphaltic concrete and Portland cement concrete. This sealant is available in two colors.

Black is best for use as a sealant between asphalt berms and concrete roadways.

Gray is the predominant choice since it can be used anywhere and is a neutral color on pavement work.

Either color is tack free within 10 minutes and allows traffic without pickup or tracking.

Both colors, black or gray, are paintable for either traffic stripping or parking place delineations.

STORAGE & SHELF LIFE

When stored in unopened, original containers at or below 90°F (32°C), RUSCOE PERMANENT SEALER 974 nitrile rubber loop sealant has a shelf life of one year from date of shipping. Keep all containers tightly closed.

Empty containers may contain hazardous waste. Do not use welding torch on or near empty drums—disposal must be made according to federal regulations.

PACKAGING

PERMANENT SEALER™ No. 974 TRAFFIC DETECTOR LOOP SEALANT is supplied in 29 fl. oz. (850 ml) cartridges, 5-gallon pails (18.9 liters) and 55-gallon drums (207.9 liters).

FOR OUTSIDE USE ONLY!



RECOMMENDED TRAFFIC DETECTOR LOOP SEALANT SPECIFICATION RUSCOE 974 SEALANT

PHYSICAL PROPERTIES OF WET MATERIALS

<u>PROPERTY</u>	<u>MEASURING STANDARD AND CONDITIONS</u>	<u>RESULTS</u>
Weight	ASTM E201	9.25 lbs./gallon \pm 0.3
Non Volatile (Total Solids by Weight)	ASTM D1353 18 Hrs. @ 200°F (93°C)	60%-65%
Viscosity	Brookfield RVF #6 Spindle @ 20 RPM 77°F (25°C) 50% RH	400,000 cps \pm 50,000 cps
Drying Time	ASTM D1640 40 Mil. (0.040") (1mm) Film, 77° (25°C) 50% RH	Dry to Touch: 2-3 Minutes Dry to Complete: 30 Hr. Max.
Flash Point of Solvent	ASTM D1310	60°F (15.5°C)

PERFORMANCE OF PROPERTIES OF CURED SEALANT

Hardness (Indentation)	ASTM D2240 Rex Type "A" Model 1700 77°F (25°C) 50% RH	25-35
Tensile Strength	ASTM D412 Die "C" Pulled @ 20 IPM	125 psi (Minimum) 0.3510 kgf/mm ² (Minimum)
Elongation	ASTM D412 Die "C" Pulled @ 20 IPM	1000% Minimum
Adhesion (Peel Strength)	ASTM D903 Canvas to Concrete	30 lbs. min, per inch width (0.268 kgf/mm) (Minimum)
Weathering Resistance	ASTM D822 Weatherometer 350 Hrs Cured 7 days @ 77°F (25°C) 50% RH	Slight Chalking
Salt Spray Resistance	ASTM B117 28 days @ 100°F (38°C) 5% NaCl, Die "C", 20 IPM	Tensile 125 (Minimum) psi (0.3510 dgf/mm ²) Elongation 1000% (Minimum)
ARC Resistance	ASTM D495	70 Seconds (Average)
Dielectric Constant	ASTM D-150	8.90 @ 100 Hz 6.01 @ 400,000 H.
Adhesion & Cohesion Under Cyclic Movement	100 \pm 50 ASTM C719-86	Passes
Chemical Resistance	ASTM D471	No effect by use of deicing chemical, gasoline, hydraulic brake fluid, motor oil, calcium chloride (5%), or jet fuel



PERMANENT SEALER No. 974 Traffic Detector Loop Sealant.

HEALTH and SAFETY INFORMATION

WARNING!

- Flammable liquid
- May cause eye and skin irritation
- Causes respiratory irritation
- May be harmful if inhaled, swallowed or absorbed through the skin
- Contains MIBK (Methyl Isobutyl Ketone)

HANDLING AND STORAGE:

Vapors form explosive mixtures with air. Keep away from heat sparks, flame, pilot lights and other sources of ignition. Store in flammable label area.

Avoid breathing (dust, vapor, mist, gas). Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Use or store with adequate ventilation. Refer to applicable OSHA regulations. Keep workplace airborne concentrations below legal and recommended limits. Circumstances could require use of respiratory protection.

Keep container closed. Empty containers may contain hazardous product residues. Disposal in accordance with OSHA regulation.

FIRST AID:

EYES: Immediately flush with water for at least 15 minutes while lifting upper and lower eyelids. Do not use chemical antidote. Get medical attention immediately.

SKIN: Immediately flush with water for at least 15 minutes. Do not use chemical antidotes. Get medical attention. Remove contaminated clothing and wash before reuse.

INHALATION: If affected remove to fresh air. If not breathing, give artificial respiration and get medical attention immediately. If breathing is difficult, get medical attention.

INGESTION: DO NOT induce vomiting. Give two glasses of water and get medical attention immediately. NEVER give anything by mouth to an unconscious person.

FOR INDUSTRIAL USE ONLY: BEFORE USE, REVIEW MATERIAL SAFETY DATA SHEET FOR FURTHER INFORMATION, INCLUDING CHRONIC HEALTH EFFECTS.

KEEP OUT OF REACH OF CHILDREN

NOTICE TO CUSTOMER

Because we do not know the particular use for which this product may be purchased nor how it may be applied, we cannot guarantee its suitability for your purpose. However, we will refund the purchase price if this product is defective. This shall be the customer's only remedy. We cannot assume any liability for the results of customer use or a customer's inability to use this product. TEST BEFORE USE.

