

YEAR OF FIRST DOT USE OR APPROVAL	POLYGUARD HIGHWAY UNDERSEALS – HISTORY OF RESEARCH, APPROVALS, and USE (Relevant published research on Polyguard materials are highlighted)
ALABAMA 1979 ARKANSAS 1978 ARIZONA 1987	Polyguard underseals are listed on Specification 454.03 Membrane for Waterproofing Joints and Cracks. Polyguard underseal has been used under Special Provision 100135 Joint Sealing Membrane. Polyguard underseal has been used under Sec. 550-s Waterproofing Membrane.
CALIFORNIA 1978	CALTRANS research concluded that "...interlayers having a rubber asphalt backing (...Polyguard) do not weaken in shear by embrittlement at low temperatures (down to -20°F)" (Evaluation of Pavement Fabric Test Installations in California, undated, p.10) Polyguard underseal meets CALTRANS spec10-1.09 Preformed Membrane Waterproofing. Numerous highway and railroad waterproofed in California.
COLORADO 1978 CONNECTICUT 1993	Polyguard underseal has been used under specification number 705.08 Prefabricated Reinforced Membrane and Primer. Polyguard is approved for use as a bridge deck waterproofing membrane on ConnDOT projects.
DELAWARE 1982	Research concluded that Polyguard underseal "...not only delayed the initial appearance of cracks, but also prevented those that did appear from becoming as severe as those in the control". (Final Report on Reflective Crack Control Membranes, 1/26/82, Contract 79-068-08, p.4.)
FLORIDA 1982	Polyguard underseals have been used under specification number 356-70 Waterproofing Concrete Pavement Joints.
GEORGIA 1977	6 year evaluation of test sections on I-85 concluded that underseals: "...have reduced the rate of reflective cracking ...even when reflective cracking appears over joints with membrane treatment, the cracks appear to stay tighter than cracks over joints without membrane treatment". (Research published in Transportation Research Record 916, paper presented by Wouter Gulden and Danny Brown.) Today Georgia DOT approves Polyguard underseals for bridge decks and pavement joints and cracks.
IDAHO 1992	Polyguard underseals meet Idaho DOT requirements, and has been used on both state and federal roads and bridges.
INDIANA 1999	Polyguard underseal used under Standard Specification 906.05.1 Joint Membrane System for Precast Reinforced Concrete Box Sections.
IOWA 1987	Polyguard underseal is listed on 496.01 Appendix A Approved Engineering Fabric for Reflective Cracking.
ILLINOIS 1972	One of the earliest Polyguard bridge deck underseal applications took place in Sterling, Illinois the last week of September 1972. Today, Polyguard underseals fulfill requirements of special provision for Reflective Crack Control System B.
KANSAS 1990	Polyguard underseal has been used under special provision 90P-105 Stress Relief Interlayer Fabric.
LOUISIANA 1990	Polyguard underseals have been used under Item 4198 Waterproofing Joint Seal.
MICHIGAN 1979	Research by MDOT using Polyguard underseal demonstrated a reduction in cracking over both longitudinal joints and transverse joints. (Performance Evaluation of Plastic Fabrics as Overlay Reinforcement to Control Reflection Cracking, research Report No. 1243, April 1984, p. 32.) Subsequently, Polyguard underseals have been approved under Supplemental Specification for Preformed Waterproofing Membrane for Concrete Bridge Decks, under Special Provision for Overlaying Longitudinal Pavement Joints and Cracks with Stress Relieving Membrane, and under Special Provision for Overlaying Bridge Deck Joints with Waterproofing Membrane.
MINNESOTA 1989	Extensive utilization of Polyguard membrane on walls, piers, and superstructure in tunnel construction on the Duluth Freeway section of I-35.
MISSISSIPPI 1984	Research by Mississippi DOT on U.S. Route 82 using Polyguard underseal demonstrated a reduction in reflective cracking, plus the ability of the material to continue sealing even when the pavement above had cracked; "Numerous cores were secured form the control and test section in December 1991. The coring was done to help verify underlying joint waterproofing... In all cases the underlying joint was waterproofed, and the tape was not ruptured". (Evaluation of Joint Sealing Tape, Final Report, State Study no.67-18, September 1992, p. 12-13) Extensive utilization of Polyguard underseals under 907-414.02.1 High Density Joint Sealing Tape and 907-414.02.2 Joint Sealing Tape, under special provision no.907-414.8, and under special provision 4435 Sec. 3.4.2.
MISSOURI 1991	Used under MSSHC Sec. 02517 Asphaltic Concrete Pavement Repair Part E Engineering Fabric for Reflective Cracking. Also used under f-011-1(28).
NORTH CAROLINA 1979	Polyguard underseal has been used under the Standard Specification for Waterproofing Membrane for Paving Joints and Cracks.
NEVADA 1988	The Federal Highway Administration (FHWA) published a report by Nevada Special Studies Section which found that Polyguard underseal used to encapsulate portable loop detectors was "...extremely durable and can withstand a wide range of weather conditions". (Oct.1988, p.1) The report was published after the Polyguard underseal had been directly exposed to a million vehicles on U.S. 395 "...without signs of undue wear and tear".
NEW YORK 1987	Polyguard underseals have been used under Item 19207.1605 Waterproofing Membrane. Research Report FHWA/NY/SR-94/114 Membranes for Pavement/Shoulder Joints noted that pavement cores with Polyguard underseal had been removed from concrete joints on Interstates I-87 and I-81 after 4-6 years under traffic. The underseal had remained intact. (December 1994, p.9.)
OHIO 1992	Polyguard underseal is approved under Item Special, Membrane Waterproofing---Sheet Types 2 and 3 for waterproofing reinforced concrete bridge decks, prestressed box beams, precast box culverts, precast three-sided culverts, and other structures.
OKLAHOMA 1975	Polyguard underseal has been used on both bridge decks and pavement joints on DOT projects.
PENNSYLVANIA 1979	Extensive quantities of Polyguard underseal have been used under Bulletin 15, sec. 467 Heavy Duty Membrane. Research Project 79-6 concluded, "Only Polyguard resulted in considerable reduction of (transverse) reflection cracks". (Follow-up Report December 1987, p.17) Research Project 79-6 also noted that inspection of pavement cores showed that the Polyguard underseal "was intact and appears to be performing satisfactorily" even when the pavement over it had cracked. (Interim report, December 1983.)
RHODE ISLAND 1980	Polyguard underseal is specified for use on transverse pavement joints on the specification for Membrane Strip Sealing of Pavement Cracks and Joints. Polyguard underseal has also been used for bridge deck waterproofing. Polyguard Hot Applied Membrane is approved for waterproofing bridge decks under Sec. 813.01.4.
SOUTH CAROLINA 1979	Polyguard underseals are listed as approved under Waterproofing Membrane Under Asphaltic Overlays for Concrete Pavement Joints. Polyguard underseal has also been used under S.C. Supplemental Specification Membrane Waterproofing for Use on Bridge Decks. (File Number 1525.606)
TENNESSEE 1977	Polyguard underseals have been approved since 1977 under "Bridge Deck B Sealant" specification. Polyguard underseals have also been used under the special provision for Reflective Cracking Prevention.
TEXAS 1978	Hundreds of miles of pavement have been treated with underseals on Texas DOT projects for joint and crack repair and bridge deck waterproofing under item Nos. 459, 3187, 3147, 3189, DMS 6320, and others.
UTAH 1985	Polyguard underseal has been utilized for bridge deck waterproofing under 534.2.3 Rubberized Asphalt Membrane.
VERMONT 1978	Polyguard underseal is listed on the Approved Products List. It has been used under Sec. 519.02 Sheet Membrane Waterproofing. Research presented at the 1989 4R Conference supports utilization of underseal for reconditioning corroding bridge decks. "...a properly selected and applied waterproofing membrane will reduce the oxygen and moisture supply at the rebar level enough to lower corrosion activity to non-destructive levels". (Interim Report 90-3, February 1990, p.9. Polyguard underseal was included in the research.)
VIRGINIA 1976	Polyguard underseals have been utilized under sec. 416, page 3, Bridge Deck Membranes, System B.
WASHINGTON 1978	Polyguard underseal is on the Qualified Products List as a bridge deck waterproofing, and has been applied to joints and cracks under the DOT's specification for Fabric Reinforcement Strips and has been applied to bridge decks under the General Special Provision for Membrane Waterproofing – Membrane System A.
WYOMING 1983	Polyguard underseal is listed as approved under Special Provision for Membrane Crack Repair ref. SS 400TA.

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Accredited to the ISO 9001 Standard (American, Dutch, German) for the design and manufacture of asphalt and polymer based membrane coatings which protect surfaces from moisture and/or corrosion