

The Technology that Makes Poly-Tar Superior

Bonsal American's unique method of incorporating proprietary polymers into the production of GemSeal PolyTar creates a superior coating that significantly outperforms conventional sealer products blended with post-added or slurry-blended latex additives. The polymerization of refined tar (RT-12) used to make PolyTar provides customers a cost-effective sealer with tensile strength and elasticity not found in any other commercially-available pavement sealers.

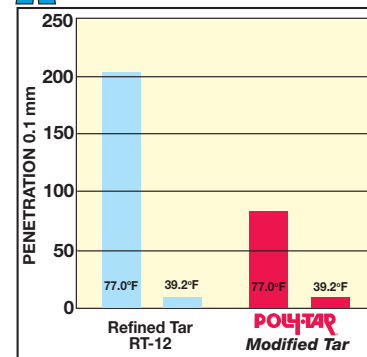
GemSeal PolyTar sealer exhibits several important improved properties which provide tangible benefits to end users as indicated in the graphs to the right.

Figure A: Penetration (ASTM D 5)

The reduced penetration (lower penetration = stiffer binder) of the GemSeal polymerized binder (RT-12) shows a significant improvement in durability at an ambient temperature of 77°F while maintaining flexibility at low temperature.

End User Benefit: Increased wear resistance and longer life of the coating.

A Penetration (ASTM D-5)



B Temperature Susceptibility, Temperature versus Pen

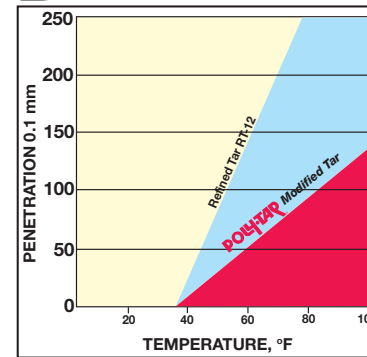


Figure B: Impact of Temperature on Hardness

The shallow slope of the graph demonstrates that the polymerized binder (RT-12) used in Gem Seal PolyTar remains harder (i.e. more durable) over a wider range of temperatures than non-polymerized binders used in conventional sealers.

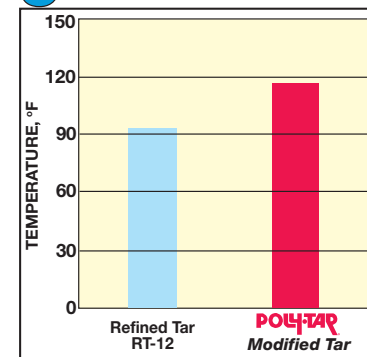
End User Benefit: Increased wear resistance over a wide range of temperatures.

Figure C: Softening Point (ASTM D 36)

The graph illustrates that the polymerized binder (RT-12) has a higher softening point than conventional non-modified binder (RT-12).

End User Benefit: A higher softening point (temperature at which a material begins to flow) significantly reduces the sealcoat's tendency to track when exposed to high pavement temperatures.

C Softening Point (ASTM D-36)



D Float Test (ASTM D-139)

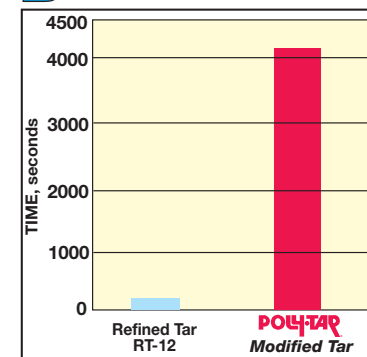


Figure D: The Float Test (ASTM D 136)

The polymerized binder (RT-12) used in GemSeal PolyTar has a substantial increase in resistance to flow than the non-polymerized binder (RT-12) in the float test. The increase in time (measured in seconds) demonstrates a significant improvement in the "internal cohesiveness", or strength of the molecular bond of the polymerized binder, especially at elevated temperatures.

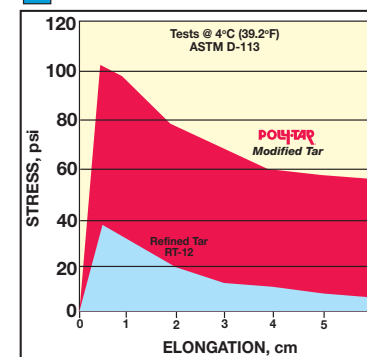
End User Benefit: A stronger binder will retain aggregate better and be more wear resistant.

Figure E: The Stress/Strain Curve

The figure shows that non-polymerized binder (RT-12) exhibits little retained tensile strength after it has been mechanically stretched (elongated). This graph also illustrates several improved characteristics of the polymerized binder (RT-12) used in Gem Seal PolyTar. First, polymerized binder (RT-12) has an increased tensile strength of 100 psi, which is 2.5 times greater than the 38 psi tensile strength of non-polymerized binder (RT-12). Second, after stretching to extreme elongation, the polymerized binder (RT-12) retains inherent tensile strength far greater than non-polymerized binder (RT-12) at every point along the elongation axis.

End User Benefit: Polytar resists tearing and cracking as the pavement expands and contracts with heating and cooling.

E Stress/Strain Curve



F Stress Relaxation

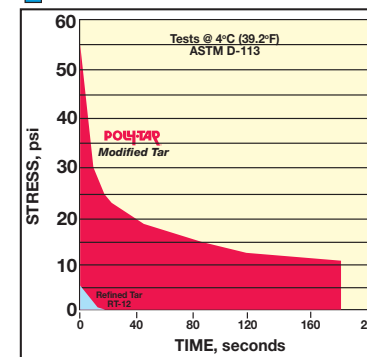


Figure F: The Stress Relaxation Graph

The figure illustrates a non-polymerized binder's (RT-12) lack of elasticity, or ability to "recoil" after stress is relieved. In contrast, the superior elasticity (recoil) of the polymerized binder gives Gem Seal PolyTar superior performance.

End User Benefit: Polymerized tar (RT-12) used in PolyTar improves overall durability and prevents degradation of tensile properties over repetitive cycles of pavement expansion and contraction.

Regional Manufacturing and Customer Service Locations

CHICAGO, IL 866-264-8273 10352 Franklin Ave Franklin Park, IL 60131	DETROIT, MI 866-264-8273 36506 Sibley Rd New Boston, MI 48164	BALTIMORE, MD 866-264-8273 10300 Pulaski Hwy White Marsh, MD 21162	BOSTON, MA 866-264-8273 18 McCracken Rd Millbury, MA 01527	ATLANTA, GA 404-696-7660 4765 Fredrick Dr Atlanta, GA 30336
DALLAS, TX 214-333-4343 3111 W. Saner Ave Dallas, TX 75233	GREENSBORO, NC 336-854-8200 139 S. Walnut Circle Greensboro, NC 27409	MEMPHIS, TN 901-775-2585 2290 Channel Ave Memphis, TN 38113	TAMPA, FL 813-630-1695 5201 Causeway Blvd Tampa, FL 33619	



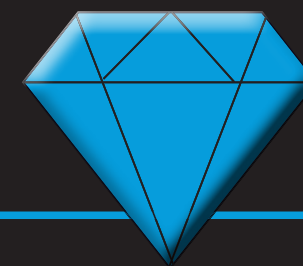
www.gemseal.net

POLY-TAR®



- Longest lasting pavement sealer on the market with 25 years of proven performance
- Manufactured with proprietary polymers for increased durability & performance
- Better wear resistance & stronger adhesion with twice the durability of conventional pavement sealers
- No additional latex modifiers required
- Ideal for high traffic asphalt parking lots, airfields pavements, & driveways
- Certified by Bonsal American's industry-leading quality control & assurance program

superior outperforms cost-savings durability



The polymer link to longer life

GemSeal PolyTar made by Bonsal American is the first major advancement in pavement sealer technology since the early 1950s. How does it work? Chemists and engineers will tell you about high molecular weight polymers cross-linked with refined coal tar. Sounds impressive, but more significantly, PolyTar outperforms all other sealers on the market today, exhibiting superior wear resistance and better adhesion to the pavement surface.

It's a matter of give and take

Asphalt has a hard life. Summer heat causes asphalt to expand. Winter cold causes asphalt to shrink. Dramatic temperature changes can occur in a single day! In either case, it is important for the sealer to "give and take" (flex) with the pavement. Otherwise, cracks and small openings will appear in the coating, allowing fuel, water and other damaging materials to seep in (penetrate). As moisture, heat and ultraviolet sunlight deteriorate exposed pavement, the need for expensive repaving or repairs is accelerated. PolyTar expands and contracts with the pavement surface, allowing the sealcoat to better protect and prolong the service life of the pavement.

Tested in a lab; proven on the field

GemSeal engineered PolyTar in 1983. Laboratory tests showed promise. But the real proof in performance came from more than 25 years of actual use by hundreds of satisfied customers and property owners. Trust PolyTar to protect and preserve your valuable asphalt pavement.

Cost Effective

PolyTar is more than just an advanced technology sealer. PolyTar requires less mixing time and is easy to apply. No need for expensive latex modifiers. And, for a modest increase in cost, PolyTar provides up to twice the life of conventional sealers, delivering fewer interruptions in applications over the life of your pavement. PolyTar delivers real value for your money!

With PolyTar, asphalt has finally found a friend

PolyTar is the first pavement sealer to incorporate elasticity and flexibility through binder polymerization providing a durable, cost effective pavement coating. PolyTar provides improved fuel resistance, stronger surface adhesion, and has better cohesion for maximum wear resistance.

Superior technology, Outstanding Service

GemSeal PolyTar has forged a tradition in quality and is backed by our industry-leading customer service. We stand behind every product to ensure that every gallon meets or exceeds the most demanding expectations. Each plant is equipped with a modern onsite lab to ensure every gallon of PolyTar meets ASTM specifications and is certified before it leaves any of our production facilities. Our philosophy is still the same...create the best product possible, and then provide the best possible service to the customer.



Now available in 32 states, from Texas to Maine

PolyTar has been sold in the Southeast for more than twenty-five years. Bonsal American now offers GemSeal PolyTar in the Midwest and Northeast. Customers across our plant network can now purchase PolyTar for a cost-effective superior performing pavement application.