

STAR[®] ROAD-GUARD[™]

A specialty coating designed to protect road surfaces that have deteriorated over years of service.

- ▲ **Housing Subdivisions**
- ▲ **Ring & Approach Roads**
- ▲ **Back Lots/Loading Docks**
- ▲ **City & County Roads**
- ▲ **Golf Course Pathways**
- ▲ **Highway Shoulders**
- ▲ **Commercial Parking Lots**

ROAD-GUARD is a tough, rubberized asphalt emulsion based pavement sealcoating.

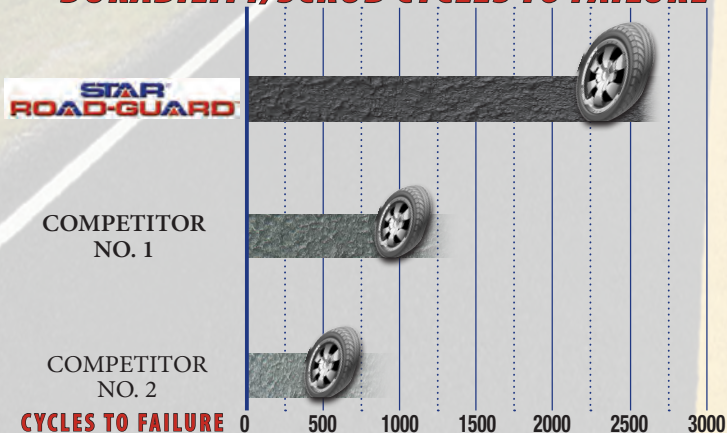
ROAD-GUARD delivers excellent cost savings compared to conventional road surface treatments.

ROAD-GUARD's performance is outstanding. An extraordinary degree of toughness and water repellency.

ROAD-GUARD is formulated with tough hot blended rubber polymers, specialty chemicals and select mineral fillers which impart flexibility and durability to road surfaces.

Road Guard protects against all elements of the weather and resists water penetration, thus extending the service life of asphalt pavements.

DURABILITY/SCRUB CYCLES TO FAILURE



Superior Performance Properties!

ROAD-GUARD MIX DESIGN

Sealcoat Type	Gallons of Road Guard	Gallons of Water	Lbs. of Aggregate	Application of the Mix Gal/Sq.Yard
ROAD-GUARD Sand Slurry	100	10 to 20 Max.	600-800	0.14-0.17
ROAD-GUARD Top Coat	100	10 to 20 Max.	None	0.10-0.12

Mix designs will vary according to the pavement surface conditions.

MEETS AND/OR EXCEEDS ALL APPLICABLE INDUSTRY AND COMMERCIAL SPECIFICATIONS.

Specifications and test methods: ASTM: D-244, D-217, D-2042, D-3910, D-562, D-2939. ASMA: Standard Specification, Federal: TTC-555B

STAR-SEAL
of MINNESOTA, INC.

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Detailed Application Specifications

1.0 OBJECTIVE

- 1.1 This specification covers the application of the STAR® ROAD-GUARD™ sealcoating system for existing, sound asphalt roadways, trails and pavements.
- 1.1.1 STAR® ROAD-GUARD™ is used to extend the service life of asphalt pavements by providing protection from elements that attack and degrade those pavements:
 - a) The sun's ultraviolet rays, which result in oxidative decomposition.
 - b) Deteriorating effects of de-icing salts, traffic damage and many chemicals.
 - c) Water and subsequent damage to the sub-base caused by water penetration through porosity, cracks and surface defects.
- 1.2 STAR® ROAD-GUARD™ will beautify and enhance the appearance of asphalt.
- 1.3 STAR® ROAD-GUARD™ will reduce maintenance costs and extend service life.
- 1.4 STAR® ROAD-GUARD™ will fill minor surface imperfections and yield a smooth even looking surface coating that beautifies while it protects.
- 1.5 STAR® ROAD-GUARD™ Offers superior toughness compared to other Asphalt Emulsion sealers available in the market.
- 1.6 STAR® ROAD-GUARD™ will provide a limited degree of skid resistance.

2.0 MATERIALS

2.1 Specialty Asphalt Emulsion. STAR® ROAD-GUARD™ functionally meets and or exceeds the requirements as detailed below.

- 2.1.1 For composition and performance properties, STAR® ROAD-GUARD™ meets or exceeds ASTM 5727-00 (formerly Federal specification RP-355e), when tested in accordance with D 2939-98.
- 2.1.2 STAR® ROAD-GUARD™ meets and or exceeds the performance requirements of all applicable specifications.
- 2.1.3 The material shall be homogeneous and show no separation or coagulation components that can not be re dispersed with moderate stirring.
- 2.1.4 The material shall be suitable for application and complete coverage, by squeegee, brush or by approved mechanical methods, to the bituminous surface at a spreading rate of approximately 0.29 - 0.32 gallon of STAR® ROAD-GUARD™ concentrate per square yard.

2.2 Physical Properties and Constants Specifications:

PROPERTIES & CONSTANTS	TEST METHOD	STAR® ROAD-GUARD™	STATUS
Specific Gravity 25/25° C	ASTM D244	1.52	Passes
% Non-Volatile (Solids)	ASTM D2939-98	70.1%	Passes
% Non-Volatile Soluble in CS ²	ASTM D2939-98	23%	Passes
% Ash of Non-Volatile	ASTM D2939-98	68.7%	Passes
Drying Time in Hours	ASTM D2939-98	8 Hrs. Max.	Passes
Resistance to Water	ASTM D2939-98	No Penetration or Loss of Adhesion	Passes
Flexibility	ASTM D2939-98	No Cracking, Flaking	Passes
Resistance to Impact	ASTM D2939-98	No Chipping, Cracking or Flaking	Passes
Viscosity	ASTM D562	95-120 Ku.	Passes
Accelerated Weathering	FED SPC TT-C-555B	No Deterioration	Passes
Cured Film Color	-	Black	-

2.3 Sand / Aggregate Specifications

- 2.3.1 Sand shall be clean, hard and irregular silica sand, free of clay, dust, salt, and organic matter. It must meet the following gradation:

U.S. Sieve Size	Percentage Retained	
	Minimum	Maximum
No. 20 or coarser (0.850 mm)	0	0
No. 30 (0.600 mm)	0	5
No. 40 (0.425 mm)	7	25
No. 50 (0.300 mm)	15	50
No. 70 (0.212 mm)	20	40
No. 100 (0.150 mm)	3	30
No. 140 (0.106 mm)	0	10
No. 200 (0.075 mm)	0	7

*50/70 U.S. Sieve Size is recommended for STAR® ROAD-GUARD™

2.4 Water Specifications

- 2.4.1 Water shall be clean and potable, free of harmful soluble salts, within a temperature range of 50-80° F.

2.5 Additives Specifications

- 2.5.1 Follow manufacturer's recommendation for selection, and mix design, for specific project requirements.
- 2.5.2 WARNING: Using other additives or additives manufactured by companies other than STAR, Inc. in conjunction with this product might produce undesirable results. Consult your STAR representative for recommendations.

2.6 Crack Filler Specifications

- 2.6.1 Any crack filler/sealer must be certified by the supplier for compatibility with the sealcoating material. Cold pour crack fillers manufactured by STAR® such as STAR® STA-FLEX™, STAR® STA-FLEX TROWEL GRADE™ and STAR® SURE-FLEX™ are recommended. Hot pour rubberized crack fillers such as STAR® ELASTO-BOND™ may also be used successfully.

2.7 Primer Specifications

- 2.7.1 Oil spot primers must be certified by the sealcoat manufacturer for compatibility with the sealcoating material. STAR® S.O.S. Sealer™ oil spot primer/sealer is compatible and recommended.
- 2.7.2 Specialty coatings/primers may be recommended by the manufacturer for problematic areas such as rust streaks in the pavement, excessive surface contamination with oil, grease, fat, tree sap etc., areas of highly polished aggregate due to high traffic use, or in areas that might require extra attention due to high traffic use. In these cases; STAR® RUST-ARREST™ and STAR® GENESIS PRIME™ are recommended products and are also useful for promoting adhesion on fresh asphalt installations.

3.0 SURFACE PREPARATION

- 3.1 **Important:** STAR® ROAD-GUARD™ must be applied to structurally sound pavements. Do not apply over chip seal or gilsonite sealed surfaces.
- 3.1.1 New asphalt pavement surfaces must have time to properly cure so that there is no concentration of oils on the surface. A period of 90 days at 70° F+ daytime temperatures must elapse between the placement of the hot-mixed asphaltic concrete surface course and the application of the sealcoating. Check the suitability of the asphalt pavement by performing a "water-break-free" test; Cast one gallon of potable water onto the surface, the water should sheet out without crawling, beading or showing oil rings confirming that the surface oils have oxidized and dissipated.
- 3.1.2 The surface must be cleaned thoroughly to remove all foreign debris (dirt, gravel, silt, vegetation, etc.) using air blowers or by flushing with water. Embedded dirt and silt will need to be removed with steel bristle hand brooms or with the careful use of pressure washers.
- 3.1.3 Mudded areas need to be thoroughly scraped and carefully pressure washed with clean water. Time must be allowed for the surface to dry.
- 3.1.4 Treat all grease and oil spots by scraping off the excess oil and dirt with a wire bristle broom and coat with STAR® S.O.S. SEALER™ oil spot primer/sealer in accordance with directions. STAR® GENESIS PRIME™ is recommended for areas contaminated extensively with oil, grease, fuel, tree saps etc. or areas with highly polished aggregate surfaces..
- 3.1.5 Make all necessary pavement repairs; patch soft spots, fill and seal all cracks, properly patch pot holes and level any "bird baths". All patched areas must be cured before applying STAR® ROAD-GUARD™.
- 3.1.6 Treat old or badly oxidized asphalt pavement with a primer coat of diluted STAR® ROAD-GUARD™ as one (1) part by volume thoroughly mixed with three (3) parts of clean water. Apply the primer at 0.04 to 0.06 gallon per square yard or 0.18-0.27 liter per square meter (concentrated sealer). Allow the primer coat to dry thoroughly, about 2-4 hours under normal drying conditions, prior to sealcoating with STAR® ROAD-GUARD™.

4.0 MATERIAL USE RECOMMENDATIONS

4.1 Material Calculations

4.1.1 For best results use as a two (2) coat system:

First Coat Requires: 0.25-0.28 gal./sq. yard or 32-36 sq. foot/gal. (0.8-0.9 liter/sq. meter) of the concentrated sealer.

Second Coat Applied as a Top Coat with No or Minimal Sand: 0.08-0.10 gal./sq. yard, (0.36-0.45 liter/sq. meter) of the concentrated sealer.

- 4.1.2 For the quantities of other ingredients, water, sand/aggregates, additives see section 4.2.0 "Recommended Systems".

4.2 Recommended Systems

INTENDED USAGE AREA	No. of COATS	ROAD-GUARD™	WATER	SAND	ADDITIVE	COVERAGE RATE
		Gallon / Liter Concentrate	Gallon / Liter Clean/Potable	Lb. / Kg. 50/70 Sieve	(i.e. Macro-Flex®) Gallon / Liter	(Mixed Sealer) Gal/sq. yd / Lt/sq. mtr
MODERATE TRAFFIC AREAS:						
Low Volume Parking Lots, Highway Shoulders, Driveways, Cart Paths.	1st.	100 / 100	10-20 / 10-20	600-800 / 72-96	N/A	.18-.28 / 1.1-1.22
HEAVY TRAFFIC AREAS:						
Industrial & Commercial Parking Lots, Ring Roads, Culdsacs, Bike Paths.	1st.	100 / 100	10-20 / 10-20	600-800 / 72-96	N/A	.25-.28 / .80-.90
	2nd.	100 / 100	10-20 / 10-20	0 / 0	N/A	.08-.10 / .36-.45

4.3 Priming Prior To Sealcoating

- 4.3.1 Prime Coat - For old, oxidized pavements, a primer coat is recommended. The suggested materials are;
- STAR® ROAD-GUARD™ diluted with clean potable water in 1:3 volume ratio (sealer:water) applied at 0.04 to 0.06 gallons per square yard, 0.18-0.27 liter per square meter (of the concentrated sealer).
 - STAR® GENESIS PRIME™ diluted with clean potable water in 1:2 volume ratio (GENESIS:water) applied at 0.05-0.08 gallons per square yard, 0.23-36 liter per square meter of the mixture.

4.4 Sand Slurry Preparation / Addition Of Sand To The Mix Design

- 4.4.1 Before the addition of sand/aggregate, add the required amount of water and additives to the sealer in the mixing tank and mix thoroughly.
- 4.4.2 SAND SLURRY PREPARATION
- 4.4.3 Keep the mixer running at a moderate rate.
- 4.4.4 Add the sand in a steady stream of about one 100 lb. bag per minute.
- 4.4.5 When adding sand, be sure you have firm footing and never place hands and arms in the agitating mixer. Always wear proper protective gear; gloves, eye protection, long sleeves and a breathing mask or respirator.
- 4.4.6 After adding all the sand, close the lid of the mixing tank and raise the speed of the mixer to "high" setting.
- 4.4.7 Agitate tank for 10 minutes to allow the contents of the tank to mix thoroughly and break up any sand clumps.
- 4.4.8 Reduce the agitator speed to "medium" setting and keep running. If the mixer is shut off during transport to the job site, it must be restarted and the contents mixed for at least 10 minutes before the application begins. Keep the agitation running during the entire application period.
- 4.4.9 **IMPORTANT:** The sieve (mesh) size of the sand has an important correlation to the thickness of the cured sealer film. Using a sand that is either too coarse or too fine will not produce the desired results of durability, traction, uniformity of the cured film and if too large can "roll out" of the sealer under traffic. STAR® ROAD-GUARD™ is specified to be used with a 50/70 U.S. Sieve size sand gradation for best results.

5.0 APPLICATION OF MATERIAL

5.1 Recommended As A Multi-Coat System Installation

- 5.1.1 The material shall be applied according to the specifications detailed in Section 4. These systems provide a protective coating that is free of voids, pinholes, and holidays (skips).
- 5.1.2 **The First Coat;** The STAR® ROAD-GUARD™ sand slurry shall be uniformly applied over the entire surface according to the recommended coverage rate. If the surface temperature is more than 90° F, pre-dampen with a light mist avoiding the creation of puddles of water. There should be no free standing water on the surface when applying the sealer.
- 5.1.3 Allow the first coat to dry sufficiently to take light traffic without scuffing. It could take approximately 4-6 hours under ideal drying conditions.
- 5.1.4 **The Second Coat;** If the specification calls for a second coat, apply it in a perpendicular direction to the previous coat, if practical to ensure the profile of the asphalt surface is evenly coated on all possible sides. The second coat shall not contain sand, or have a very low sand content.
- 5.1.5 The completed application will need to be allowed to cure at least for 24 hours and then tested for traffic suitability prior to opening for regular use.
- 5.1.6 The amount of material needed will vary according to the porosity and texture of the pavement. The mix designs (i.e. STAR® ROAD-GUARD™ and other ingredients) expressed in section 4.2.0 are guidelines only.

6.0 METHOD OF APPLICATION

6.1 Hand Tool Application Using Squeegee Or Sealcoaters Brush

- 6.1.1 **Mixing Tank Details;** The agitator in the sealer tank should be kept on at all times during application to keep the sealer mix design in proper suspension.
- 6.1.2 **Cut In / Edging;** Apply a coating around the edges of the pavement first by pouring a continuous ribbon of STAR® ROAD-GUARD™ mix along the pavement edge approximately 6-12 inches from curbing/pavement edge. Draw the STAR® ROAD-GUARD™ mix away from the pavement edge by pulling a squeegee or brush through the ribbon of material at a slight angle while walking parallel to the pavement edge. Repeat the process in reverse direction pulling the excess material toward the center of the pavement. For best results use a squeegee followed by a brush.
- 6.1.3 **Sealer Application;** Pour more STAR® ROAD-GUARD™ mix to maintain a working ribbon of material and continue across the pavement until it is completely and uniformly covered. Continue the process in reverse direction pulling the excess material toward the intended end point of the pavement. For best results use a squeegee followed by a brush.

6.2 Machine Squeegee Application / Self Propelled Driven Unit

- 6.2.1 When applying by machine, first seal the edges of the pavement by hand as described in 6.1.2. The machine should then be used to apply STAR® ROAD-GUARD™ mix to the remaining larger pavement area. A self-propelled machine that squeegees and brushes the sealer into the pores of the pavement is recommended. The machine should be equipped with a fog bar to be used for pre-dampening if the pavement temperature exceeds 90° F.
- 6.2.2 Care should be taken to ensure that the proper coverage rate is maintained, and frequent quality control checks should be made to confirm that the proper amount of sealer is being applied. Too much or too little sealer on the surface can cause complications in the proper cure out, lead to tire tracking and ultimately reduced durability/longevity of the finished sealcoating system.

6.3 Spray Application By Self Propelled Driven Unit Or By Hand (Wand)

- 6.3.1 Mechanical Considerations; If using a traditional diaphragm pump to deliver the sealer to the spray bar, an approximate pressure starting point should be at about 50-80psi. Start out with a lower psi setting and adjust as needed after a test patch is made. In most cases an 80/50 or 80/70 spray tip can be used. Note: the size of the spray tip and the amount of pressure is related, changing one will likely require an adjustment to the other. Spray tips should always be kept clean and free of dried sealer. Store spray tips in a sealed container of water to keep them clear.
- 6.3.2 HAND SPRAY APPLICATION WITH WAND; Spray application should deposit the material per specified coverage rates. When material is being sprayed the sealcoating spray pattern should be slightly angled (10-20°) and a back-and-forth fanning motion used. As you make each pass from right to left and then back left to right, tilt the angle of the spray in opposite directions so as to apply an even coating on all sides of the pavement profile. As you advance across the pavement you should overlap your application by 1/3 to 1/2 onto the previously applied row/area.
- 6.3.3 SPRAY APPLICATION WITH DRIVEN MACHINE; Spray application should deposit the material per specified coverage rates. Care should be taken to ensure that the proper coverage rate is maintained, and frequent quality control checks should be made to confirm that the proper amount of sealer is being applied. Too much or too little sealer on the surface can cause complications in the proper cure out, lead to tire tracking and ultimately reduced durability/longevity of the finished sealcoating system.

7.0 STRIPING

7.1 Traffic Marking Paint / Lot Striping

- 7.1.1 If striping is required, use STAR-BRITE® Latex Traffic Paint (TT-P-1952B) or STAR-BRITE PLUS®, Fast Drying 100% Acrylic Traffic Paint (TT-P-1952D,E). Allow the seal coat to dry at least 24 hours before striping. Refer to the paint manufacturers Technical Data Sheet for details.

8.0 PRECAUTIONS

8.1 Storage and Temperature

- 8.1.1 STAR® ROAD-GUARD™ must be protected from freezing. Do not store at temperatures below 32° F. Always store unused sealer in tightly closed containers.

8.2 Application and Temperature

- 8.2.1 Do not apply STAR® ROAD-GUARD™ during rainy or foggy weather. Ground and air temperature must be 50° F and rising prior to and after application.
- 8.2.2 Drying is retarded by low temperatures and excessive moisture in the air or on the ground. Examples: rain, fog, prolonged humidity and seasonal extremes (early Spring and late Fall). Under such conditions, the use of STAR® branded additives is recommended to obtain optimum and uniform drying. If STAR® ROAD-GUARD™ is applied too heavy, the coating will form a film on the very top of the surface and this film will restrict the water evaporation from the rest of the coating slowing down the full curing process.

8.3 Personal Protection and Safety

- 8.3.1 STAR® ROAD-GUARD™ is based on specialty Petroleum Resins which are non-irritating, non-burning and have only a faint odor. Still use all precautions as detailed in the Safety Data Sheets for personal and environmental protection. Always wear full protective clothing and gear when handling STAR® ROAD-GUARD™.
- 8.3.2 Keep out of reach of children.



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STAR[®] ROAD-GUARD[™]

GENERAL DESCRIPTION

STAR[®] ROAD-GUARD[™] is a specialty coating, designed for road surfaces that have deteriorated over years of use. STAR[®] ROAD-GUARD[™] is an outstanding asphalt emulsion-based pavement coating that is far superior in performance compared to conventional surface treatments. STAR[®] ROAD-GUARD[™] delivers excellent cost savings compared to commonly used surface treatments like slurry sealing or micro surfacing. STAR[®] ROAD-GUARD[™] is formulated with tough rubber polymers, specialty chemicals and select mineral fillers which impart flexibility and durability to the coated pavement surfaces. The hot blending of rubber polymers in STAR[®] ROAD-GUARD[™] during the manufacturing process maximizes the performance properties of the sealer.

OUTSTANDING PROPERTIES

- STAR[®] ROAD-GUARD[™] is a unique product with an unconventional technological approach. It has far superior performance over conventional asphalt surface treatment products.
- It has outstanding flexibility, toughness and longevity. Apply to parking lots and roadways where traffic has damaged the asphalt surface prematurely.
- STAR[®] ROAD-GUARD[™] will produce a uniform rugged-textured surface that will improve the driving condition on an existing road surface that had deteriorated.
- It is certified to meet and/or exceed specifications for ASTM D-244, D-217, D-2042, D-3910, D-562, ASMA Standard Specification and Federal TTC-555B.
- STAR[®] ROAD-GUARD[™] delivers excellent value and cost savings compared to traditional surface treatments like slurry sealing, micro-surfacing, etc.
- Is water-based; safe to handle and store. Non-toxic and nearly odorless.

RECOMMENDED USES

STAR[®] ROAD-GUARD[™] is recommended for all asphalt pavements particularly; Sub-division road surfaces, shopping center ring roads, business complex approaches, country roads, back lot/loading dock areas, highway shoulders, commercial parking lots, apartment complexes, walkways, golf cart pathways, theme parks and many more.

MIX DESIGN RECOMMENDATIONS

Important - All mix designs must include clean, quartz, angular sand/aggregate.

	<u>US</u>	<u>METRIC</u>
STAR ROAD-GUARD [®]	100 Gal.	100 Liters
Water (Clean, Potable)	10-20 Gal. Max	10-20 Liters Max
Sand/Aggregate 50-70 AFS*	600-800 Lbs.	72-96 Kg.

* Crushed slag (i.e. Black Beauty) may be used as the aggregate, provided it is clean, angular and within 50-70 AFS gradation.

APPLICATION RATES

Must be applied to structurally sound pavements. Mix design and application parameters are subject to specifications dictated by the project engineer. Old and oxidized surfaces need to be primed with a suitable primer.

STAR[®] ROAD-GUARD[™] AS A STAND ALONE SEALER

Apply One (1) Coating per the mix design using the lower level addition of sand/aggregate to minimize sand rollout; The total coverage rate of 0.18 - 0.20 Gal./Sq. Yd. or 45 - 50 Sq. Ft./Gal. (1.1 - 1.22 Sq. Meter/Liter).

FOR BEST RESULTS USE AS A SYSTEM

1 Apply One (1) Coat of STAR[®] ROAD-GUARD[™] per the Mix Design recommendations at a total coverage rate of 0.25 - 0.28 Gal./Sq. Yd. or 32 - 36 Sq. Ft./Gal. (0.8 - 0.9 Sq. Meter/Liter) of the concentrated sealer.

2 Apply a Second Coat as a Top Coat without using any sand at an application rate of 0.08 to 0.10 Gal./Sq. Yd. (0.36 to 0.45 Liter/ Sq. Meter) of the concentrated sealer.

Each application of STAR[®] ROAD-GUARD[™] should be allowed to properly dry a minimum of 4 hours and the final coat for a minimum of 24 hours under good drying conditions before opening to traffic.

IMPORTANT WEATHER LIMITATIONS

- Surface and air temperature should be a min. 50° F (10° C) and rising.
- Do not apply on rainy, foggy, or extremely humid days, or when rain is in the forecast within 24 hours.
- If the pavement temperature is over 100° (38°C) dampen the pavement with a fine mist of water to facilitate even spreading. Do not allow water to puddle on the surface.

APPLICATION TOOLS

- Use conventional tools; Brush, rubber squeegee or spray rig.
- Clean up with Water. Do not discard washings in the bodies of water or down sewer drains. Discard washings in accordance to applicable local, state and federal regulations.
- Dried sealer on tools - Wire brushing, scraping and peeling.
- Keep stored containers sealed tightly.

CURING TIME

Cure time will vary according to temperature and humidity at the time of application. Insufficiently cured films wear prematurely. Lower temperatures, high humidity and lack of direct sunlight will prolong the cure time. Higher temperatures, lower humidity and direct sunlight accelerate the cure process. After the application of the last coat, allow the coating to cure at least 20-24 hours under good drying conditions.

SPECIAL INSTRUCTIONS

IMPORTANT: Heavy Sand Loading in your mix design will require continual agitation of the sealer.

- Apply only on unsealed asphalt or surfaces previously sealed with either Asphalt Emulsion or Refined Tar based sealers.
- New asphalt pavements must be allowed to cure at least 90 days in hot weather. Perform a water break free test to confirm that the surface oils have dissipated.
- Using additives with STAR[®] ROAD-GUARD[™] is not normally necessary, however an additive may be useful under adverse drying conditions. Use only additives manufactured by S.T.A.R., Inc. Other additives may not be compatible with STAR[®] ROAD-GUARD[™] and may affect the consistency of the mix and the performance of the finished product. Consult your STAR Manufacturing representative for recommendations.

CAUTIONS

KEEP FROM FREEZING / KEEP OUT OF REACH OF CHILDREN

Wear gloves and protective clothing. In case of contact, flush skin or eyes immediately with fresh water. If the product gets in the mouth or eyes see a physician immediately. Consult a Safety Data Sheet for details.

PACKAGING & AVAILABILITY

5-Gallon plastic pails, 55-gallon drums & 275-gallon plastic totes, and bulk at all STAR plant locations.

WARRANTY & DISCLAIMER The suggestions and related data contained on these pages are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use of our products are beyond our control. S.T.A.R., Inc. will not be responsible for any indirect or consequential damages. We will either replace or refund the purchase price in the event the products are proved to be defective, at our option.

MANUFACTURED BY:
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