

★ PRODUCT BULLETIN



GENERAL DESCRIPTION

STAR SEAL® is a heavy duty coal tar sealer that is specifically designed to protect and beautify asphalt pavements. Composed of high temperature refined coal tar pitch, select mineral fillers and surfactants, STAR SEAL forms a tough, durable and flexible coating that protects asphalt surfaces from the damaging elements of weather, water, salts, gas, oil and other petrochemicals. STAR SEAL provides an attractive, easy-to-clean, like new surface.

CHARACTERISTICS

Asphalt is easily attacked and degraded by Sun's ultraviolet rays and the process begins as soon as a new pavement is installed. First the surface oils break down and dissipate, then the process continues down to the deeper layers of the pavement. As a result, aggregates break loose and cracks start to develop.

Water penetrates through the cracks and damages the pavement in subsequent freeze-thaw cycles. According to the Asphalt Institute, "Accumulation of moisture in the pavement structure is probably the greatest single cause of pavement distress".

In addition, oil, gasoline, and automobile fluids soften asphalt, giving rise to soft patches in the pavement. Logically, the best protection to asphalt is to be provided by a "barrier" coating that will resist all the damaging elements that destroy the asphalt pavement in the first place. Refined coal tar pitch, composed primarily of stable aromatic (closed-ring) compounds meet such criteria.

STAR SEAL®, a refined coal tar based sealer seals out the damaging elements of weather and chemicals and keeps the vital oils and plasticizers locked in the asphalt pavement to keep them flexible and functional.

RECOMMENDED USES

STAR SEAL® is recommended for use on all asphalt surfaces; low, moderate and heavy traffic, subject to abuse by weather, salts, oil, gasoline and harsh chemicals.

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| Industrial & commercial driveways and parking lots | Fast food restaurants and hotels |
| Airfields, taxiways and shoulders | Play areas and home driveways |
| Service stations and truck terminals | |

STANDARDS & SPECIFICATIONS

STAR SEAL® meets and or exceeds the requirements of ASTM D-5727-00 (previously Federal Spec. RP-355e), when tested in accordance with the following ASTM standards.

- D 2939 – Bituminous Base Emulsions for use as Protective Coatings
- D 490-77 – Specification for Road Tar.
- D 3320-79 – Specification for Emulsified Coal-Tar Pitch (Mineral Colloid Type)
- D 140 – Sampling of Bituminous Materials
- D 529 – Recommended Practice for Accelerated Weathering Test of Bituminous Materials.
- D 466 – Methods of testing films deposited from Bituminous Emulsions.
- D 1655 – Turbine fuels
- B 117 – Salt Spray (fog) Testing

Physical Properties and Constants

<u>Properties & Constants</u>	<u>Star Seal®</u>	<u>Specifications</u>

		ASTM 5727-00(Old RP 355e)
Solids, % by weight	50+/- 1	47-53
Ash, % solids, by weight	36-38	30-40
Solubility of Non-Volatile		
In Carbon disulfide	29-30	20 min.
Specific Gravity 25/25C	1.22-1.25	1.2 min.
Drying Time, (hours)		
To Touch	1	-
Full Set	6	8 max
Appearance wet	Dark Chocolate Brown	None
Color Upon drying	Dark slate black	None

RECOMMENDED SYSTEMS						
Usage Area	Coats	STAR SEAL®	Water	Sand	Macro-Flex	Coverage rate
		Gallons	gallons	Pounds	Gallons	Mix. Gal./sq.yd
Low traffic Home driveways, parking lots walkways, cart & bicycle paths, etc.	1st.	100	30-40	200-300	0-3	0.15-0.20
	2nd.	100	25-40	0-300	0-3	0.10-0.15
Moderate traffic Airfield, highway shoulders gas stations, schools, etc.	1st.	100	30-50	300-500	0-4	0.15-0.20
	2nd.	100	30-50	0-500	0-4	0.10-0.15
Heavy traffic Airfield taxiways, commercial parking lots, service plaza, malls, etc.	1st.	100	30-60	400-600	0-5	0.15-0.20
	2nd.	100	30-60	400-600	0-5	0.15-0.20
	3rd.	100	30-40	0-500	0-4	0.10-0.15

APPLICATION

STAR SEAL® must be applied on a structurally sound Pavement by professional applicators.

Coverage Rates – 0.18 to 0.20 gal/sq. yard of the concentrated **STAR SEAL®**, in two-coat application. Coverage rates may vary depending upon the porosity and texture of the pavement surface.

Dilution – Maximum 35% by volume of the concentrated **STAR SEAL®** with clean potable water.

Aggregates Addition – Clean silica sand or synthetic aggregates with an average grain fineness between 50 – 70 shall be added for increased traction and textured appearance.

Method – Mechanical or spray applicators, brush or squeegee.

STAR MAXCRO-FLEX®, rubberizing additive may be added for extended longevity and chemical resistance.

CAUTIONS

Apply only on unsealed asphalt or surfaces previously sealed with refined coal tar or asphalt emulsion-based sealers. Do not sealcoat over gilsonite based sealers.

New asphalt pavements must be allowed to cure for at least 30 days in hot weather. Perform “water-break test” (meaning water shall spread evenly on the surface) before sealcoating.

Not recommended for steeply inclined surfaces, as they may become slippery when wet.

Contains refined coal tar. May cause skin irritation.

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 Material Safety Data Sheet (M.S.D.S.) for details.
Store in airtight containers. Protect from freezing.
Keep out of reach of children.

PACKAGING

Bulk tanker and 55 gallons metal drums.

SHIPPING POINTS

All STAR plant locations

Warranty and Disclaimer- These specifications reflect successful performance experience, and are intended to provide a guide to approved construction practices and materials. However, there are no express warranties which extend beyond the description on the face hereof. Manufacturer disclaims any implied warranties of merchantability or of fitness for any particular purpose. Since manufacturer cannot control the manner of use of its products after their sale, manufacturer will not be responsible for any consequential or indirect damages. Rather, manufacturer will, at its option either replace the goods sold or refund the purchase price. No warranties will apply if the goods are in any way altered or modified after delivery by manufacturer.

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