

## SEALCOATING FOR AIRPORT PROJECTS

# This is the first product of its kind in our business.

# STAR AVIATOR;

- Far superior in performance than conventional mix designs where rubber is mixed on the job.
- Meets and/ or exceeds FAA performance tests & Specs.
- STAR AVIATOR contains FAA required rubber. No on the job blending of rubber latex is required. Avoids the use of an excessive amounts of water in the mix design.
- Minimal time needed for sealer preparation.
- No on-the-job inspection (for rubber amounts) is needed.
- Pre-shipment certification for FAA performance tests are issued by STAR.
- Independent lab test certification for FAA Specifications Compliance is available.

## PRODUCT BULLETIN



# STAR AVIATOR

#### SEALCOATING FOR AIRPORT PROJECTS

**SPECIFICATION: FAA P-627, P-628, P-630 & P-631** 

#### GENRAL DESCRIPTION

**STAR AVIATOR** is an outstanding sealer that is dramatically superior to the conventional FAA mix design sealers. **STAR AVIATOR** as supplied already *contains the rubber* per FAA specifications. The rubber is hot blended during the manufacturing process. The superiority in performance has been established in field performance and by independent testing laboratories.

#### HIGHLIGHTED BENEFITS

#### STAR AVIATOR, SEALCOATING FOR AIRPORT PROJECTS;

- 1. **Is a unique product with unconventional technological approach.** No similar products in the industry.
- 2. Has far superior performance to the conventional FAA, mix designs.
- 3. **Allows mix design control-** Rubber is the most critical component in FAA mix designs. Factory blending of the rubber in STAR AVIATOR assures the accuracy of the mix.
- 4. **Certified** to meet and/ or exceed FAA specifications.
- 5. **Is Cost Effective** & performs better than mix designs containing much higher rubber latex e.g. at 7% and 10% levels.
- 6. Savings in Labor Costs.

#### Better performance with STAR AVIATOR

- In fewer coats,
- No need for special equipment, e.g. drag box, etc.
- Time saved by not adding rubber on the job.

#### **APPLICATION NOTES**

**STAR AVIATOR**, is applied using conventional methods, spray, squeegee, brush, etc.. Consult FAA Specifications P-627, P-628, P-630 & P-631, for details.

## Dilution -Max 20% by volume on the amount of concentrated STAR AVIATOR

# COMPOSITION OF MIXTURE, Using STAR AVIATOR

Sealcoat Type	STAR AVIATOR	WATER	AGGREGATE	APPLICATION OF THE MIX.
	GALLONS	GALLONS	LBS.	GAL/SQ.YARD
RUBBERIZED SAND SLURRY	100	20 max.	300-800	0.07-0.14
RUBBERIZED EMULSION	100	20 max.	None	0.07-0.11

#### **PRECAUTIONS**

## Keep out of reach of children

Follow all safety instructions for handling and storage. Contains refined coal tar. Read the Material Safety Data Sheet (MSDS). Keep the partially used containers tightly closed.



March 15, 2002

#### To Whom It May Concern:

This is to certify that;

**STAR AVIATOR**, meets and/ or exceeds the requirements of FAA Specification P-627, P-628, P-630 & P-631 **STAR AVIATOR** contains 4% rubber (Acrylonitrile/butadiene). The product shall be diluted with water at a rate not exceeding 20% by volume of the product.

### Mix design COMPOSITION OF MIXTURE, Using STAR AVIATOR

Sealcoat Type	STAR AVIATOR	WATER	AGGREGATE	APPLICATION OF THE MIX.
	GALLONS	GALLONS	LBS.	GAL/SQ.YARD
RUBBERIZED SAND SLURRY	100	20 max.	300-800	0.07-0.14
RUBBERIZED EMULSION	100	20 max.	None	0.07-0.11

**Test Data & Specification Compliance:** STAR AVIATOR meets and/ or exceeds the requirements of FAA Specifications: FAA P-627, P-628, P-630 & P-631.

Properties	FAA P-627 SPEC.	TEST DATA	COMMENTS
Brookfield Viscosity	Visual Compatibility	Materials appear compatible	Passed
	10-90 Poises	44.4 Poises	Passed
Scuff Resistance	>100 in-Lbs.	8 hrs., 165 in-Lbs.	Passed
>8 Hr. Torque	24 hrs. 175 in-Lbs.	Passed	
Freeze Thaw	1 Max.	5 cycles 0	Passed
3 Max.		10 Cycles 2	Passed
Adhesion	5A	5 A	Passed

Please contact the undersigned if you have any questions.

Sincerely, S.T.A.R, INC.

Girish C. Dubey President



Keimeth W. Krainer, PE Erank A. Henderson, PG Tinnothy H. Bedenis, PF Gerald M. Belian, PE Larry P. Jedele, PE Stair D. Kohn, PhD, PE Mark K. Kiamer, PE Edward S. Lindow, PE Gerard P. Markel, PE Truman F. Maxwell, CPA Robert C. Rabeler, PE

J. William Coberly, CET
Sheryl K. Fountain
Chuck A. Gernayel, PE
Davie J. Hurburt, PE
Cheryl Kehres Dietrich, CGWP
Michael S. Meddock, PE
Timothy J. Mitchell, PI
Thomas P. Rozman, Ph. CHM
John C. Zarzeck, CWI
Paul Byeofski, CT
Christopher B. Byrimn Phil), PI
Michael E. Gase, CWI
Julie A. Hartner
E. Lancey Henson
Herbort A. Hoskins, CHMM
Joel A. Johnson, CF;
Laurel M. Johnson, PF
Jeffery M. Krusinga, PF
Jemes M. Less, CIH
Mark L. Michener
Michael J. Neuman, PE
Thomas M. Pect, PE
Roban W. Percta, Phil), PE
Thomas M. Powell
Daniel O. Rossey

#### soil and materials engineers, inc.

43980 Plymouth Oaks Blvd. Plymouth, MI 48170-2584 (734) 454-9900 FAX (734) 454-0629

February 26, 2002

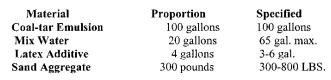
Mr. Gurish Dubey STAR, inc. 1400 Walcutt Road Columbus, OH. 43228

Re: Coal Tar Sealer Mix Design FAA P-625 Columbus, Oh. SME Project No. PP 40879

Dear Mr. Dubey:

We have completed the Coal Tar Sealer Mix Design you requested using the blended coal tar and latex, sand and water samples we received. The mixture was prepared using the FAA P-627 procedure you transmitted to us. We understand the sample of sealer we received was comprised of coal tar emulsion and latex additive added at a rate of 4% by volume. We blended the mixture with aggregate and the water sample we received. The materials were combined and tested in accordance to the FAA P-627 specifications. The mix design and test results completed to date are as follows:





Test Property	Test Results	Criteria
Brookfield Viscosity	Materials appear compatible	Visual Compatibility
	44.4 poises	10-90 poises
Scuff Resistance	8 hrs. 165 in-LBS.	>100 in-LBS.
	24 hrs. 175 in-LBS.	>8 hr Torque
Freeze Thaw	5 Cycles 0	1 Max.
	10 Cycles 2	3 Max.
Adhesion	5 A	5 A
Fuel Resistance	No Penetration	No Penetration

Detroit Bay City Kalamazoo Lansing Toledo Grand Bapids

Consultants in the geosciences, materials, and the environment



Thomas H. Skotzke Larry W. Shook, PF

R. Scott Steiner, C1 Michael J. Thelen, Pt.



Mr. Gurish Dubey STAR, Inc. February 26, 2002 Page 2

The materials used in the mix design were the products you submitted for our testing.

Based on the FAA P-627 criteria, all materials and mix properties as reported to date, meet the FAA P-627 criteria.

If you have any questions regarding these test results please do not hesitate to contact us.

Very truly yours,

SOIL AND MATERIALS ENGINEERS, INC.

Thomas M. Powell Materials Consultant

Starr D. Kohn P.E. Vice President

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Consultants in the geosciences, materials, and the environment

#### MATERIAL SAFETY DATA SHEET



# Material Safety Data Sheet STAR AVIATOR

#### SEALCOATING FOR AIRPORT PROJECTS

Meets and or Exceeds the FAA Specification, FAA P-627, P-628, P-630 & P-631

Manufacturer: S.T.A.R., INC. 1400 Walcutt Road. Columbus, Ohio 43228 Emergency Phone No. Information Phone No. Date Of Preparation Date Supersedes CHEM-TEL 800-255-3924

800-759-1912 July 24, 2002

#### **SECTION I - IDENTIFICATION**

Product Name: STAR AVIATOR- Sealcoating for airport projects.

Chemical Family- Refined Coal Tar Pitch EmulsionH.M.I.SChemical Name- ProprietaryHealth = 1Prepared by- G.C. DubeyFire = 1Reactivity = 1Reactivity = 1

#### **SECTION II- INGREDIENTS**

Ingredients	CAS NO.	WT%	Exposure Limi	<u>ts</u>
			OSHA PEL	ACGIH TLV
Hazardous Ingredients				
Coal Tar Pitch	65996-93-2	27-29%	0.2 mg/m3 (Volatiles)	0.2 mg/m3 (Volatiles)
Listed in SARA Title III,	Section 313- No.			,
STEL	- N/A*			
LC 50	- N/A			
LD 50	- N/A			
Other Ingredients Ethoxylated Amine		1 %		
Specialty Polymers	Proprietary	4-5%	N/D	N/D
Clay	1332-58-7	18-20%	N/A	10mg/m3 (dust)
STEL	- 5 MG/M3 (DU	(ST)		, ,
LC 50	- N/A			
LD 50	- N/A			
Water	7732-18-5	49-50%	N/A	N/A
Listed in SARA Title III,		.,	14/11	14/11
STEL	- N/A			
LC 50	- N/A			
LD 50	- CTI OVER 32	0,000		

#### \* N/A = NOT AVAILABLE OR APPLICABLE

Total weight percentage of all the listed ingredients could be below 100, indicating other unlisted ingredients that are not considered hazardous by any federal (OSHA, WHMIS, SARA), any state or province or local Right-To-Know Regulations.

#### SECTION III, PHYSICAL DATA

<b>Boiling Point</b>	Vapor Pressure	Vapor Density	Appearance
	(mm Hg)	(Air=1)	
Over 212 F	approx. 25	1	Dark Brown Liquid with Coal Tar
			odor.

Evaporation Rate	Specific Gravity	pН	Freezing Point
(Water=1)		-	_
1	1.20 - 1.25	7.00-8.00	32 Deg F/ O Deg C

Miscibility	Threshold Odor	Water/Oil Dist Coeff.
Dilutable with water	ppm-	
	N/A	1/1

V.O.C.

Lb../gal- 0.12, Grams/liter-15

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#### SECTION IV- FIRE AND EXPLOSION HAZARD DATA

Flammability Classification	Flash Point	Flammable Limits	
	(method used)	LEL	UEL
N/A	N/A	N/A	N/A
<b>Combustion Products</b>		Extinguish	ing Media
CO, CO2, Hydrocarbon compounds		Foam, dry o	chemical, CO2

**Special Fire Fighting Procedures:** Cool exposed containers to prevent steam pressure build up. Wear self-contained breathing equipment.

Unusual Fire and Explosion Hazards: Containers may rupture due to steam pressure build-up.

**Explosive Power** Burning Rate

N/A N/A

UN/NA/PIN# Static Sensitive Impact Sensitive

N/A NO NO

#### SECTION V- HEALTH HAZARD DATA

**Threshold Limit Value** - 0.2 mg/ m3, coal tar pitch volatiles. **Routes Of Entry**- Skin, eyes, inhalation, ingestion. **Effects Of Overexposure** - Acute: YES Chronic: YES

<u>Eyes -</u> Overexposure of vapors can cause eye irritation, burning, redness and/or corneal changes, which in absence of recommended first aid may result in severe burns.

Skin - Contact with skin can result in irritation which when accentuated by sunlight may result in photo toxic skin reaction

(similar to sunburn). Prolonged and/or repeated contact with the product or volatiles may result in more serious skin disorders including cancer.

<u>Inhalation-</u> The product has very low vapor pressure, therefore, harmful effects are not anticipated. Chronic inhalation overexposure to vapors. Repeated and/or prolonged contact to high levels of vapor concentration may result in respiratory problems, central nervous system (CNS) effects, cardiovascular collapse.

<u>Ingestion-</u> May cause nausea, cramps, vomiting, diarrhea or acute effects. May be fatal in large amounts.

**Unusual Chronic Toxicity:** May cause cancer of the skin, lungs, kidney and bladder. Prolonged or repeated contact over many years in the absence of good hygiene and personal protection may lead to changes in skin pigmentation and skin tumors.

Conditions aggravated by exposure and additional health hazards: The test results reported in Koppers Industries, Inc. publication "Using Refined Coal Tar Emulsion Safely" conclusively establish that emissions during the manufacturing, as well as application, of sealcoatings based on refined coal tar are well below the OSHA exposure limits. Refined coal tar is a complex mixture of thousands of chemical compounds, a majority being closed ring, polynuclear aromatic compounds (PNAs) which range from single ring structure to multiple (30-40) rings in there molecular structure. According to NTP, IARC, or OSHA, some of these PNAs have been found to induce cancer in animals under laboratory conditions.

Cancer warning statements for materials derived from coke oven tar, which includes refined coal tar RT-12, are based primarily on crude (unrefined) tars. No data has been established on refined coal tars or sealcoatings based on refined coal tars as potential carcinogens. The cancer warnings are, therefore, affixed on all coal tar derived products, due to the lack of specific data on these products.

Respirable crystalline silica, also used in conjunction with this product is a suspected carcinogen, however, no exposure is expected through the use of this material. This product and sealcoatings in general, have not been tested for chronic exposure effects.

Carcinogenic: IARC-YES ACGIH-YES

#### EMERGENCY AND FIRST AID PROCEDURES

Eyes- Immediately flush with plenty of water for 15 minutes, call a physician, if condition persists.

Skin- Wash thoroughly with plenty of water and soap.

Inhalation- Move to fresh air, administer oxygen and call a physician.

Ingestion- Do not induce vomiting. Seek physician immediately and show M.S.D.S. or label.

#### SECTION VI- REACTIVITY DATA

Stability Conditions to Avoid Incompatibility (Materials to avoid)

Stable Keep from freezing. Strong oxidizing agents.

**Hazardous Decomposition Products** - N/A

**Hazardous Polymerization** - Will not occur.

Conditions to Avoid -N/A

#### SECTION VII- SPILL OR LEAK PROCEDURES

**SARA Title III** 

# 302 - No # 304 -No # 313 - No. RCRA-No.

#### STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

**Ventilate the area. Wear approved respiratory protection.** Wear suitable protective clothing, gloves and eye / face protection. Contain and pick up waste material. Put in a sealed approved container. Dispose of in accordance with federal, state, and local regulations.

For Small Spills: Absorb with an inert material and place in containers.

**For Large Spills:** Contain material and pump into tanks or other suitable containers. Spills over 45 gallons should be reported to national, state and local emergency response agencies. The telephone number for the National Response Center is 800-424-8802.

Do not flush into sewers or bodies of water. The material will suffocate fish until it settles to the bottom.

#### WASTE DISPOSAL

<u>This material is not a hazardous waste in either liquid (emulsion) form or as a dried material, according to TCLP (Toxic Characteristic Leaching Procedure) results (EPA method 1311). Recommended disposal by land filling (dry) or incineration shall be selected in accordance with the local, state, and federal regulations.</u>

**Reportable Quantity** - N/A

**Regulations** - WHMIS, SARA, State and province.

Hazardous Waste - N/A TPQ (lb.) - N/A

#### SECTION VIII- SAFE HANDLING AND PROTECTION INFORMATION

Ventilation: Use local exhaust ventilation to control mists or vapors generated when using this product.

Special- N/A Other- N/A

Respiratory Protection: Use only with adequate ventilation. If ventilation is inadequate, wear approved respiratory

equipment.

Protective Gloves: Rubber Gloves, chemically resistant.

Eye Protection: Wear safety glasses, goggles or face shield.

Other Protective Equipment: Wear suitable protective clothing.

Estimated LD50, MG/KG: N/A
Estimated LC50, PPM: N/A
Sensitization: N/A
Irritants: YES

#### **SECTION IX- SPECIAL PRECAUTIONS**

- 1. Keep out of reach of children.
- 2. For professional and industrial use only.
- 3. Do not handle until manufacturer's safety precautions have been read and understood.
- 4. Use only with adequate ventilation.
- 5. Do not take internally.
- 6. Avoid contact with eyes and skin.
- 7. Wash thoroughly after using. Practice safe hygiene principles.
- 8. Additional Technical Data Sheets and/or M.S.D.S.'s are available upon request.

THE RECOMMENDATIONS AND INFORMATION PROVIDED HEREIN ARE BELIEVED TO BE ACCURATE AS THE DATE HEREOF. HOWEVER, SUCH INFORMATION AND RECOMMENDATIONS ARE PROVIDED WITHOUT WARRANTY OF ANY KIND AND S.T.A.R., INC. DISCLAIMS ANY AND ALL LIABILITY OR LEGAL RESPONSIBILITY FOR USE AND RELIANCE UPON THE SAME.



#### DETAILED APPLICATION SPECIFICATION

# STAR AVIATOR

# **SEALCOATING FOR AIRPORT PROJECTS**FAA SPECIFICATION: FAA P-627, P-628, P-630 & P-631

#### 1.0 Objectives:

This specification covers the application of STAR AVIATOR, is a premium grade rubberized protective sealcoating system, especially designed for airport asphalt pavements requiring compliance to FAA P-627.

- 1.1 To extend the service life of asphalt pavements by sealing out:
  - The sun's ultraviolet rays, which result in oxidative decomposition,
  - Deteriorating effects of deicing salts, oils, gasoline, and grease, water and subsequent damage to the sub-base caused by water penetration.
- 1.2 To beautify and enhance the appearance.
- 1.3 To reduce the maintenance costs and extend the service life.
- 1.4 To fill minor surface imperfections and yield an even looking surface.
- 1.5 To provide a limited degree of skid resistance.

#### 2.0 Materials:

#### 2.0 Coal Tar Pitch Emulsion.

- 2.1.1 Coal Tar Pitch Emulsion must meet or exceed ASTM D 5727-00 (formerly Federal specification RP-355e), U.S. Air Force and F.A.A. requirements. The Coal Tar Pitch Emulsion shall also be in compliance with ASTM Specification D 3320-90.
- 2.1.2 The material shall be prepared from straight run high temperature coke-oven tar meeting the requirement of ASTM D 490- 92.
- 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 brush or by approved mechanical methods, to the bituminous surface at a spreading rate of 0.18 0.20 gal. (based on the amount of STAR AVIATOR Concentrated) per square yard in a two (2) coat application system.

  STAR AVIATOR meets and or exceeds the requirements, as detailed above.
- 2.1 **Sand / Aggregate Specifications:** 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 coa	arser (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
Finer than No.	200	0	3

- 2.2 Water shall be clean and potable, free of harmful soluble salts, within a temperature range of 50-80 ° F.
- 2.3 **Additive** Generally none required. Acrylonitrile/butadiene latex rubber, meeting the FAA Specifications, is hotblended during the manufacturing process. Other additives may be specified by the manufacturer in consultation with the project engineer.
- 2.4 **Crack Fillers:** Must be certified by the supplier for compatibility with the sealcoating material. Cold pour crack fillers, *STAR STA-FLEX* and the premium grade *STA-FLEX SUPREME*, are recommended. Hot pour rubberized crack fillers may also be used.

#### 2.4 Primers;

- 2.6.1 **Oil Spot Primers:** Must be certified by the Sealcoat manufacturer for compatibility with the sealcoating material. *STAR S.O.S. Primer/Sealer* is recommended.
- 2.6.2 **Pavement Primer:** Must be certified by the Sealcoat manufacturer for compatibility with the sealcoating material.
- 2.6.3 **Specialty Coatings/Primers** may be recommended by the manufacturer for problematic areas, e.g. rust streaks in the pavement, excessive surface contamination with oil, grease, fat etc. *STAR ONE STEP*, prediluted with water (in 1:2 volume ratio; product: water) is recommended. It is also recommended for fresh laid asphalt patches and polished aggregates.

#### 3.0 Surface Preparation:

The pavement surface to be sealcoated must be sound and surface cured to achieve the optimum performance. Sound pavements are those that;

- Have oil free surface (for additional notes-see under new pavements).
- Are compacted proper over the base and sub-base courses and suitable for the desired traffic loads and
- Are well drained and stable
- 3.1 **New Asphalt Pavement Surfaces**: Cure new asphalt pavement surfaces so that there is no concentration of oils on the surfaces. A period of at least 90 days at +70 ° F daytime temperature must elapse between the placement of a hot-mixed asphalt pavement and the application of STAR AVIATOR.

Perform a water-break-free test to confirm that the surface oils have degraded and dissipated. Cast one gallon of clean water over the surface to be tested. If the water sheets out uniformly, without crawling or showing oil rings, the pavement is suitable for sealcoating.

- 3.2 Clean the surface thoroughly to remove all foreign debris (dirt, gravel, silt, etc.) using air blowers or by flushing with water. Embedded dirt and silt shall be removed with steel bristle hand brooms.
- 3.3 Treat all grease and oil spots by scraping off the excess oil and dirt with a wire bristle broom and coat with STAR OIL SPOT PRIMER (S.O.S.) in accordance with directions. STAR ONE STEP is recommended for areas contaminated extensively with oil, grease fuel etc.
- 3.4 Make all necessary repairs, patch soft spots, fill all cracks and holes in the pavement. All patched areas must be cured before applying **STAR AVIATOR**.
- 3.5 Old and **or badly oxidized asphalt pavement** with a primer coat of diluted **STAR AVIATOR**, one (1) part by volume thoroughly mixed with Three (3) parts of clean water. Apply the primer at 0.04 to 0.06 Gal./ Sq. yard (based on undiluted sealer). Allow the primer coat to dry thoroughly, about 2-4 hours under normal drying conditions, prior to sealcoating with **STAR AVIATOR**.

#### 4.0 Materials and Recommendations:

#### 4.1 Materials Calculations:

STAR AVIATOR- For a standard two (2) coat sealcoating system, calculate at the rate of 0.18-0.20 gallons of undiluted sealer per square yard of the asphalt surface to be sealcoated.

Ist coat requires- 0.10-0.12 gal./square yard, IInd. Coat requires- 0.08-0.10 gal./square yard. Other Ingredients (water, sand/aggregates, etc.)-see section 4.2.

#### 4.2 Recommended Systems:

#### **COMPOSITION OF MIXTURE,** Using STAR AVIATOR

Sealcoat Type	STAR AVIATOR	WATER	AGGREGATE	APPLICATION OF THE MIX.
RUBBERIZED	GALLONS	GALLONS	LBS.	GAL/SQ.YARD
SAND SLURRY	100	20 max.	300-800	0.07-0.14
RUBBERIZED EMULSION	100	20 max.	None	0.07-0.11

- **4.3.1. Prime coat-** For old, oxidized pavements, a primer coat is recommended. The suggested materials are noted below;
- a. STAR AVIATOR, diluted with clean potable water in 1:3 volume ratio (sealer: water) applied at 0.04 to 0.06 Gal.(undiluted sealer)/ Square yard.
- b. STAR ONE STEP, diluted with clean potable water in 1:2 volume ratio (STAR ONE STEP: Water), applied at 0.05-0.08 gal. (mixed)/ Square Yard.

#### 4.4 Sand Slurry Preparation

- Add the required amount of water to the sealer in the mixing tank and mix thoroughly.
- Keep the mixer running at a moderate rate.
- Add the sand in a steady stream of about one 100 lb. bag per minute. When adding sand, be sure of firm footing and never place hands and arms in the agitating mixer.
- After adding all the sand, close the lid of the mixing tank and raise the speed of the mixer to "high" setting.
- Mix for 10 minutes to allow the contents of the tank to mix thoroughly and break any sand clumps.
- Reduce the agitator speed to moderate 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 it running during the entire application period.

#### **5.0** Application of Material:

- 5.1 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.
- 5.1 The first coat, **STAR AVIATOR** sand slurry, shall be uniformly applied over the entire surface. If the surface temperature is more than 90 ° F, pre-dampen with a light mist. Avoid puddles. There should be no free standing water.
- 5.2 Allow the first coat to dry sufficiently to take light traffic without scuffing. It will take about 4-6 hours under ideal drying conditions.
- 5.3 If the specification calls for a second coat, apply it perpendicular to the previous coat, if practical.

- 5.4 The completed application shall be allowed to cure at least for 24 hours and then tested for traffic-ability prior to opening for regular use.
- 5.6 The amount of material needed will vary according to the porosity and texture of the pavement. The mix designs (i.e. **STAR AVIATOR** and other ingredients) expressed in section 4 are for guidelines only.

#### 6.0 Method of Application

#### 6.1 Squeegee/ Brush (Hand Application) method:

- 6.1.1. The agitator in the sealer tank should be kept on to keep the material in suspension at all times. The machine should be equipped with a fog bar to be used for pre-dampening if the pavement temperature exceeds 90 ° F.
- 6.1.2. Coat the edges first. Pour a continuous ribbon of the **STAR AVIATOR** along the pavement edge 6-12 inches from curbing.
- 6.1.3 Draw the **STAR AVIATOR** mix away from the pavement edge by pulling a squeegee or brush perpendicular through the ribbon of material at a slight angle. Walk 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.
  - Pour more **STAR AVIATOR** mix to maintain a working ribbon of material and continue across the pavement until it is completely covered.

#### **6.2** Machine Application:

- 6.2.1. When applying by machine, seal the edges of the pavement by hand. The machine should then be used to apply **STAR AVIATOR** mix to the remaining area. A self-propelled machine that squeegees and brushes the sealer into the pores of the pavement is recommended.
- 6.2.2. Spray application should deposit the material per specified coverage rates.
- **7.0 Striping:** If striping is required, use STAR-BRITE Latex Traffic Paint (TT-P-1952b) or STAR BRITE PLUS, fast drying-100% Acrylic Traffic Paint. Allow the seal coat to dry at least 24 hours before striping. Refer to the Technical Data Sheet for details.

#### 8.0 Precautions:

- 8.1 **STAR AVIATOR** must be protected from freezing. Do no store at temperatures below 32 ° F. .Do not apply **STAR AVIATOR** during rainy or foggy weather. Ground and air temperature must be 50 ° F and rising prior to and after application
- 8.2 Drying is retarded by excessive moisture in the air or ground. Examples: rain, fog, prolonged humidity and seasonal extremes (early Spring late Fall). Under such conditions, allow additional time for initial drying and cure
- 8.3 Follow the recommended coverage rates. IF **STAR AVIATOR** is applied too heavy, the surface will dry first and restrict the water evaporation from the rest of the film, slowing down full curing process.
- 8.4 **STAR AVIATOR** is based on coal tar pitch. Prolonged and/or repeated contact may cause skin irritation. A protective cream should be used. Avoid breathing vapors. Wear protective clothing. See the Material Safety Data Sheet for **STAR AVIATOR** for details.
- 8.5 Keep out of reach of children.

Disclaimer:

These specifications report accurate and reliable information to the best of our knowledge, however, no expressed or implied warranties are extended by the manufacturers due to the fact that the conditions of use and workmanship are beyond the controls of the manufacturer. STAR Inc. assumes no responsibility for the use of information presented herein and hereby disclaims all liability in regard to such use.