

# Enviroseal LAS-320™

## Liquid Asphalt Sealer

**LAS-320™ fuel resistant asphalt sealer**  
**Preserves and Protects asphalt surfaces**

1019 SE Holbrook Ct.  
Port St. Lucie, FL, 34952  
Phone: 772-332-5940  
[www.enviroseal.com](http://www.enviroseal.com)  
[sales@enviroseal.com](mailto:sales@enviroseal.com)



# What is LAS-320™ ?

**LAS-320™** is manufactured exclusively by Enviroseal and is a non-asphaltic emulsion used for sealcoating and preserving asphalt surfaces. It is non-toxic and non-hazardous with a VOC (Volatile Organic Content) of 94 grams per liter and does not contain harmful chemicals or PAH (Poly Aromatic Hydrocarbons) to pollute our environment.

**LAS-320™** is different from conventional sealcoating products and is based on a chemistry that was developed for construction of dirt runways for US military applications.

**LAS-320™** dries fast, will not track, and provides long term protection against premature asphalt degradation from water, fuel or UV damage. LAS-320™ makes a molecular bond with an oxidized asphalt surface and significantly extends the life cycle of degraded asphalt.

**LAS-320™** preserves and extends the life cycle of asphalt surfaces by eliminating the two most damaging factors, water intrusion which leads to base failure and Ultra Violet deterioration which results in oxidation from a breakdown of the asphalt hydrocarbons.

# Enviroseal LAS-320™

- No odor and No tracking
- Environmentally safe – No PAH
- Repels most liquids and chemicals
- Low VOC with only 94 Grams per Liter
- Dries quickly- usually less than 60 minutes
- Non-toxic - Non-hazardous - Non-flammable
- Can be striped within 90 Minutes after drying
- Classified as a Fuel Resistant Sealer by the FAA
- Eliminates premature degradation and UV damage
- Ease of application, can be applied with a broom or sprayed
- Coverage rates 60 to 125 square feet per gallon (1.5 to 3 M2/Liter)



# LAS-320™ is designed to

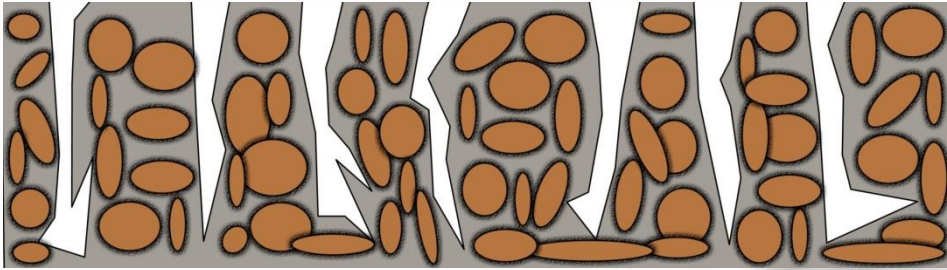
**Protect** Asphalt surfaces from degradation caused by UV, water, fuel, or chemical spills. A good asphalt pavement will not last forever; external factors destroy the asphalt oil that binds it all together. When oxygen and water combine with the asphaltic binder of the pavement, a chemical change takes place. At first, this process is necessary for the pavement to become hard and firm. Later, if this process is not arrested, a complete deterioration of the asphaltic binder will take place and reduce the pavement to a layer of loose stone. The asphalt binder is essentially what differentiates a gravel road from a paved road. Heat & Sunlight will accelerate the deterioration process; salt and other chemicals will act as a catalyst. Water which penetrates the surface can get into the base to cause cracks and potholes and start oxidizing the asphaltic binder inside the pavement.

**Preserve** The integrity of asphalt to seal the exposed surface and lock in the properties of the binder which provide flexibility and binding qualities. Using LAS-320™ will provide waterproofing and prevention of water intrusion which leads to base deterioration and freeze-thaw cycles.

**Provide** Resistance to the effects of weathering and oxidization and aggregate retention of the surfacing material. This sustainable process improves safety, reduces maintenance interventions, extends the life of the existing surface, and offers the best value asset management solution.



# Unprotected Asphalt



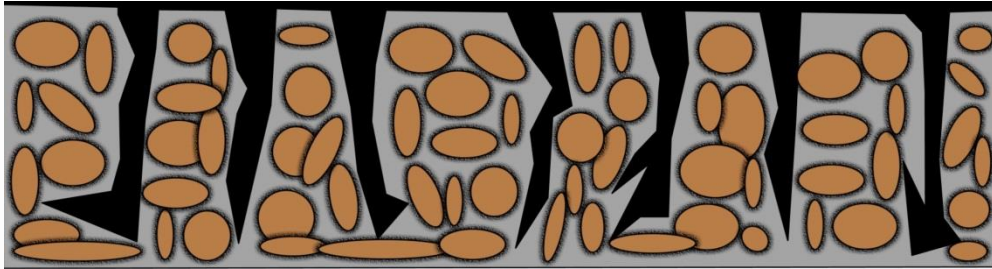
Asphalt pavement has two major factors that cause it to deteriorate

- Ultra Violet
- Water intrusion



Both these factors result in breakdown of the asphalt and will continue until the asphalt is replaced or sealed with LAS-320™

# Asphalt Protected with LAS-320™



**LAS-320™ adsorbs into the existing cracks to seal and protect against water intrusion.**

**LAS-320™ remains flexible to expand and contract with the asphalt with daily temperature fluctuations**

**LAS-320™ preserves the life of asphalt many years by blocking UV and forming a water-proof barrier sealing the cracks.**

**LAS-320™ can eliminate Freeze Thaw damage to the base reducing potholes and cracking**



# FAA Laboratory Testing on LAS-320™

A detailed study has been prepared under the Airport Asphalt Pavement Technology Program (AAPTTP) with funding provided by the Federal Aviation Administration (FAA) Cooperative Agreement Number 04-G-038. A complete copy of this report is available upon request.

Protection of pavements from damage associated with fuel spills or oil leaks has long been recognized as an important component of any airport pavement maintenance plan. Aircraft fuels, hydraulic fluids and most lubricating oils are produced by refining crude oil.

Asphalt cement used in the construction of Hot Mix Asphalt (HMA) pavements is also a product of the crude oil refining process. Fuels, oils, and asphalt are chemically compatible and readily mix with each other which results in a softening of the asphalt that leads to degradation of the pavement.

Material	Tile Test	Ranking for each test procedure		
		Laboratory Fuel Permeability Test	Laboratory Fuel Infiltration Test	Field Fuel Infiltration Test
LAS - 320	Passed	1	1	1
Coal Tar	Passed	2	2	2
CarbonPlex	Failed	3	3	3
TRMSS	Failed	5	5	5
SS -1	Failed	4	4	4

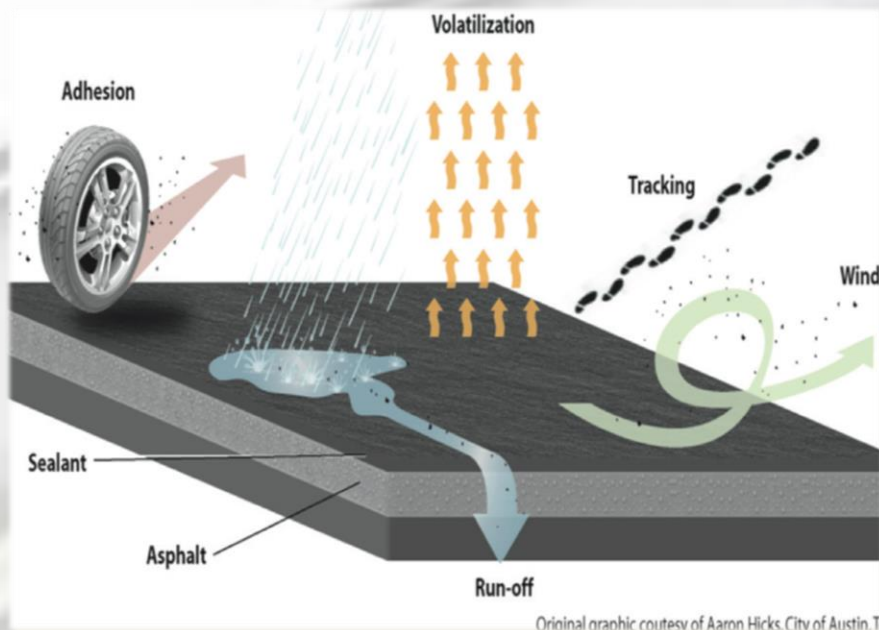


Note that the kerosene is completely clear – which indicates that none of the sealer dissolved.

# LAS-320™ vs Coal Tar

Fuel-resistant sealers are frequently applied to the surface of the pavement to prevent degradation from fuel and oil spills. Since oils derived from coal are highly aromatic and less compatible with petroleum-based fuels and lubricants, common sealers usually contain coal tar as the primary binder.

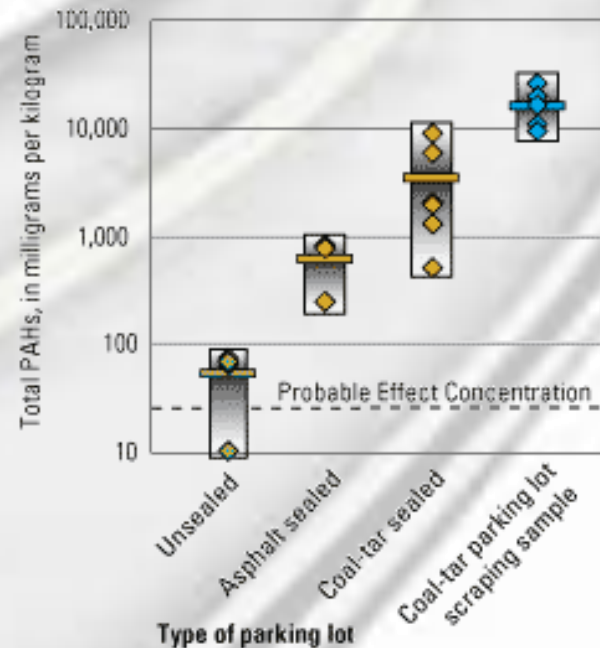
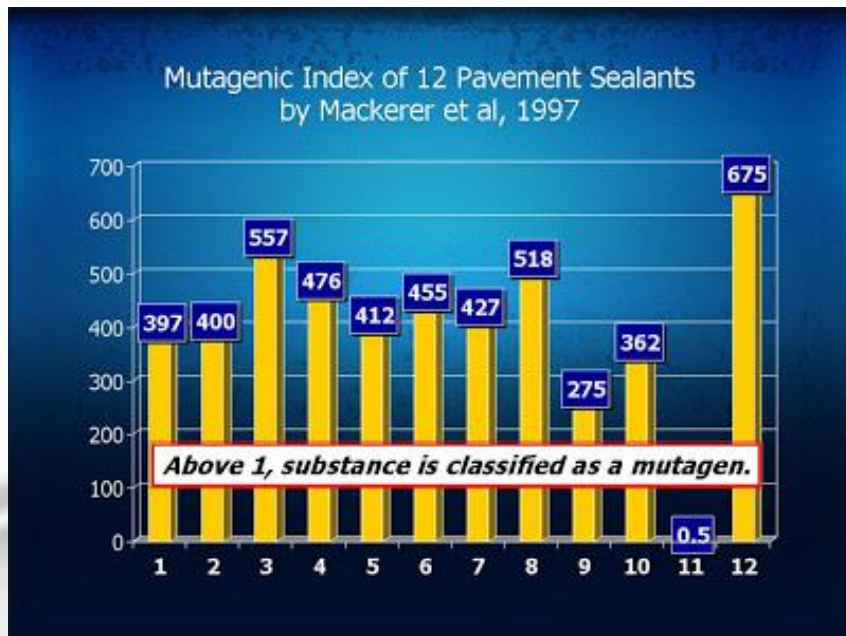
Although coal tar-based sealants can be effective in protecting HMA pavements, their use has been curtailed due to three significant drawbacks:



- The coefficient of thermal expansion for coal tar sealants is different from that of the underlying pavement resulting in cracking of the sealant resulting in repeated applications.
- Coal tar contains significant amounts of Polycyclic Aromatic Hydrocarbons (PAHs) known to cause mutagenic/carcinogenic behavior in humans, animals, and mammals.
- Direct skin contact creates health hazards for workers when PAHs are absorbed through the skin during product application.



# LAS-320™ is free of Polycyclic Aromatic Hydrocarbon (PAH)



*"The increased cancer risk associated with coal-tar-sealed asphalt (CSA) likely affects a large number of people in the U.S. Test results indicate that the presence of coal-tar-based pavement sealants is associated with significant increases in estimated excess lifetime cancer risk for nearby residents," said E. Spencer Williams, Ph.D., principal author of the study and Baylor University assistant research scientist at the Center for Reservoir and Aquatic Systems Research in Baylor's College of Arts & Sciences.*

# Application of LAS-320™

## **SURFACE PREPARATION**

The surface should be thoroughly cleaned by Blowing, sweeping and/or pressure washing. Oil stains should be cleaned thoroughly with detergent and rinsed clean with water. The area to be treated should be dried and cleaned 24-hours prior to application. Prime affected area with LAS-320 and allow to dry before finishing entire area.

## **BRUSH METHOD**

Simply pour LAS-320 on the surface and spread liberally with a push broom. Approximate coverage is 60 to 125 square feet per gallon (1.5 to 3 square meters/liter) depending on surface condition and application method. Work the LAS-320 thoroughly into the asphalt surface.

## **SPRAY METHOD**

Apply LAS-320 sufficiently to coat the surface under low pressure allowing it to penetrate and seal thoroughly. Avoid overspray and use shields as necessary.

## **APPLICATION TEMPERATURE**

Do not apply at temperatures below 45°F (7°C) or surface temperature over 130°F (55°C)

## **CURE TIME**

The time to dry will vary depending on ambient conditions. Normally a treated surface can be opened to pedestrian traffic in 60 minutes or less. If stripes are to be painted, 90 minutes of dry time is recommended. A full 24-hour cure is recommended before area is opened to vehicular traffic. Depending on ambient conditions (i.e.: temperature and humidity), areas can be opened to light traffic in as little as 3 hours.

## **CLEAN UP**

Clean all equipment immediately with soapy water. Dried LAS-320 will be impossible to clean from fabric, any stains are permanent. As with any chemical, proper safety and eye protection is recommended. Refer to SDS, all product information, and follow safety precautions. LAS-320 will stain untreated surfaces, proper preparation is necessary.

## **SLIP RESISTANCE**

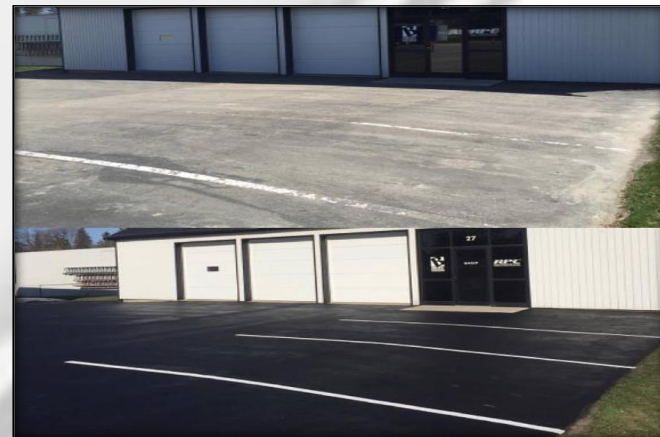
Sand can be manually broadcasted at a rate of 0.26 pounds per square yard (150 grams/M2) to increase slip or skid resistance. Immediately after LAS-320 is applied, broadcast sand evenly before it dries. Additional brooming may be necessary for uniformity.

# Crack Repair with LAS-320™

**LAS-320™ is thin in viscosity allowing it penetrate and fill fine cracks that creates a permanent repair against water.**

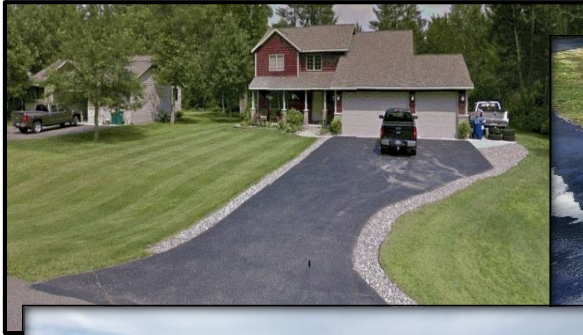
**Larger cracks can be filled with sand and then soaked with LAS-320™ so it permeates into and binds with the sand inside the crack. This process creates a solid mass that prevents water intrusion.**

**LAS-320™ remains flexible to expand and contract with the asphalt through daily temperature fluctuations unlike conventional crack repair systems. It is fuel proof so vehicles that drip fluids will not affect the asphalt surface.**





# Previous Applications



# **LAS-320™ Packaging**

Enviroseal supplies LAS-320™ in pails, drums, and totes.  
Export packaging and Concentrate available for commercial accounts



**275-Gallon  
IBC Tote**

**5-Gallon  
Buckets**



**55-Gallon Drums**