

# What Reclamite rejuvenating agent is, and how it works.

Reclamite rejuvenating agent is formulated from petroleum maltenes to prolong the life of asphalt pavements. It provides a simple, one-step method for restoring and preserving plasticity and durability in asphalt, and it is remarkably effective for extending the life of newly constructed pavement and for corrective maintenance on deteriorated pavements.

To understand how Reclamite works, one should know the chemical composition of asphalt. Asphalt consists of five basic components: asphaltenes (A), polar compounds (PC), first acidaffins (A<sub>1</sub>), second acidaffins (A<sub>2</sub>) and saturated hydrocarbons (S). The latter four components, PC, A<sub>1</sub>, A<sub>2</sub> and S, are referred to as the maltene fractions.

Asphaltenes are soluble only in the presence of polar compounds. The first and second acidaffins act as mediums to disperse the dissolved asphaltenes, and the saturated hydrocarbons develop the setting characteristics of the entire solution.

The most reactive of the asphalt fractions are the polar compounds and first acidaffins; they are also more susceptible to aging than the second acidaffins and saturated hydrocarbons.

**How it works.** For all of its outstanding qualities as a paving material, asphalt is no more impervious to the effects of time, weathering and tough service

than any other construction material. With the passage of time, the need for maintenance becomes signaled by dryness, brittleness and other visible signs of deterioration, such as loss of matrix, raveling, cracking and spalling.

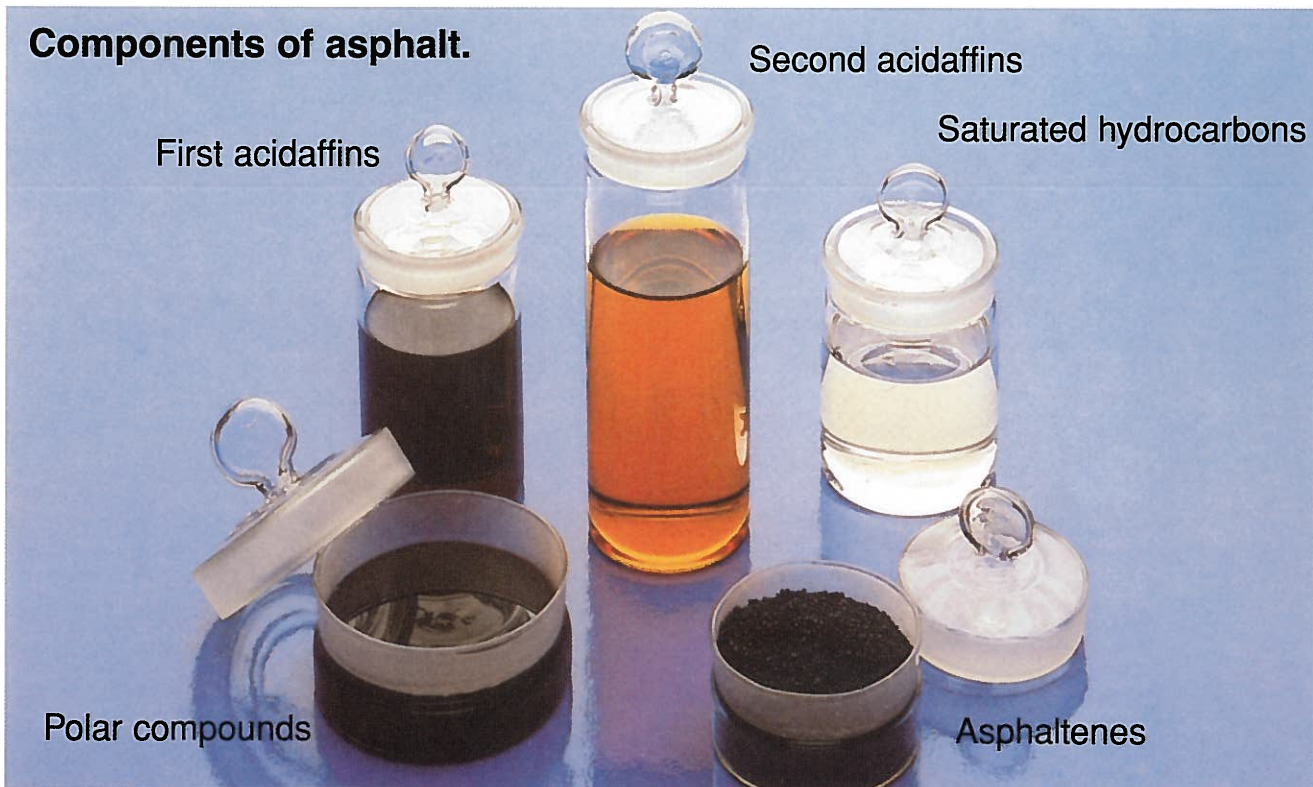
Reclamite is outstanding for its ability to delay the aging process from the outset and to reverse any premature aging that might be caused by construction variables such as excess heat at the hot plant, excess voids caused by low temperatures during compaction, critical mix design and other inconsistencies. All of these factors leave the finished surface vulnerable to air and water intrusion, chief causes of premature aging.

By replenishing the proper blend and amount of maltene fractions, the aged asphalt can be restored to a new and highly durable asphalt cement, virtually equal to or better than the original consistency.

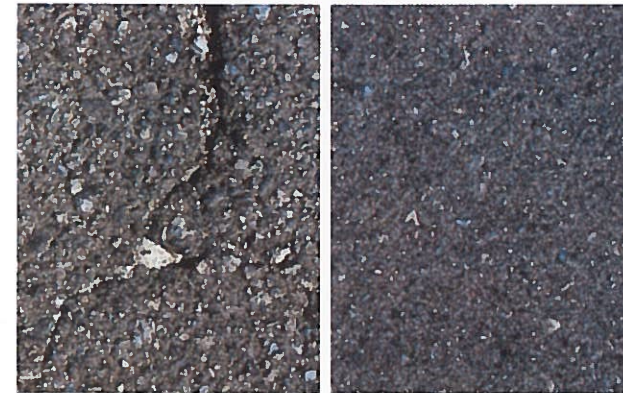
This can be achieved simply by spraying Reclamite directly on the asphalt surface. It readily penetrates the pavement and combines with the asphaltenes to restore the proper balance of the five fractions.

And it can all be done in place, without disturbing the adhesion, cohesion or stability of the existing roadway.

## Components of asphalt.



# Results of treatment of older pavements and analytical data.



Untreated area on left shows loss of aggregate and cracking. Reclamite treated area on right shows retention of aggregate with surface intact.



Reclamite was applied to the left-hand lane; the right-hand lane was not treated. This photo, taken five years later, shows severe distress, requiring patching and maintenance. The Reclamite-treated side (left) shows no distress and requires no maintenance.



Reclamite was applied to the upper portion of this open-graded pavement; the lower portion was not treated. This photo, taken four years after application, shows severe loss of aggregate in the lower untreated area. The upper Reclamite-treated portion shows no surface loss or distress.

Penetration values of asphalt on cores taken at intervals over period of time.

Depth	Reclamite treated		
	2 mos.	18 mos.	36 mos.
Top 1/2"	82	48	40
Untreated			
Top 1/2"	23	19	16



Reclamite preservative seal was applied to this ten-year-old asphaltic concrete pavement runway. Due to the dry, brittle pavement condition, total absorption of the Reclamite eliminated the need for sanding.



Reclamite application at this airport was completed in about one hour, and the stripping was left intact. The pavement's high void content—which allows fast water shedding in moist areas—eliminated the need for sanding after the application of Reclamite.