



Reclaimed Asphalt Pavement Past Projects



- Cold Central Plant Mix
- Cold In-place
- Hot In-place
- Shouldering
- Base Course
- Full Depth Reclamation
- Scrub Seal
- RAP Chip Seal

Abundance of RAP Spurs New Uses in Preservation Treatments

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Despite recent increases in allowable reclaimed asphalt pavement (RAP) content in hot-mix asphalt concrete, both in the California Standard Specifications and in the Standard Specifications for Public Works Construction ("Greenbook"), a surplus of RAP continues to exist in most urban areas of Southern California. New and innovative uses for RAP in slurry seals, micro surfacing, and chip seals will help consume some of this surplus, as well as reduce the demand for virgin aggregate. These uses are becoming increasingly common among Southern California agencies.

RAP aggregate is produced by crushing and screening RAP to the gradation required for the specific seal coat application. After processing, RAP aggregate will typically have a residual asphalt content of between 3 and 8 percent, a specific gravity of approximately 2.4, and an absorption rate of approximately 1.5 percent, based on testing performed by Los Angeles County.

MAKING RAP CHIPS
The use of RAP aggregate (RAP) chips in chip seals has the longest history. Los Angeles County first used RAP chips in a seal coat on a half-mile section of Avenue J in the unincorporated area of Lake Los Angeles in February 2008. Since then, RAP chips have been used in numerous chip seals. For chip seals placed under a

Chip Seal Cover Material Properties



- Stripping
- Polishing
- Soundness
- LA abrasion
- Fracture Faces
- Flakiness Index

Emulsion Classifications

IONIC CHARGE Formulated for compatibility with specific aggregates and components	C CATIONIC	ANIONIC	NONIONIC
AGGREGATE COATING THICKNESS Utilizes a chemical formulation that promotes a gel quality to the emulsion, increasing performance	HF HIGH FLOTT	NOT HIGH FLOTT	
SPEED AT WHICH EMULSIONS ARE SET Engineered for optimal break time and workability	RS RAPID SET	MS MEDIUM SET	SS SLOW SET
VISCOSITY & HARDNESS To accommodate specific application methods and climates	1 LOW VISCOSITY	2 MEDIUM VISCOSITY	H HEAVY GRADE
POLYMERS & ADDITIVES To achieve strength, adhesion, elasticity, durability or other performance demands	P POLYMER	L LIQUID POLYMER	S POLYMER





**In Conclusion
Why Use RAP
Chips**

- Cost
- Availability
- Performance
- Environmental
- Aesthetics

A road with a dark, sealed surface, likely using RAP chips. In the background, there are workers in orange safety vests and vehicles on a dirt road.

Using Reclaimed Asphalt
Pavement RAP in Preventive
Maintenance

A graphic showing a road winding through a landscape of broken asphalt and rocks. The Tooele County logo is visible in the bottom right corner.

**TOOELE
COUNTY**