



RAPPAGE

REJUVENATOR / ANTI-STRIP / COMPACTION AGENT

Rejuvenates and facilitates quality and easy production of high-recycle mixtures

Combining properties of an anti-strip, compaction aid and rejuvenator, RAPpave is the asphalt industry's first three-facet product. For use in mixes containing higher recycled material content. When used in 100% recycle mixtures made in Cold Central Plant and Cold In-Place processes, it can dramatically lower virgin asphalt cement, as well as provide stability without addition of Portland cement.

How is RAPpave incorporated?

The low viscosity of RAPpave allows easy blending with asphalt cement whether in the supply tank or in-line at the asphalt plant.

What is the addition rate?

Dosage rates depend on amount of recycle content and the desired effect of the product. When used solely as a compaction aid, dosage rates are as low as 0.5 lbs. per ton of mix. When used as a rejuvenator in high-recycle mixtures, dosage rates are typically 3 to 8 pounds per ton.

What is the shelf life?

RAPpave forms a homogeneous, stable mixture when blended with asphalt cement and has a storage life of up to 2 weeks at typical asphalt cement storage temperatures.

NOTABLE BENEFITS

- 3-in-1: rejuvenator, anti-strip and compaction aid
- Addresses both adhesive and cohesive deficiencies
- Offsets negative effects of adding high amounts of recycled binder
- Non-corrosive to pumps, pipelines and storage tanks
- Environmentally friendly, odor-free, safe, and non-toxic
- Can be transported without any special placarding or licensing
- High flash point (> 400°F)

IMPORTANT PROPERTIES

- Physical Form: slightly viscous, free-flowing liquid
- Odor: neutral to mild
- Density: 7.65 lbs/gallon at 77° F

See Proof that Verifies RAPpave Performance Advantages

Discover how our product stands up to the major competition when used at an equal dosage rate.

20-Hr. Age vs. 40-Hr. Age PAV Comparison

Product	M-VALUE DATA			S DATA			LOW TEMP PG IMPROVEMENT	
	20-HR (M-value)	40-HR (M-value)	Low Temp Δ	20-HR (Stiff)	40-HR (Stiff)	Low Temp Δ	20-HR M-value Improvement	40-HR M-value Improvement
Base 67-22	68.6-22.5	68.6-17.0	5.5	68.6-25.4	68.6-23.8	1.6		
2% RAPpave w/Base 67-22	65.9-27.9	65.9-25.4	2.5	65.9-27.6	65.9-27.2	0.4	5.1	8.4
2% Rejuvenator A w/Base 67-22	66.9-24.2	66.9-21.2	3.0	66.9-25.8	66.9-25.1	0.7	1.7	4.2
2% Rejuvenator B w/Base 67-22	66.6-25.0	66.6-22.7	2.3	66.6-26.4	66.6-25.8	0.6	2.5	5.7
4% RAPpave w/Base 67-22	62.6-30.2	62.6-28.9	1.3	62.6-30.7	62.6-31.4	-0.7	7.7	11.9
4% Rejuvenator A w/Base 67-22	63.5-26.2	63.5-24.0	2.2	63.5-28.1	63.5-28.9	-0.8	3.7	7.0
4% Rejuvenator B w/Base 67-22	64.6-26.4	64.6-23.8	2.6	64.6-27.3	64.6-27.6	-0.3	1.3	6.8

Field Trial Data

MIX		40% RAP	40% RAP	60% RAP	60% RAP
DESIGN	Virgin AC Grade	PG 52-34	PG 52-34	PG 58-28	PG 58-28
	FRAP, %	40	40	60	60
	Targeted Total AC, %	4.8	4.8	4.8	4.8
	As Measured Total AC, %	4.6	4.7	4.6	4.4
VOLUMETRICS	Added AC, %	2.7	2.7	1.7	1.7
	Recycle AC, %	2.1	2.1	3.1	3.1
	Binder Replacement, %	44%	44%	65%	65%
	Additive, %	0.0	0.0	0.2	0.2
PERFORMANCE TESTING	TSR	N/A	91.3	N/A	99.2
	SIP, # passes	11,691	19,894	11,840	9,321
	Rut depth @ 10,000 passes, mm	7.1	3.3	6.0	7.6
	SCB FI	4.4	1.6	2.7	3.2
	DCT Energy, J/m2	347	324	446	386
	Continuous PG	72.1-26.1	69.2-28.0	70.8-27.3	70.8-29.3
	(Tcont, S), °C	-32.7	-33.3	-30.1	-31.3
	(Tcont, m), °C	-26.1	-28	-27.3	-29.3
	Delta Tc, °C	-6.6	-5.3	-2.8	-2.0

Similar Product & Application: RASpave – Anti-strip, WMA compaction aid and rejuvenator for lower recycle content mixtures

Manchester Pavement Solutions creates chemical additives to overcome challenging asphalt construction problems. Designed by contractors for contractors, every product is field-tested, conditions-based, and results-driven.