



## Data Sheet – RAVEL CHECK® Asphalt Rejuvenating Liquid

### Product Description

RAVEL CHECK® Asphalt Preservation & Rejuvenation Liquid is an asphalt based emulsion with penetrating oils and asphalt resins designed with LOCK THE ROCK® technology to rejuvenate, preserve and restore asphalt based pavements.

Preservation & rejuvenation liquids are a higher performance pavement surface treatment relative to sealers. Sealer performance is limited to sealing the pavement. Filling small cracks, sealing out water, blocking UV rays and reducing air contact which limits binder oxidation.

Preservation & rejuvenation liquids extend the sealer performance by returning the pavement surface layer to near new chemical and physical condition. Starting during production, binder (asphalt) temperatures exceed 350°F, initiating the oxidation process. In pavement, oxidation is the process of oxygen chemically reacting with pavement components, resulting in a different chemical structure. The greater the oxidation, the greater the change in the pavement's chemical and physical components. Generally accepted in the industry is the loss of maltenes from the asphalt. Maltenes are sometimes referred to as resins or heavy oils. Preserving or rejuvenating asphalt to a pre-oxidized condition requires returning lost components and supplying additional asphalt. In addition to maintaining the highest maltene concentration, **RAVEL CHECK** preservation/rejuvenation liquid includes environmentally friendly solvents to effectively transport the maltenes to the oxidized pavement.

Preservation & rejuvenation liquids are surface treatments and must provide a durable wearing surface. Pavement flexing, vehicle maneuvering and unpredictable weather

require adhesion, strength, flexibility, sealing, UV protection and environmental acceptability.

The negative environmental impact from older pavement surface treatments based on coal tar is becoming an ever increasing liability. In several states and the District of Columbia they are already banned. The major box stores no longer handle these products. Hospitals, schools and selected drug stores are restricting tar based products due to health issues. The human health and environmental impact create too high a liability for those handling these products.

Preservation & rejuvenation liquid applications include miles of road, walking/golf paths, parking lots and any paved area. Optimizing rejuvenator performance for all applications requires ease of application with automated sprayer trucks, small sprayer apparatus including mini spray bars and spraying wands.

### Recommended Uses

Use on any new pavement, raveling paved asphalt or loose slurry, micro and chip sealed roadways, driveways and parking lots to preserve or restore the asphalt and extend the pavements' life cycle. Call UNIQUE's Technical Department for questions related to on-site optimizations.

### Benefits / Features

- Preserves and rejuvenates asphalt
- Slows pavement deterioration in one application
- Extends pavement life up to 5 years
- Easy application
- Stops moisture from penetrating surface
- Excellent adhesion to pavement surfaces
- Rebinds asphalt and aggregate for added strength
- Seals minor cracks

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RAVEL CHECK® REJUVENTAINING LIQUID PRODUCT SPECIFICATIONS		
Tests on Emulsion Concentrate:	ASTM Test	Specification
Viscosity; Saybolt Furol Seconds (SFS) @ 77°F	D-244	20 Min 100 max
Specific Gravity @ 60°F	D-6937	1.01
Density @ 60°F, lb/gal	D-6937	8.42
Sieve Test %	D-6933	0.2% max
5 Day Settlement %	D-6930	5.0% max
pH	D-244	2-8
Tests on Residue From Distillation or Evaporation		
Viscosity @ 275°F, Cps.	D-4402	1200 Cps max
Penetration @ 77°F Dmm	D-5	40 max
Solubility % in Trichloroethylene	D-2042	97.5% min
Asphaltenes, %	D-6560	12% min
Maltenes, % (calculated)	D-6560	4% min

**Limitations**

**RAVEL CHECK** preservation/rejuvenation liquid should not be applied in rainy or damp weather, to damp surfaces, or when rain is expected within 12 hours following application. **RAVEL CHECK** liquid should only be applied when ambient temperature is 50°F (10°C) and above. **DO NOT apply RAVEL CHECK liquid over pavements that have been treated with coal tar emulsion sealers.** Contact UNIQUE’s Technical Department for pavement treatment solutions over coal tar emulsion.

**Surface Preparation**

Pavement surface repairs should be made with UPM® Permanent Pavement Repair Material or hot mix asphalt. Repair cracks with KOLD-FLO® Pourable Crack Filler. Allow surfaces recently repaired with **UPM** mix to cure for at least 60 days or **KOLD-FLO** crack filler to cure for at least 7 days prior to applying **RAVEL CHECK** liquid.

**Mixing**

Some separation/settling may occur over time. Stir **RAVEL CHECK** liquid to achieve a consistent mixture. **RAVEL CHECK** should not be diluted with water unless specified by a UNIQUE technical representative.

**Placement**

Surface should be dry. Apply **RAVEL CHECK** bulk liquid through a distributor as directed by UNIQUE. Typical application rates are between 0.09 to 0.12 gallons per square yard depending on pavement condition. Package applications for localized repairs typically require less than 10 gallons of rejuvenator in 5-gallon pails (1 gallon per 90-100 ft²). Larger areas may be applied from drums and totes. Localized application can be applied using small spray apparatus, sealer brooms and squeegees. Broadcast sand over larger repair areas or areas requiring more friction. See Treatment Rate Chart on next page:

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COVERAGE RATE GUIDE for RAVEL CHECK® PRESERVATION & REJUVENATION LIQUID				
gal/100 ft <sup>2</sup>	ft <sup>2</sup> /gal	gal/ft <sup>2</sup>	yd <sup>2</sup> /gal	gal/yd <sup>2</sup>
1.7	60.0	0.017	6.7	0.15
1.6	64.3	0.016	7.1	0.14
1.4	69.2	0.014	7.7	0.13
1.3	75.0	0.013	8.3	0.12
1.2	81.8	0.012	9.1	0.11
1.1	90.0	0.011	10.0	0.10
<b>1.0</b>	<b>100</b>	<b>0.010</b>	<b>11.1</b>	<b>0.09</b>
0.9	112.5	0.009	12.5	0.08
0.8	128.6	0.008	14.3	0.07
0.7	150.0	0.007	16.7	0.06
0.6	180.0	0.006	20.0	0.05

**Coverage**

One gallon of **RAVEL CHECK** preservation/rejuvenation liquid will cover approximately 100 square feet (11 square yards). Coverage rate will vary due to age, surface condition and porosity. Newer pavements and recently sealed pavement will require less **RAVEL CHECK** liquid for coverage. Typical treat rate is 1 gal per 100 ft<sup>2</sup>. Pavement condition will affect treat rate. **RAVEL CHECK** applications range from 0.09 to 0.12 gal per Yd<sup>2</sup>.

**Curing**

Final cure time prior to opening to traffic should be 2-4 hours. Cure time will vary due to ambient conditions.

**Storage**

Keep from freezing.

**Shelf Life**

Up to 6 months in an unopened container. Bulk storage must include mild agitation typical of all sealers or asphalt emulsions.

**Packaging**

Item #	Description	
53-00004	RAVEL CHECK® Liquid Bottle 1-gal (8.5#)	144 – 8.5# bottles (packaged 4 /box) per stretch wrapped pallet 4032 - 1-8.5# bottles per truckload
53-00003	RAVEL CHECK® Liquid Pail 5-gal (40#)	36 - 40# pails per stretch wrapped pallet 1008 - 40# pails per truckload
53-00005	RAVEL CHECK® Liquid Drum 55-gal (440#)	4 - 440# drums per stretch wrapped pallet 88 - 440# drums per truckload (with pallets) 96 - 440# drums per truckload (no pallets)
53-00001	RAVEL CHECK® Liquid	1 - 2090# tote per pallet

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Tote 275-gal (2,090#) 20 - 2090# totes per truckload  
**Packaging (Cont'd)**

Item #	Description	
53-00006	RAVEL CHECK® Liquid Tote 330-gal (2,600#)	1 - 2600# tote per pallet 16 - 2600# totes per truckload

Truckload quantities are typical but may vary depending on destination, truck tare weight and/or trailer type (box van, flat bed, rail shipments or ocean freight container).

**Caution:**

This product contains petroleum derived and various chemicals to enhance performance. Refer to SDS for details. Avoid skin contact and use appropriate safety equipment, suggested but not limited to approved safety glasses and gloves. In case of contact with eyes, immediately flush with water for at least 15 minutes and seek medical attention.

**Caution Cont'd:**

DO NOT TAKE INTERNALLY. Keep out of reach of children. Avoid prolonged contact with clothing. Avoid hazards by following all precautions found in the Safety Data Sheet. Please read this information prior to using product.

**Limited Warranty:**

UNIQUE Paving Materials Corporation (UNIQUE) warrants that at the time and place we make shipment our materials will be of good quality and will conform with our published specifications in force on the date of acceptance of the order. THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED. WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OF DEALING, CUSTOM OR TRADE OR OTHERWISE ARE SPECIFICALLY DISCLAIMED. As the exclusive remedy for breach of this warranty, we will replace defective materials, provided, however, that the buyer examines the material when received and promptly notifies us in writing of any defect before the materials are used or incorporated into structure. Three (3) months after UNIQUE has shipped the materials, all our warranty and other duties with respect to the quality of the materials delivered shall conclusively be presumed to have been satisfied, all liability therefor terminates, and no action for breach of any duties may thereafter be commenced. UNIQUE shall in no event be liable for consequential damages. No warranty is made with respect to materials not manufactured by UNIQUE.

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