



# MAC 52

## Premium Pavement Sealer

### Application Specification

#### I. OBJECTIVES:

- A. To extend the serviceable life of off-street asphalt pavements that do not receive a full and continuous pattern of compaction from rolling traffic. To further increase the life of these pavements by protecting them from damage caused by (1) gasoline and oil, which soften and dissolve the asphaltic binder, (2) sun and oxidation, which dries out and embrittles the asphalt therefor leading to raveling of the surface aggregates, (3) and most importantly water absorption, which reduces the pavements internal cohesive and compressive strength, thus creating susceptibility to progressive freeze-thaw damage.
- B. To create an attractive traction enhanced surface, slate-black in color, that does not release hazardous loose stones with age and reduces the need for expensive premature overlays.
- C. To acquire the aforementioned benefits at minimum expenditure when used over parking lots, low to medium traffic roadways, gasoline stations, walkways, airfield runways and aprons.
- D. To achieve objectives A, B, and C by employing the most advantageous application system based on the intended usage of the pavement involved.

Physical composition and performance data are detailed in McConnell & Associates Specification Index MAC-PS. The chemical and physical make up is as follows:

	<b>MAC – 52 Specifications</b>	<b>R-P-355E Requirements</b>
Water, %	48%+/- 2%	53% Max.
Nonvolatile, %	49%+/- 2%	47% Min.
Ash of Nonvolatile %	36%+/- 2%	30% - 40%
Solubility of Nonvolatile in CS <sub>2</sub> , %	20% Min.	20% Min.
Specific Gravity 25 Deg. C/25 Deg. C	1.20 Min.	1.20 Min.

**SAND** – shall be clean, hard and durable, free from clay, salt and organic matter, and well grading within the following limits (U.S. Sieve / Total % Retained): No. 30 / 0.10; No. 40 / 4.80; No. 50 / 34.20; No. 70 / 36.90; No. 100 / 17.60; No. 140 / 5.90; No. 200 / 0.20; No. 270 / 0.10

**WATER** – shall be fresh, clean, and within a temperature range of 50 degrees to 75 degrees F.

**MAC-52 SAND SLURRY** – shall be a blend equal to two to six pounds of sand per gallon of MAC-52 agitated to even consistency. When high ambient or pavement temperatures are prevalent and workability is hampered, water may be added, but at no time shall the amount exceed 10% of the total MAC-52 slurry.

#### RECOMMENDED APPLICATION SPECIFICATIONS

SYSTEM	SYSTEM DESCRIPTION	RECOMMENDED AREAS FOR SYSTEM
MAC – S1	1 Sand Slurry Coat and 1 Coat Without Sand	Home drives, Low Traffic Parking Lots, Gasoline and Oil Spillage Areas
MAC – S2	2 Sand Slurry Coats	High Traffic Parking Lots, Aged Pavements, Private Streets
MAC – S3	2 Sand Slurry Coats and 1 Coat Without Sand	Parking Lot Roadways, Airfields

#### II. MATERIALS:

MAC-52 PAVEMENT SEALER is a heavy-bodied and high-solids refined coal tar pitch emulsion. Basic ingredients include a stable, straight run distillate softening point refined coal tar pitch combined with inert mineral fillers dispersed in water. MAC-52 meets and exceeds requirements of ASTM D 3320-00 – Emulsified Coal-Tar Pitch (Mineral Colloid Type).

#### III. PREPARATION OF PAVEMENT:

The asphaltic surface, prior to application, shall be clean, sound, and surface cured.

To be clean, the surface shall be free from sand, clay, dust, oil, grease and other foreign matter. Insure this by hand brooming, power brooming, or the employment of high velocity air blowers. Oil and grease spots which have accumulated on the pavement surface shall be scraped or heated using a propane torch if necessary, then sealed off with MAC OIL SPOT PRIMER (refer to McConnell & Associates Specification Index MAC-OSP) prior to the application of Protective Surface Treatment.

To be sound the pavement shall have sufficient drainage capabilities and be supportive of the traffic loads for which it was designed.

To be surface-cured the pavement shall be free of surface oils presenting a water-break-free surface when exposed to water. Minimum cure time is 30 days. Home driveways, where 95% compaction (PROCTER) is not achieved, cure time is a minimum of 60 days.

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### IV. APPLICATION OF MATERIALS:

Specification No. **MAC-S1** is a two-coat system consisting of one application of MAC-52 Sand Slurry and one application of MAC 52 without sand.

Specification No. **MAC-S2** is a two coat system consisting of two applications of MAC-52 Sand Slurry.

Specification No. **MAC-S3** is a three coat system consisting of two applications of MAC-52 Sand Slurry and one application of MAC-52 without sand.

The aforementioned application systems are to provide a uniform heavy-duty protective coating that is free of voids, holidays, and pinholes.

The **first coat of MAC-52 Sand Slurry** (detailed in Section II) shall be applied uniformly over the entire pavement surface (refer to Section III). If it is necessary to pre-dampen the prepared surface on hot days to reduce the surface temperature, only dampen the pavement. The surface shall be free of all standing water.

When the first application has dried sufficiently to take traffic without scuffing, the **second and/or third coat of MAC-52**, depending upon specification employed, shall then be applied uniformly over the entire area (cross-wise if practical).

**QUANTITIES OF MATERIALS** necessary to complete the project can vary as much as 20% depending on the porosity and surface texture of the pavement. The general range is as follows with minimums noted:

#### First MAC-52 Sand Slurry Coat

MAC-52	0.12 to 0.15 gallon/square yard
Sand (dry wt.)	2 to 6 pounds/gallon of MAC-52

#### Second MAC-52 Sand Slurry Coat

MAC-52	0.08 to 0.12 gallon/square yard
Sand (dry wt.)	2 to 6 pounds/gallon of MAC-52

#### MAC-52 without Sand

MAC-52	.08 to .10 gallon/square yard
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**Application** may be made with a heavy-duty soft rubber squeegee with brushes employed to rake areas of heavy deposits. Mechanical equipment (squeegee or spray) specially designed for this purpose may also be used.

It is recommended that the completed application be allowed to cure for a minimum of 24 hours and then tested for trafficability before opening for regular use.

### V. NOTES:

**Pavement Striping** – For non-bleeding marking, white or yellow latex traffic paint is recommended (TTP-1952b). Refer to paint manufactures specifications for application.

**Weather** MAC-52 shall not be applied outside when weather is foggy or rainy, or when ambient temperature is below 50 degrees F. Lower temperature and/or higher humidity may retard curing based on a one hour set to touch of 78 degrees F. and 50% relative humidity with air circulation present. Favorable conditions must exist 24 hours following application.

**Precautions** Refined coal tar is a collection of organic compounds, primarily aromatic hydrocarbons. If individuals with sensitive skin are overexposed to MAC-52 for long periods of time, dermatitis or other skin disorders may result. Consult the MAC 52 M.S.D.S. sheets and Index MAC-PS for more information.

### Warranty and Disclaimer

These specifications reflect successful performance experience, and are intended to provide a guide to approved construction practices and materials. However, there are no express warranties which extend beyond the description on the face hereof. Manufacturer disclaims any implied warranties of merchantability or of fitness for any particular purpose. Since manufacturer cannot control the manner of use of its products after their sale, manufacturer will not be responsible for any consequential or indirect damages. Rather, manufacturer will, at its option either replace the goods sold or refund the purchase price. No warranties will apply if the goods are in any way altered or modified after delivery by manufacturer.

### SHORT SPECIFICATION FOR ARCHITECTS AND ENGINEERS

**MAC-S1** – 1 slurry coat & 1 coat without sand – “Asphalt pavement, after a minimum of a 30 day cure period, shall be provided a MAC-52 Protective Surface Treatment (1 slurry coat and 1 sealcoat) applied in accordance with McConnell and Associates Corp., General Application Specification MAC-S1.”

**MAC-S2** – 2 slurry coats – “Asphalt pavement, after a minimum of a 30 day cure period, shall be provided with a MAC-52 Protective Surface Treatment (2 slurry coats) applied in accordance with McConnell and Associates Corp. General Application Specification MAC-S2.”

**MAC-S3** – 2 slurry coats & 1 coat without sand – “Asphalt pavement, after a minimum of a 30 day cure period, shall be provided with a MAC 52 Protective Surface Treatment (2 slurry coats and 1 sealcoat) applied in accordance with McConnell and Associates Corp. General Application Specification MAC-S3.”



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