Top Tuff™ Pavement Sealer Additive

1. PRODUCT NAME
   Top Tuff Pavement Sealer Additive

2. MANUFACTURER
   ThorWorks Industries, Inc.
   2520 S. Campbell St.
   Sandusky, OH 44870
   Phone: 800-395-7325
   Fax: 419-626-5477
   www.thorworks.com

Additional Plant Locations: SealMaster has a nationwide network of manufacturing and distribution facilities.

Phone 1-800-395-7325 or visit website at www.sealmaster.net to find the location near you.

3. PRODUCT DESCRIPTION & BENEFITS
   Top Tuff is a polymer latex resin emulsion designed to modify both asphalt based and coal tar based pavement sealer emulsions. Top Tuff imparts outstanding toughness, locks in aggregate, and provides a blacker color to the cured, dried film.

   **Basic Uses:** Top Tuff is designed to enhance the performance of both asphalt based and coal tar based emulsion pavement sealers.

   **Composition:** Top Tuff is a water based copolymer latex emulsion.

   **Sizes:** Top Tuff is available in 55 gallon drums and 5 gallon pails.

   **Color:** Pavement sealer fortified with Top Tuff dries blacker.

   **Limitations:** SealMaster pavement sealers fortified with Top Tuff shall not be applied when temperature is expected to drop below 50°F at any time within a 24 hour period after application.

4. TECHNICAL DATA
   Top Tuff meets the performance requirements of ASTM D 4866 specification for latex additives used in coal tar pitch emulsion (CTPE) pavement sealer.

<table>
<thead>
<tr>
<th>Test</th>
<th>Specifications</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>Material shall be homogenous and show no separation or coagulation that cannot be overcome by moderate stirring.</td>
<td>Passes</td>
</tr>
<tr>
<td>Chem. &amp; Physical Analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Non Volatiles %</td>
<td>50 - 60%</td>
<td>Passes</td>
</tr>
<tr>
<td>- Ash Non Volatiles %</td>
<td>.10 - .12%</td>
<td>Passes</td>
</tr>
<tr>
<td>- Specific Gravity 25°C</td>
<td>Approx. 1.08</td>
<td>Passes</td>
</tr>
<tr>
<td>Flexibility</td>
<td>No Cracking or Flaking</td>
<td>Passes</td>
</tr>
<tr>
<td>Resistance to Impact</td>
<td>No Chipping, Flaking or Cracking</td>
<td>Passes</td>
</tr>
<tr>
<td>Wet Film Continuity</td>
<td>Smooth, Nongranular Free From Coarse Particles</td>
<td>Passes</td>
</tr>
</tbody>
</table>

**Environmental Considerations:** Top Tuff is an environmentally friendly water based latex emulsion containing less than 150 grams per liter volatile organic content (VOC).

**Physical/Chemical Properties:** Top Tuff meets the following material requirements when tested in accordance with ASTM D 4758 and ASTM D 2939. (See chart below)

5. INSTALLATION
   Surface must be clean and free from all loose material and dirt. Pavement surface repairs should be made with a suitable hot or cold asphalt mix. Cracks should be filled with SealMaster hot pour or cold applied crack fillers.

   **Methods:** SealMaster pavement sealers fortified with Top Tuff shall be applied by either pressurized spray application equipment or self-propelled squeegee equipment. Pressurized spray equipment shall be capable of spraying pavement sealer with sand added. Equipment shall have continuous agitation or mixing capabilities to maintain homogeneous consistency of pavement sealer mixture throughout the application process. Self-propelled squeegee equipment shall have at least 2 squeegee or brush devices (one behind the other) to assure adequate distribution and penetration of sealer into bituminous pavement. Hand squeegees and brushes shall be acceptable in areas where practicality prohibits the use of mechanized equipment.

   **Application:** For optimum performance and durability apply 2 coats of properly mixed SealMaster pavement sealer fortified with Top Tuff. A third coat may be applied to high traffic areas such as entrances, exits, and drive lanes.

   **Application Rate:** Apply mixed pavement sealer fortified with Top Tuff at a rate of .11 to .13 gallon per square yard (70-82 square feet per gallon) per coat.

   **Note:** Application rates may vary somewhat due to pavement age and porosity.
Estimating Material Requirements:
A minimum of 2 gallons of Top Tuff for every 100 gallons of SealMaster pavement sealer concentrate.

Precautions: Both surface and ambient temperature shall be a minimum of 50°F. Temperature shall not drop below 50°F in a 24 hour period following application. New asphalt surfaces should be allowed to cure a minimum of four weeks under ideal weather conditions (70°F) before applying SealMaster pavement sealer fortified with Top Tuff. Keep Out Of Reach Of Children. Do not store unopened drums or pails in freezing temperatures.

6. AVAILABILITY & COST

Availability: Top Tuff is supported by a nationwide network of SealMaster manufacturing facilities along with a national network of qualified applicators.

Cost: Cost information can be obtained from a local SealMaster applicator. Contact SealMaster for the applicator in your area.

7. WARRANTY

ThorWorks warrants that Top Tuff meets the chemical composition and performance requirements set forth in section 4. Liability to the buyer or user of this product is limited to the replacement value of the product only.

8. MAINTENANCE

Periodic pavement sweeping will ensure optimum product service life.

9. TECHNICAL SERVICES

Manufacturer: Complete product specifications, material safety data sheets, and technical assistance is available from ThorWorks or your local SealMaster Representative.

Professional Applicators: Your local SealMaster applicator is available to provide on-site inspections and recommendations to meet your specific needs.

10. FILING SYSTEMS

- Sweet's Catalog
- Sweet's CD
- Sweet's Online
- Sweet's Directory
- SealMaster Online Specification at www.sealmaster.net
- Complete SealMaster Product and Equipment Catalog Available

The statements made on this specification sheet are believed to be true and accurate and are intended to provide a guide for approved application practices. As workmanship, weather, construction, condition of pavement, tools utilized, and other variables affecting results are all beyond our control, the manufacturer warrants only that the material conforms to product specifications and any liability to the buyer or user of this product is limited to the replacement value of the product only. The manufacturer expressly disclaims any implied warranties of merchantability or fitness for a particular purpose. Warranty is void on multi-coat applications if material made by other manufacturers is used with this product.

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