Illinois Department of Transportation  
Bureau of Materials  
QUALIFIED PRODUCER LIST OF  
TECHNOLOGIES FOR PRODUCTION OF WARM MIX ASPHALT (WMA)  
August 17, 2018  
This list supersedes the February 28, 2014 list.  
BDE Specification for Warm Mix Asphalt (effective 1/1/2012)

For information regarding new product submittal, click the “New Submittal” bookmark to the left.

**APPROVED TECHNOLOGY LIST FOR WMA TECHNOLOGIES**

<table>
<thead>
<tr>
<th>Company</th>
<th>Mechanical</th>
</tr>
</thead>
<tbody>
<tr>
<td>AESCO/Madsen</td>
<td>Eco-Foam II</td>
</tr>
<tr>
<td>1531 20th Street N.W. Auburn, WA 98001</td>
<td></td>
</tr>
<tr>
<td><strong>ALmix</strong></td>
<td>ALmix WarmWare</td>
</tr>
<tr>
<td>13333 Hwy 24 West Fort Wayne, IN 46804</td>
<td></td>
</tr>
<tr>
<td><strong>Astec Industries, Inc.</strong></td>
<td>Astec® Double Barrel Green System</td>
</tr>
<tr>
<td>1725 Shepherd Road Chattanooga, TN 37421</td>
<td></td>
</tr>
<tr>
<td><strong>East Texas Asphalt Co., Ltd.</strong></td>
<td>HydroFoam IEQ</td>
</tr>
<tr>
<td>204 East Burke Avenue Lufkin, TX 75901</td>
<td></td>
</tr>
<tr>
<td><strong>Gencor Industries, Inc.</strong></td>
<td>Gencor Ultrafoam GX™</td>
</tr>
<tr>
<td>5201 North Orange Blossom Trail Orlando, FL 32810</td>
<td></td>
</tr>
<tr>
<td><strong>Herman Grant Company</strong></td>
<td>HGRANT Warm Mix System</td>
</tr>
<tr>
<td>1100 Ashmore Avenue Chattanooga, TN 37415</td>
<td></td>
</tr>
<tr>
<td><strong>MAXAM Equipment, Inc.</strong></td>
<td>MAXAM AQUABlack®</td>
</tr>
<tr>
<td>1575 Universal Avenue Kansas City, MO 64120</td>
<td></td>
</tr>
<tr>
<td><strong>Meeker Equipment Corp. Inc.</strong></td>
<td>Meeker AquaFoam</td>
</tr>
<tr>
<td>1440 Industry Road Hatfield, PA 19440</td>
<td></td>
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<tr>
<td><strong>Reliable Asphalt Products, Inc.</strong></td>
<td>Aqua Foam</td>
</tr>
<tr>
<td>521 Old Seven Mile Pike Shelbyville, KY 40065</td>
<td></td>
</tr>
<tr>
<td><strong>Shell Oil Company</strong></td>
<td>WAM Foam</td>
</tr>
<tr>
<td>909 Fannin Street Houston, TX 77010</td>
<td></td>
</tr>
<tr>
<td><strong>Stansteel</strong></td>
<td>Stansteel Accu-Shear™</td>
</tr>
<tr>
<td>12711 Townepark Way Louisville, KY 40243</td>
<td>Stansteel Eco-Blend™</td>
</tr>
<tr>
<td><strong>Terex Corporation</strong></td>
<td>Terex® Warm Mix Asphalt System</td>
</tr>
<tr>
<td>200 Nyala Farm Road Westport, CT 06880</td>
<td></td>
</tr>
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<tr>
<td>Akzo Nobel Surfactants</td>
<td>Rediset™</td>
</tr>
<tr>
<td>MeadWestvaco</td>
<td>Evotherm™</td>
</tr>
<tr>
<td>PQ Corporation</td>
<td>Advera</td>
</tr>
<tr>
<td>Sonneborn</td>
<td>SonneWarmix RT™</td>
</tr>
<tr>
<td>Zydex Industries</td>
<td>Zycotherm SP</td>
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</table>

PROVISIONAL TECHNOLOGY LIST FOR WMA TECHNOLOGIES

<table>
<thead>
<tr>
<th>Company</th>
<th>Additive</th>
<th>Date Provisionally Accepted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sasol Wax North America Corporation</td>
<td>Sasobit®</td>
<td>12/2011</td>
</tr>
</tbody>
</table>
Approval Process for Technologies for Production of Warm Mix Asphalt
Effective: December 16, 2011
Revised: May 11, 2018

**A. Scope**

Warm Mix Asphalt (WMA) Technologies (additives, foaming technologies, and processes) will be evaluated by the Bureau of Materials (CBM). Acceptable Warm Mix Asphalt Technologies will be placed on the APPROVED TECHNOLOGY LIST FOR WMA TECHNOLOGIES.

The WMA Technology approval process will be based on:

1. Initial screening by the Department.
2. Testing of mainline surface mixture produced at an approved asphalt plant on two field trial projects.
3. Or reciprocity with other states.

Once approved, the WMA Technology may be used in the production of WMA or Hot Mix Asphalt (HMA).

**B. Initial Screening**

The Department will review candidate WMA technologies for long term compatibility in initial use and reuse in future mixes. Technologies that could present potential recycling issues will not be approved or placed on the provisional list.

**C. Field Trial Projects**

Two successful trial projects that placed surface mix on mainline will be listed on the Department's APPROVED TECHNOLOGY LIST FOR WMA TECHNOLOGIES. A trial project is considered a success when it demonstrates that the WMA has been produced and placed in compliance with contract specifications and requirements specified herein.

1. **Trial Project Requirements**

   Projects shall contain:
   
   - Minimum 2000 tons mainline WMA surface mix.
   - Minimum 2000 tons mainline HMA surface mix control section.

2. **Sampling**

   Witnessed by the Engineer, the Contractor shall collect representative samples sufficient to produce the following for both HMA and WMA:
   
   - Four (4) 63mm high gyratory specimens.
   - Six (6) 95 mm high gyratory specimens.
   - Additional 75 lbs of loose mix provided to the Engineer.
3. Hamburg Wheel Sample Preparation
   a) Conditioning
      (1) WMA
         a. Hamburg Wheel Testing. The loose WMA mix shall be conditioned by short
            term aging in oven for not more than 2 hours at 270 ± 5 °F prior to gyratory
            compaction.
         b. Tensile Strength Testing. No short term aging is required.
   b) Gyratory Compaction
      (1) Four (4) specimens each for HMA and WMA shall be gyratory compacted to 7.0 ±
          1.0% voids and 62 ± 2 mm high.
      (2) Six (6) specimens each for HMA and WMA shall be gyratory compacted to 7.0 ±
          1.0% voids and 95 ± 5 mm high.
      (3) Each specimen will be clearly marked for project ID and HMA or WMA.
      (4) Specimens will be allowed to cool then be packed for transport and provided to the
          Engineer.

4. Evaluation Procedure
   Testing will be conducted by the CBM on the samples received from the project as follows:
   a) Four (4) Gyratory specimens each for HMA and WMA will be evaluated using Hamburg
      Wheel Tracking Device according to IL Mod AASHTO T324.
   b) Six (6) Gyratory specimens each for HMA and WMA will be evaluated for tensile strength
      according to IL Mod AASHTO T283.
   c) Test results shall meet the criteria listed in the Warm Mix Asphalt BDE Special Provision
      (effective January, 2012).
   d) Additional loose mix may be used to determine compliance of specified volumetric
      criteria.

D. Reciprocity
   1. WMA Technologies listed on approved lists of at least ten other states will be considered.
   2. The WMA Technology must have been used in a climate similar to Illinois.
   3. The WMA Technology does not modify the grade of PG asphalt specified on the plans.
   4. The WMA Technology does not impact future recyclability of the pavement in either overlays
      or full-depth pavements.

E. Getting Started
   1. A WMA Technology supplier seeking approval shall coordinate with a Contractor(s) to identify
      field trial projects meeting the criteria specified herein.
2. The Contractor shall submit a written request to the District Materials Engineer requesting to use the WMA Technology on a contract. The request should include the following:

   a) Contract Number.
   b) HMA mix design number (used for control section).
   c) WMA Technology information with Material Safety Data Sheet and background information as appropriate.
   d) Proposed paving plan with location of WMA and HMA sections.

3. Upon approval, the District Materials Engineer will forward the proposal to CBM for final approval.

4. After successful completion of two field trial projects the WMA Technology will be listed on the APPROVED TECHNOLOGY LIST FOR WMA TECHNOLOGIES.

F. Removal

If the approved WMA technology is found to adversely affect performance of the asphalt pavement the WMA technology may be removed from the approved list.