

## Warm Mix Additives - Approved Products and Processes

### Effective: 03/25/2024

All products used for this application must be tested through the AASHTO Product Evaluation and Audit Solutions (AASHTO PEAS) and meet the approval criteria below. Foaming processes are exempt from testing. Any change to the approved warm mix additive (in formulation or composition) requires re-evaluation of the material and the new product must receive departmental approval prior to use.

#### WisDOT Warm Mix Additive Approval Criteria:

- PG Binder Grading Test:
  - No loss of PG grade type in AASHTO M320 and M332 Binder Grading Criteria.
  - Examples of changes that would disqualify a product:
    - PG 64-22 becomes a PG 58-22 after addition, modifying the binder.
    - PG 64H-22 becomes a PG 64S-22 after addition.
- TSR (AASHTO T 283):
  - TSR of sample with WMA Product must be at least 95% of or greater than that of the control mix.
    - Example – Control: 0.68, WMA: 0.646 or greater.
  - TSR can't demonstrate a drop in dry or wet strength of greater than 20%.
    - Example – control dry strength is 200 pounds; WMA dry strength must be 160 pounds or greater.
- Hamburg Wheel (AASHTO T 324):
  - HW must have at least 10,000 passes before reaching 12.5mm rut depth.
  - HW SIP must be at least 7,500 passes.

#### New Product/Process Submissions:

Suppliers may request WisDOT evaluation once the AASHTO PEAS testing cycle is complete. AASHTO PEAS test data is acceptable only if it is less than seven years old. Renewal of warm mix additives is required every seven years. Foaming processes are exempt from the AASHTO PEAS and renewal requirements.

When submitting a written request for approval to the department, the following must be included:

- Company Name.
- Physical and mailing addresses.
- Product brand name.
- Contact person's name with email address and phone number.
- NTPEP product identification.

Send submittal information to:

[DOTProductSubmittal@dot.wi.gov](mailto:DOTProductSubmittal@dot.wi.gov)

ATTN: HMA Unit

The department assigns the expiration date based on the date AASHTO PEAS releases the data to the public. The expiration date will be the December 31<sup>st</sup> on or after 7 full years from the test data's public release date (i.e.: A product with a public data release of February 11, 2020, will expire on December 31, 2027, regardless of when the request to be added to the Approved Products List is made).

#### Renewal Submissions:

A written request including the required information for new product submissions for re-approval must be submitted to the department at least two weeks prior to the expiration date for the product to remain on the Approved Products List. In the request for renewal, include updated NTPEP Product Identification corresponding to test results that are less than seven years old. Send renewal information to the same contact listed above for new submittals. The expiration date will be updated as described for new submittals.

<b>Supplier/Manufacturer Name</b>	<b>Product or System ID</b>	<b>Expiration Date</b>
Advanced Concepts Engineering Co.	LEA-CO	N/A
AESCO/Madsen	Eco-Foam II	N/A
All States Materials Group	Sonnewarmix RT	12/31/2027
Arkema   Road Science	WarmGrip Ultra 1 (formerly AD-here ULTRA 1)	12/31/2028
Arkema   Road Science	Cecabase RT	12/31/2028
Astec Industries	Double Barrel Green System	N/A
Cargill	Anova 1501	12/31/2030
Collaborative Aggregates, LLC	Delta S	12/31/2027
Gencor Industries	Green Machine	N/A
Green Paving Solutions	Fastac	12/31/2027
Herman Grant Company	HGrant Warm Mix System	N/A
Ingevity	Evotherm M Series	12/31/2027
Ingevity	Evotherm P Series	12/31/2027
Ingevity	Morlife	12/31/2027
Maxam Equipment Inc.	Aquablack Warm Mix Asphalt	N/A
Meeker Equipment Corp. Inc.	Meeker Warm Mix	N/A
Nouryon	Rediset LQ 1102C	12/31/2025
Nouryon	Rediset LQ-1200A	12/31/2029
Nouryon	Wetfix G400	12/31/2029
Sripath Technologies, LLC	ReLIXER formerly ReJUVN8	12/31/2026
Stansteel	Accu-Shear Dual Warm Mix Additive System	N/A
Tarmac Inc.	Tri-Mix Warm Mix Injection	N/A
Terex Roadbuilding	Warm Mix Asphalt System	N/A
Zydex	ZycoTherm - SP	12/31/2028