

## Warm Mix Additives - Approved Products and Processes

**Effective: 04/13/2023**

All products used for this application must be tested through the AASHTO National Transportation Product Evaluation Program (NTPEP) and meet the following requirements.

### WisDOT WMA NTPEP 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.

Suppliers may request WisDOT evaluation once the NTPEP testing cycle is complete. Suppliers must resubmit chemical products to NTPEP for testing upon any reformulation of the product. A written request for re-approval must be submitted to the department at least two weeks prior to the expiration date for the product to remain in the Approved Products List.

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:

Ali Arabzadeh

Wisconsin Department of Transportation

Bureau of Technical Services, Truax Center

3502 Kinsman Blvd

Madison, WI 53704

[ali.arabzadeh@dot.wi.gov](mailto:ali.arabzadeh@dot.wi.gov) (Note: email is to be used as the primary means of sending this information)

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