AD-HERE® ULTRA CA
Asphalt Mix Performance-Improving Additive

TECHNICAL DATA SHEET

COMPACtion AID WITH LIQUID ANTI-STRIP
ENGINEERED FOR WESTERN UNITED STATES AGGREGATES

AD-HERE ULTRA CA is an asphalt additive that allows for easier field compaction and stronger adhesion of the asphalt binder to aggregate. It safeguards pavements against destructive forces such as traffic loading, water intrusion and oxidation, leading to reduced pothole formation, cracking and rutting for safer, smoother and longer-lasting roads. AD-HERE ULTRA CA chemistry is specifically formulated for the challenging surface chemistry of Western United States igneous and metamorphic paving aggregates, and is used to design mixes that conform to typical specifications including AASHTO T283: Method of Test for Resistance of Compacted Bituminous Mixture to Moisture Induced Damage, AASHTO T324: Method of Test for Hamburg Wheel-Track Testing of Compacted Hot Mix Asphalt (HMA) and AASHTO R35: Standard Practice for Superpave Volumetric Design.

APPLICATIONS

Asphalt Paving

FEATURES

EASIER FIELD COMPACtion
Enables increased mat density with fewer roller passes, even with high recycled asphalt pavement (RAP) mixes

RELIABLE ANTI-STRIPPING EFFECTIVENESS
Passes tensile strength ratio (TSR) and Hamburg Wheel Tracking tests with wide variety of asphalt and aggregate combinations

BETTER MIX WORKABILITY
Enables easier hand-work in paving applications

HEAT STABILITY
Remains effective several weeks in hot asphalt

NO HEATED STORAGE REQUIRED
Easy to handle and pump in cold temperatures

COMPATIBILITY

ASPHALT
Compatible with most asphalts including those modified with styrene-butadiene-styrene (SBS), styrene-butadiene rubber (SBR), ethylene-vinyl acetate (EVA) polymers, ground tire rubber (GTR) and recycled asphalt shingles (RAS)

AGGREGATES
Compatible with various aggregate types including granite, diabase, diorite, basalt, gabbro, rhyolite, andesite, dacite, chert, quartzite, gneiss, limestone, dolomite, marble, sandstone, natural sand and gravel, slag and RAP

USE AD-HERE ULTRA CA WHEN YOU NEED:

• Faster and easier compaction
• To pass TSR and Hamburg tests with the challenging asphalt and aggregate combinations found in the Western U.S.
OPTIONS FOR ADDING AD-HERE ULTRA CA TO ASPHALT:

1. Add to asphalt storage tank and agitate mechanically or through pump circulation
2. Add at asphalt terminal by injecting into asphalt line as transport tanker is being charged
3. Add at asphalt mix plant by in-line injecting into the asphalt line (continuous plant) or weigh hopper (batch plant)

NEAT AND MODIFIED ASPHALTS:

- 0.25 – 0.75% by weight of total asphalt in mix
- Usage rate should be determined by user based on degree of aggregate coating and moisture sensitivity testing at desired production temperature

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PHYSICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Appearance, 77 °F (25 °C)</td>
<td>Dark Colored Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Ammoniacal</td>
</tr>
<tr>
<td>Density, 77 °F (25 °C)</td>
<td>8.4 lb/gal</td>
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<tr>
<td>Viscosity, 77 °F (25 °C)</td>
<td>600 cP</td>
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<tr>
<td>TSCA Inventory</td>
<td>Listed</td>
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<tr>
<td>C.A.S. Number</td>
<td>Proprietary</td>
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</tbody>
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The density and viscosity data reported are typical and not specifications. Typical ranges for density and viscosity values are ± 2 and ± 20%.

HANDLING AND STORAGE

Always handle AD-here ULTRA CA in accordance with Safety Data Sheet (SDS) and Road Science Asphalt Additives Handling and Storage Guidelines document. Avoid product contamination with other materials. Do not store product in excess of 140 °F (60 °C) for prolonged periods. Recommended product handling temperature range is 50 – 120 °F (10 – 50 °C).

AVAILABILITY

AD-here ULTRA CA is available for shipment in bulk by tank truck. Packaged quantities are available in 275 gal/1,000 L IBC totes (2,200 lb/997.9 kg net weight) and 55 gal/208 L steel drums (420 lb/190.5 kg net weight).

TECHNICAL SUPPORT

To request additional product information, contact your regional Road Science representative.
You can also contact us at 918-960-3800 or customerservice@roadscience.net, or visit our website at www.roadscience.net.