NOVAGRIP™ D-771 EU
Next-Generation Bitumen Mix Performance-Improving Additive

WORKER-FRIENDLY LIQUID ANTI-STRIP CHEMISTRY FOR ALL BITUMENS

NovaGrip D-771 EU is a next-generation, worker-friendly liquid anti-strip that extends pavement life by creating powerful chemical adhesion of bitumen to aggregate, protecting them from moisture damage and resultant pavement distresses such as raveling, pothole development and rutting. It is engineered for ultimate robustness and effectiveness, even with the most challenging bitumen and aggregate combinations. NovaGrip D-771 EU 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), AASHTO R35: Standard Practice for Superpave Volumetric Design, and equivalent BS EN test standards, including EN 12697-11: Determination of the affinity between aggregate and bitumen.

APPLICATIONS

Bitumen Paving

USE NOVAGRIP D-771 EU WHEN YOU NEED:
- To eliminate smoke and odor at the terminal, mix plant or jobsite
- Passing TSR and Hamburg results even with challenging bitumen and aggregate combinations
- An additive that works with PPA

FEATURES

NO ODOR AND NO SMOKE
Worker-friendly for improved comfort of plant and paving crew personnel

MOST POWERFUL ANTI-STRIPPING EFFECTIVENESS AVAILABLE
Passes tensile strength ratio (TSR) and Hamburg wheel tests even with the most difficult bitumen and aggregate combinations

WORKS WITH ALL BITUMEN MODIFIERS
Does not affect performance grade of polyphosphoric acid (PPA) modified bitumen

BETTER MIX WORKABILITY
Enables easier hand-work

HEAT STABILITY
Remains effective several months in hot bitumen

COMPATIBILITY

BITUMEN
Compatible with all bitumen types including those modified with polyphosphoric acid (PPA), styrene-butadiene-styrene (SBS), styrene-butadiene rubber (SBR), ethylene-vinyl acetate (EVA) polymers and ground tire rubber (GTR)

AGGREGATES
Compatible with various aggregate types including granite, diabase, diorite, basalt, chert, limestone, dolomite, marble, sandstone, natural sand, slag and recycled asphalt pavement (RAP)
USAGE RECOMMENDATIONS

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

OPTIONS FOR ADDING NOVAGRIP D-771 EU TO BITUMEN:
1. Add to bitumen storage tank and agitate mechanically or through pump circulation
2. Add at bitumen terminal by injecting into bitumen line as transport tanker is being charged
3. Add at bitumen mix plant by injecting into the bitumen line (continuous plant) or weigh hopper (batch plant)

PHYSICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance, 25 °C</td>
<td>Brown</td>
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<tr>
<td>Odor</td>
<td>Mild</td>
</tr>
<tr>
<td>Density, 25 °C</td>
<td>1.02 kg/L</td>
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<tr>
<td>Viscosity, 25 °C</td>
<td>280 cP</td>
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<tr>
<td>TSCA Inventory</td>
<td>Listed</td>
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<tr>
<td>REACH</td>
<td>Compliant</td>
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<tr>
<td>C.A.S. Number</td>
<td>Proprietary</td>
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</tbody>
</table>

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 NovaGrip D-771 EU 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 50 °C for prolonged periods. Recommended product handling temperature range is 21 – 38 °C.

AVAILABILITY

NovaGrip D-771 EU is available in 1,000 L IBC totes (997.7 kg net weight) and 208 L plastic drums (199.5 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.

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