ColdGrip™ IQ
Cold Mix Performance-Improving Additive

TECHNICAL DATA SHEET

SMARTER CHEMISTRY FOR EASIER COATING AND STRONGER STRIPPING PROTECTION

ColdGrip IQ is a performance-improving additive engineered to enhance the coating and adhesion of cutback asphalt with aggregates used in cold mix applications. It aids in mixing by enabling the cutback to coat cool, wet and dusty stone quickly and easily, both in the mix plant or by means of a field pugmill. ColdGrip IQ prolongs the life of roads and patches by protecting against moisture damage and stripping.

APPLICATIONS
Cold Patch Stockpile Mix
Cold Mix Paving

FEATURES AND BENEFITS
LONGER PATCH AND PAVEMENT LIFE
Binds cutback to aggregate which keeps water out eliminating stripping, raveling and premature failures prolonging the life of patches and roads

EASIER COATING OF COOL, WET AND DUSTY AGGREGATES
Chemically transforms cutback to easily coat cool, wet, dusty aggregates thus eliminating headaches, wasted time and added costs due to coating challenges.
Broadens the range of aggregates that can be used including more cost-effective aggregates previously not utilized due to coating difficulties

STRONGER PROTECTION AGAINST STOCKPILE STRIPPING
Makes cutback cling to aggregate for exceptional film thickness, guarding stockpiles against major rain event-induced stripping, and eliminating repackaging and wasted material costs.

LONGER STOCKPILE LIFE
Preserves stockpile workability of the cold patch mix over an extended period of time

EASIER HANDLING & BETTER VISCOSITY
Low viscosity additive for operational convenience even when outside temperatures are below freezing

COMPATIBILITY
ASPHALT CUTBACKS
Compatible with all types of asphalt cutbacks

SOLVENTS
Compatible with all commonly used petroleum-based distillates used in formulating cutbacks

REJUVENATORS
Compatible with Revive CM, a low volatile organic compound (VOC), recycled asphalt pavement (RAP) extending rejuvenator additive for cold mixes

POLYMER MODIFIERS
Compatible with most polymers including styrene-butadiene rubber (SBR) and styrene-butadiene styrene (SBS)

AGGREGATES
Compatible with various mineralogies including granite, diabase, diorite, basalt, traprock, chert, limestone, dolomite, marble, sandstone, slag and RAP

USE COLDGRIP IQ IF YOU WANT:
- Longer lasting, more durable cold patch
- Easier mixing and coating in field with pugmill
- To eliminate stockpile stripping
- Easy-to-handle product in freezing temperatures

6502 South Yale Avenue, Tulsa, OK 74136
918-960-3800 | www.roadscience.net
TYPICAL CUT-BACK FORMULATION:

<table>
<thead>
<tr>
<th>ColdGrip IQ</th>
<th>Revive CM</th>
<th>Petroleum Distillate</th>
<th>Asphalt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cold Patch Stockpile Mix</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.0 - 3.0% bwac</td>
<td>15 - 30% bwcb</td>
<td>0</td>
<td>70 - 85% bwcb</td>
</tr>
<tr>
<td>1.0 - 3.0% bwac</td>
<td>0</td>
<td>15 - 30% bwcb</td>
<td>70 - 85% bwcb</td>
</tr>
<tr>
<td>Cold Mix Paving</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.0 - 2.0% bwac</td>
<td>10 - 15% bwcb</td>
<td>0</td>
<td>85 - 90% bwcb</td>
</tr>
<tr>
<td>1.0 - 2.0% bwac</td>
<td>0</td>
<td>10 - 15% bwcb</td>
<td>85 - 90% bwcb</td>
</tr>
</tbody>
</table>

bwac – by weight of asphalt.
bwcb – by weight of cutback.
Typical asphalt grade is PG58-22 or 100-150 pen.
Revive CM recommended if mix contains RAP.

*Usage rate should be determined based on:
1. Degree and ease of aggregate coating during mixing at desired production temperature
2. Testing to assess moisture damage resistance of the cold mix

OPTIONS FOR ADDING COLDGRIP IQ**:
1. Add to asphalt or cutback storage tank and agitate mechanically or through pump circulation
2. Add at asphalt terminal by injecting into asphalt or cutback line as transport tank is being charged
3. Post-add to cutback by inline injecting upstream from static mixer

**Preferred and most efficient option is adding directly to the asphalt.

PHYSICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance, 77°F (25°C)</td>
<td>Dark-Colored Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild</td>
</tr>
<tr>
<td>Density, 77°F (25°C)</td>
<td>7.73 lb/gal (0.93 kg/L)</td>
</tr>
<tr>
<td>Viscosity, 77°F (25°C)</td>
<td>200 cP</td>
</tr>
<tr>
<td>Pour Point</td>
<td>&lt; 15°F (-9°C)</td>
</tr>
<tr>
<td>TSCA Inventory</td>
<td>Listed</td>
</tr>
<tr>
<td>C.A.S. Number</td>
<td>Proprietary</td>
</tr>
</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 ColdGrip products 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 greater than 28°F (-2°C).

AVAILABILITY

ColdGrip IQ is available for shipment in bulk by rail car and tank truck. Packaged quantities are available in 275 gal/1,000 L IBC totes (2,000 lb/907.2 kg net weight) and 55 gal/208 L metal drums (400 lb/181.4 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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