LL10 & LL20 Water Repellents

DESCRIPTION:
KARNAK LL10 & LL20 are environmentally friendly colorless silane modified siloxane emulsions manufactured for use as masonry water repellents. They are formulated for deep penetration which enables surfaces to shed water effectively.

The active material penetrates into the substrate and condenses to give hydrophobic characteristics to the substrate. The reaction does not substantially affect the water vapor permeability of the treated surfaces.

USES:
LL10 & LL20 are water repellents designed specifically for use on fresh concrete and similar alkaline substrates. Neutral substrates will require longer curing times to develop similar water repellent characteristics.

SURFACE PREPARATION:
Application of the LL10 & LL20 solution should be made onto a clean, dry surface free of oil, grease, dirt, laitance and adhesion-inhibiting materials.

APPLICATION:
LL10 & LL20 (stir before using) can easily be applied by brushing or spraying until the surface is saturated. Full curing requires 7 - 10 days.

Apply the solution by starting at the top of the structure and working downward. Avoid rundown or drips.

Application should be made at temperatures of 40°F and rising.

Examples of application fields:
• Facades
• Pre-cast concrete
• Roadways
• Bridges
• Clay tile
• Field stone
• Stucco, brick, terra-cotta

COVERAGE RATE:
Apply at a rate of 125-175 square feet per gallon.

SPECIFICATION:
Fed Spec SS-W-11OC; NCHRP 244 Series II
LL10 & LL20 Water Repellents

PHYSICAL PROPERTIES:

<table>
<thead>
<tr>
<th>ACTIVE MATTER</th>
<th>LL10</th>
<th>LL20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density, #/ga</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td>VOC (ethanol by reaction)</td>
<td>8.3</td>
<td>8.3</td>
</tr>
</tbody>
</table>

PERFORMANCE:

- Prevents concrete corrosion by blocking salt penetration
- Water repellency
- Effective protection, even in wind-driven rain
- Good penetration
- Reduction of salt blooming
- Non-tacky finish
- Normally, no visible change of surface
- Prevents spalling

TEST RESULTS:


Water Repellant Chart (Absorption vs. Control)

Uncoated 24 hr. Absorption%, Coated 72 hr. Absorption %, Absorption Reduction %;
LL10 (10%) 8.4, 0.97, 88.0; LL20 (20%) 8.3, 0.63, 92.0

NCHRP 244 Series II Results

Chloride Ion (Salt) Intrusion LL10 84%, LL20 90%
CAUTION:
Do not apply when rain is imminent. Protect from freezing. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Do not thin. Cover air intakes during application and while drying.

Keep out of reach of children. Avoid prolonged contact with skin. Wear protective eye wear. Dispose of in an environmentally safe manner. For additional information refer to the SDS sheet.

Do not store material at extreme temperature, below 32°F (0°C) or above 125°F (50°C) for any length of time.

LL10 and LL20 has a shelf life of 12 months from date of delivery when stored in unopened containers at room temperatures.

PACKAGING:
Available in 5 gallon pails and 55 gallon drums.

If further information is needed, contact KARNAK Technical Services at 1-800-526-4236.