VAPORTIGHT COAT®-SG3
100% Solids, Moisture mitigation and pH barrier coating

CSI Div. 07 + 09
07 26 00 VAPOR RETARDERS
09 96 56 EPOXY COATINGS

LEED Points
IEQ Credit 4.2, Low-Emitting Materials, Paints & Coatings: 1 Point
Using this AQUAFIN product can help contribute to LEED certification of projects in the categories shown above.

Product Description:
VAPORTIGHT COAT®-SG3 is a unique 2-component, moisture tolerant, low viscosity, solvent free, chemically enhanced epoxy based product which reduces the passage of water vapor and moisture through slabs on, below and above grade as well as split slabs, thus eliminating delamination of adhesives, floor coverings and coatings. SG3 meets or exceeds the requirements of ASTM F3010-13 Standard Practice for Two-Component Resin Based Membrane-Forming Moisture Mitigation Systems for Use Under Resilient Floor Coverings.

Typical Applications:
• Indoor and outdoor, new and existing concrete slabs: on grade, above grade, below grade and split slabs, old cementitious underlayment (no gypsum) and ceramic tiles with missing or damaged under-slab vapor barriers.
• Industrial/retail facilities, office buildings, supermarkets, food processing plants, airplane hangars, hospitals, schools, etc.
• Use VAPORTIGHT COAT-SG2 for capillary infiltration of oil or other chemicals from the ground or to treat oil-contaminated slabs or radon infiltration.

Advantages:
• One coat system - No sand broadcast
• Low viscosity, solvent free, no VOC’s
• For slabs with MVER up to 25 lbs and RH up to 100%
• ASTM E 96 perm rating ≤0.10
• Flooring system installed next day
• Can be applied to damp & green concrete (min. 5 days old)
• High alkalinity barrier (pH 14)
• Compatible with most flooring systems
• Does not support mold growth
• Great for indoor applications: low odor and non-flammable.
• SG3 passed Indoor Air Quality Material Emissions Test as per DIN EN ISO 16000 [Report CT-10-06-2201:250005/2-3]

Testing Concrete Slabs for Contaminants:
AquaFin recommends testing slabs with unknown history, as well as slabs with previously failed flooring systems, for contaminants (i.e. hydrocarbons, other organic compounds, un-reacted water soluble silicates, chlorides, ASR, Sulfurous compounds, etc.) to determine suitability of SG3. Provide Ion Chromatography and IR Spectroscopy data to AquaFin before commencing application. A separation screed may be required.

Moisture Vapor Emission Testing:
AquaFin recommends testing to determine moisture vapor emission rate [MVER] including “Anhydrous Calcium Chloride” testing as per ASTM F 1869-11 on slabs to be treated, to determine the MVER in lb/1000 ft²•24 hrs [grams/m²•hr] and to determine RH content (%) as per ASTM F 2170. This testing can be used to determine application rate of material required to obtain AQUAFIN warranty.

Check our website for the latest version of the Technical Datasheet.
www.aquafin.net
Substrate Preparation:

- Concrete must be a minimum of 5 days old or have reached a minimum 2,500 psi (17 MPa) compressive strength, to be treated with SG3.
- Concrete must be clean, sound and have an "open"/absorptive surface ("tooth and suction"). All slabs must be mechanically prepared (i.e. Shot blast) to a concrete surface profile (CSP) 3 – 5 per the International Concrete Repair Institute (ICRI) Guideline No. 301-2R. 2013. Acid etching is not allowed, broom finish on new slabs is not acceptable. Burn off any reinforcing fibers and vacuum remains.
- Remove glaze from "quarry tiles".
- After surface preparation, check slab surface with the water drop method. Pour a drop of water about the size of a dime in several places. If the water beads, the surface is not absorptive and requires additional preparation or core extraction and testing. If the water "wets out" or penetrates the concrete within 30 – 60 seconds the surface is ready to receive the SG3 treatment.
- Material should be minimum 60°F (15°C) at time of mixing.
- Use chemical resistant gloves and goggles when mixing or applying.
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- Pressure sensitive adhesives installed directly over SG3 require a longer "tack" time than listed on manufacturer’s literature to prevent adhesive failure when trapped rising moisture activates these compounds and/or solvent entrapment.
- Many flooring systems require a more level or smooth surface. In such cases an application of a self-leveling cementitious underlayment (minimum 1/8" (3 mm) thickness) is required to provide a proper substrate for the floor covering and the adhesive (See Aquafin LEVEL-Ultra TDS).
- Exterior Applications: Top coatings (i.e. epoxy, terrazzo, urethane) and flooring systems (i.e. VCT, sheet vinyl, carpet, wood) must be applied within 12 hrs - 5 days.
- Underlayment's and Patching:
  - Patching, repair mortars are to be used, the manufacturer’s recommended primer or Aquafin SLU-PRIMER must be applied over SG3.
  - Do not apply flooring system if SG3 surface is wet due to dew point or other causes.

Mixing:

SG3 is supplied in the appropriate mixing ratio (Comp-A = resin, Comp-B = hardener). Always mix full units.
- Use chemical resistant gloves and goggles when mixing or applying.
- Material should be minimum 60°F (15°C) at time of mixing.
- 1. For 4.6 & 2.7 gal kits only (7.3 gal kit packaged separate A&B containers): Pierce a hole through the rubber membrane in the lid and continue through the bottom of "lid well". Assure Part B completely drains into Part A.
- 2. Stir mixture for approx. 5 minutes to a homogenous, streak free consistency, using a slow speed drill (~300 rpm) with a PS Jiffy blade. Avoid entrapping air. Ensure that the material at the bottom and sides are scraped and thoroughly mixed.
- Pour mixed material from the mixing container into another, clean container and carefully mix for additional 30 seconds.
- 3. Follow with a non-shed roller, back rolling at right angle (90 degrees) to the squeegee application to achieve uniform coverage and let product cure for minimum 12 hours.

Application:

- Underlayment's and Patching:
  - Patching, repair mortars are to be used, the manufacturer’s recommended primer or Aquafin SLU-PRIMER must be applied over SG3.
  - Do not apply flooring system if SG3 surface is wet due to dew point or other causes.
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Water-Vapor Transmission Treatment:

1. Remove existing floor coverings, coatings, adhesives, curing compounds, efflorescence, dust, grease, laitance, etc. down to bare concrete with steel shot blasting, scarifying or grinding using a diamond cup blade (run with low RPM and assure that surface is profiled).
2. Repair cracks with a suitable patching mortar or SG3 mixed with 5 parts by volume of oven-dried sand.
3. Install cementitious underlayment’s or leveling mortars on top of SG3.

Packaging and Shelf Life:

- Shelf life is 2 years in closed, original packaging, stored in a dry, cool place.
- 0.24 gal/2.2 lb (0.9 L/1.0 kg) kit [special order only]
- 2.4 gal/22 lb (9.2 L/10 kg) kit
  - A-Comp: 1.5 gal/14.48 lb (5.8 L/6.58 kg)
  - B-Comp: 0.9 gal/7.52 lb (3.4 L/3.42 kg)
- Exterior Applications: Top coatings (i.e. epoxy, terrazzo, urethane) and flooring systems (i.e. VCT, sheet vinyl, carpet, wood) must be applied within 12 hrs - 5 days.
- Exterior Applications: Top coatings such as epoxy, urethane traffic membranes, must be applied within 24 hrs - 36 hrs.
- If re-treat "outgassing channels" and pin-holes by sanding surface, and cleaning with hot water. Make sure surface is dry and re-apply SG3. 5. Immediately clean all equipment and tools with mineral spirits.

Acid Blast: Any concrete floor must be free of any paint, epoxy, coating, or admixtures that may prevent the SG3 effective application. Metal shot blasting is the only method to remove these compounds without damaging the surface. If cement based toppings, such as underlayments, screeds, "flash" membranes, must be applied within 24 hrs - 36 hrs.
- Note: This method does not replace pre-testing of concrete cores. A test application is highly recommended on existing slabs to determine adhesion (i.e. Elcometer, etc.).
- Pressure sensitive adhesives installed directly over SG3 require a longer "tack" time than listed on manufacturer’s literature to prevent adhesive failure when trapped rising moisture activates these compounds and/or solvent entrapment.
- Many flooring systems require a more level or smooth surface. In such cases an application of a self-leveling cementitious underlayment (minimum 1/8" (3 mm) thickness) is required to provide a proper substrate for the floor covering and the adhesive (See Aquafin LEVEL-Ultra TDS).
- Exterior Applications: Top coatings such as epoxy, urethane traffic membranes, must be applied within 24 hrs - 36 hrs.
- If recoat time is missed, SG3 surface must be sanded, cleaned with hot water, and allowed to dry, before application of flooring systems or top coatings.
- Underlayment’s and Patching:
  - Patching, repair mortars are to be used, the manufacturer’s recommended primer or Aquafin SLU-PRIMER must be applied over SG3.
  - Do not apply flooring system if SG3 surface is wet due to dew point or other causes.
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VAPORTIGHT COAT®-SG3

Special order size:
• 7.3 gal/65.59 lb (27.5 L/30 kg) kts
  A-Comp: 4.6 gal/41.06 lb (17.3 L/18.87 kg)
  B-Comp: 2.7 gal/24.53 lb (10.2 L/11.13 kg).

Limitations:
• Do not apply over gypsum based substrates.
• Post-cracking of the concrete, slab warping or warping relaxation at
  Limitations:
  • Do not spray apply SG3.
  • Post-cracking of the concrete, slab warping or warping relaxation at
    joints or cracks after installation of the SG3 may cause a breach in the
    coating and void warranty.
  • Do not apply over gypsum based substrates.
  • Do not alter mixing ratios, thin or mix with Cab-O-Sil.
  • Call Aquafin Technical Department for slabs with floor heating systems
    or installation recommendations for any substrates and conditions not
    listed.

Note:
Installer is responsible for proper product application. Site visits by Aquafin
personnel or representatives are solely for the purpose of making technical
recommendations, not for providing supervision or quality control. This
product is not sold to the Do-it-Yourself market. For Professional Use
Only.

SG3 Application Rates per ASTM F-1869 (CaCl) & F-2170 or ASTM F-2420 (RH - Relative Humidity):

<table>
<thead>
<tr>
<th>Moisture vapor emission rate (MVER): listed by lbs./1000 ft² * 24hrs</th>
<th>RH: listed by percentage (%)</th>
<th>No. of coats</th>
<th>Application rate ft²/gal (kg/m²)</th>
<th>~Thickness mils</th>
<th>~Yield: 2.4 gal (9.2L) ft² m²</th>
<th>~Yield: 7.3 gal (27.5 L) m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>up to 10 lbs</td>
<td>&lt;85%</td>
<td>1</td>
<td>155</td>
<td>10</td>
<td>370</td>
<td>1,130</td>
</tr>
<tr>
<td>10 - 15 lbs</td>
<td>85 - 90%</td>
<td>1</td>
<td>130</td>
<td>12</td>
<td>310</td>
<td>950</td>
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<td>15 - 25</td>
<td>90 - 100%</td>
<td>1</td>
<td>100</td>
<td>16</td>
<td>240</td>
<td>730</td>
</tr>
<tr>
<td>Stand-alone coating on slabs</td>
<td></td>
<td>1</td>
<td>90</td>
<td>18</td>
<td>215</td>
<td>665</td>
</tr>
<tr>
<td>New concrete (min. 5 days old)</td>
<td></td>
<td>1</td>
<td>100</td>
<td>16</td>
<td>240</td>
<td>730</td>
</tr>
</tbody>
</table>

Walls: contact our technical dept. Note: all values theoretical. Application thicknesses are approximate. Some variations may apply due to porosity and absorption of
substrate.

Sample Water Vapor Transmission Reduction

Test : ASTM E 96

Water Vapor Transmission:
• lbs./1000 ft² * 24 hrs
  24.08

Vapor Permeance:
• grains/hour/ft²/in.Hg
  3.17

Check our website for the latest version of the Technical Datasheet. Only the current version is legally binding - and only for the intended market. In cases of uncertainty
contact our technical department for further information before starting any applications.

www.aquafin.net

Limited Warranty: AQUAFIN, INC. warrants its products to be manufactured free of defects for one year and to be consistent with its standard high quality. We will replace or, at
our election, refund the purchase price of, any product which is proven to be defective, provided
that the product was properly applied. Our product recommendations are based on Industry
Standards and testing procedures. We assume no warranties either written, expressed or implied
as to any specific methods of application or use of the product. AQUAFIN, INC. MAKES NO
WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND
THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED. AQUAFIN,
INC. shall not be liable for damages of any sort including remote or consequential damages,
down-time, or delay. Contact Aquafin for information on extended warranty's.

Safety: Refer to SDS.
Part A - irritating, sensitizer - contains epoxy resins.
Part B - corrosive, sensitizer - contains amines.

Keep Out of Reach of Children.
Spills: Ventilate area. Contain and collect spillage with noncombustible,
absorbent materials (i.e. sand, vermiculite, universal binders, sawdust,
etc.) and place in container for disposal. Emergency procedures are not
required. Dispose of in accordance with current local, state and federal
regulations. VOC limit: This product is well below the allowable EPA limits
as stated in 40 CFR Part 59.

VAPORTIGHT COAT-SG2 or SG3

Environmental Considerations:
AQUAFIN, INC.
Product Systems

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