

## MATERIAL SAFETY DATA SHEET

<b>SECTION 1: CHEMICAL PRODUCT &amp; COMPANY IDENTIFICATION</b>			
<b>Material Identification:</b> MicroGuard AD35 HVAC/R Coil & Fin Clear Treatment (Part A)			
<b>Adsil, Inc.</b> <b>1901 Mason Avenue, Suite 101</b> <b>Daytona Beach, FL 32117</b>	<b>386-274-1382 PHONE</b> <b>386-274-1798 FAX</b> <b>CHEMTREC: 1-800-424-9300</b>		
<b>SECTION 2: OSHA HAZARDOUS COMPONENTS</b>			
<u>C.A.S. Number(s)</u>	<u>Wt%</u>	<u>Components</u>	<u>Exposure Limits</u>
Proprietary – Mixture	98%	Alkoxysilanes	No exposure limits established
67-56-1	2%	Methyl Alcohol	TWA 200 ppm, STEL 250 ppm ACGIH TLV-skin TWA 200 ppm
The above components are hazardous as defined in 29 CFR 1910.1200.			
NFPA/HMIS Code: Health 1, Flammability 3, Reactivity 0			
<b>SECTION 3: PHYSICAL DATA FOR MATERIAL</b>			
<p><b>pH:</b> Not Applicable (non-aqueous)</p> <p><b>Solubility in water:</b> None</p> <p><b>Appearance:</b> Clear Colorless Liquid</p> <p><b>Odor:</b> Strong Odor</p> <p><b>Specific Gravity @ 25° C:</b> 0.95</p> <p><b>Boiling Point:</b> &gt;35° C., &gt;95° F.</p> <p><b>VOC Content:</b> 709 g./liter (Components A, B, C mixed); Method 24</p>			
<b>SECTION 4: FIRE &amp; EXPLOSION HAZARD OF MATERIAL</b>			
<p><b>Flash Point:</b> 46.9° F./8.3° C.</p> <p><b>Fire Hazards:</b> Static electricity may accumulate and ignite vapors. Prevent a possible fire hazard by suitable means such as bonding and grounding, inert gas purge, vapor dilution and the like. Vapors are heavier than air and can travel along the ground to remote ignition sources.</p> <p><b>Unusual Fire Hazards:</b> Thermal breakdown of this product during fire or very high heat conditions may evolve the following hazardous decomposition products; Silicon Dioxide, Carbon Dioxide and traces of incompletely burned carbon compounds, Formaldehyde.</p> <p><b>Extinguishing Media:</b> Carbon Dioxide (CO<sub>2</sub>), Water Fog, Dry Chemical.</p> <p><b>Fire Fighting Procedures:</b> Self contained breathing apparatus and protective clothing should be worn in fighting fires involving chemicals. Heat exposure pressurizes closed containers. Evacuate the area in cases of overheating or fire.</p>			
<b>SECTION 5: HEALTH &amp; HAZARD DATA</b>			
<p><b>Eye Contact:</b> Causes eye irritation.</p> <p><b>Skin Contact:</b> Causes skin irritation.</p> <p><b>Inhalation:</b> Spray mist causes damage to respiratory tract.</p> <p><b>Ingestion:</b> Product generates methyl alcohol, which may cause blindness and possibly death, if swallowed.</p> <p><b>Signs &amp; Symptoms of Exposure:</b> Burning pain in the nose and throat (inhalation), pain, redness and tearing (eye exposure), itching or burning (skin exposure).</p>			

**Special Hazards:** Carcinogens – none known  
 Teratogens – none known  
 Mutagens – none known  
 Reproductive Toxins – none known  
 Sensitizers – When heated to temperatures above 150° C., in the presence of air, product can form formaldehyde vapors. Formaldehyde is a potential cancer hazard, a known skin and respiratory sensitizer and an irritant to the eyes, nose, throat, skin and digestive system.

**Warning:** Product will give off additional methyl alcohol when exposed to moisture or humid air.

**Comments:** Methyl Alcohol forms on contact with water or humid air. Provide adequate ventilation to control exposures within guidelines or OSHA PEL:  
 TWA 200 ppm and ACGIH TLV-skin TWA 200 ppm, STEL 250 ppm.

### **SECTION 6: FIRST AID MEASURES**

**Eyes:** Immediately flush with water for 15 minutes. Get medical attention.

**Skin:** No first aid should be needed.

**Inhalation:** Remove to fresh air. Get medical attention if ill effects persist.

**Oral:** Get immediate medical attention. If conscious, give lukewarm water (pint or ½ liter) to dilute ingested material. Do not induce vomiting. Lie down, keep warm and cover eyes to exclude light.

**Comments:** Treat same as methyl alcohol poisoning.

### **SECTION 7: REACTIVITY DATA**

**Stability:** Stable

**Hazardous Polymerization:** Will not occur.

**Conditions to Avoid:** None

**Materials to Avoid:** Concentrated nitric and sulfuric acids, strong oxidizers, aldehydes, halogens and halogen compounds.

### **SECTION 8: LEAK OR SPILL INFORMATION**

**Containment/Clean-up:** Disposal of collected product, residues and clean up materials may be governmentally regulated. Observe all applicable local, state and federal waste management regulations. Remove possible ignition sources and if needed, use non-sparking tools and equipment. To prevent possible spontaneous combustion, store rags, mops, absorbent, etc; used during clean up in appropriate containers or covered with water. Mop, wipe or soak up with absorbent material and contain for salvage or disposal. For large spills, provide diking or other appropriate containment to keep material from spreading. Clean any remaining slippery surfaces by appropriate techniques, such as washing with mild, caustic detergents or solutions, or high-pressure steam for larger surface areas. Observe any safety precautions applicable to the cleaning material used.

### **SECTION 9: SPECIAL PROTECTION INFORMATION**

**Respiratory Protection:** Use respiratory protection, unless adequate local exhaust ventilation is provided or air-sampling data show exposures are within recommended exposure guidelines; NIOSH – black cartridge, minimum.

**Gloves:** No special precautions are needed. Wash at mealtime or end of shift.

**Eye Protection:** Safety glasses at minimum.

**Protective Equipment:** Eye wash station (bottle) should be within direct access of work area.

**Personal Hygiene:** Do not get in eyes or on clothing. Avoid contact with skin. Wash thoroughly after handling. Wash contaminated clothing before reuse.

**SECTION 10: TRANSPORT INFORMATION****DOT Information** (49 CFR 172.101)**Proper Shipping Name:** COATING SOLUTION**Hazard Technical Name:** ALKOXYSILANES**Hazard Class:** 3**UN Number:** UN1139**Packing Group:** II**SECTION 11: HANDLING & STORAGE****Handling:** No special precautions are needed.**Storage:** Keep container closed and stored away from heat, sparks and open flame. Store away from water or moisture.**SECTION 12: REGULATORY INFORMATION****TSCA Status:** All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.**EPA SARA Title III Chemical Listings:****Section 302 CERCLA Extremely Hazardous Substances:** None**Section 304 CERCLA Hazardous Substances:** None**Section 312 Hazard Class:**

Acute: Yes

Chronic: Yes

Fire: Yes

Pressure: No

Reactive: No

**Section 313 Toxic Chemicals:**

<u>CAS Number</u>	<u>Wt%</u>	<u>Component Name</u>
67-56-1	2.0	Methyl Alcohol

**Supplemental State Compliance Information: California****Warning:** This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

None known.

**Revision Date:** 05/07**Prepared by:** Adsil - MSDS Coordinator  
Daytona Beach, Florida 32117  
PH: 386-274-1382

## MATERIAL SAFETY DATA SHEET

<b>SECTION 1: CHEMICAL PRODUCT &amp; COMPANY IDENTIFICATION</b>			
<b>Material Identification:</b> MicroGuard AD35 HVAC/R Coil & Fin Clear Treatment (Part B)			
<b>Adsil, Inc.</b> <b>1901 Mason Avenue, Suite 101</b> <b>Daytona Beach, FL 32117</b>		<b>386-274-1382 PHONE</b> <b>386-274-1798 FAX</b> <b>CHEMTREC: 1-800-424-9300</b>	
<b>SECTION 2: OSHA HAZARDOUS COMPONENTS</b>			
<u><b>C.A.S. Number(s)</b></u>	<u><b>Wt%</b></u>	<u><b>Components</b></u>	<u><b>Exposure Limits</b></u>
7732-18-5	96% - 98%	Distilled Water	Not Applicable
64-19-7	2% - 4%	Acetic Acid	TWA 10 ppm, STEL n/e
NFPA/HMIS Code: Health 0, Flammability 0, Reactivity 0			
<b>SECTION 3: PHYSICAL DATA FOR MATERIAL</b>			
<p><b>pH:</b> 4.0 (+/- 0.5)  <b>Solubility in water:</b> N/A  <b>Appearance:</b> Clear Liquid (colorless)  <b>Odor:</b> Slight Vinegar  <b>Specific Gravity @ 25° C:</b> 1.00  <b>Boiling Point:</b> 100° C., 212° F.  <b>VOC Content:</b> None</p>			
<b>SECTION 4: FIRE &amp; EXPLOSION HAZARD OF MATERIAL</b>			
<p><b>Flash Point:</b> N/A  <b>Fire Hazards:</b> None  <b>Unusual Fire Hazards:</b> None  <b>Extinguishing Media:</b> Not Flammable.  <b>Fire Fighting Procedures:</b> N/A</p>			
<b>SECTION 5: HEALTH &amp; HAZARD DATA</b>			
<p><b>Eye Contact:</b> May cause moderate eye irritation.  <b>Skin Contact:</b> May cause mild skin irritation.  <b>Inhalation:</b> None  <b>Ingestion:</b> None  <b>Signs &amp; Symptoms of Exposure:</b> None  <b>Special Hazards:</b> Carcinogens – none known                                    Teratogens – none known                                    Mutagens – none known                                    Reproductive Toxins – none known</p>			
<b>SECTION 6: FIRST AID MEASURES</b>			
<p><b>Eyes:</b> None  <b>Skin:</b> None  <b>Inhalation:</b> None  <b>Oral:</b> None  <b>Comments:</b> No first aid measures should be needed.</p>			

<b>SECTION 7: REACTIVITY DATA</b>
<b>Stability:</b> Stable <b>Hazardous Polymerization:</b> Will not occur. <b>Conditions to Avoid:</b> None <b>Materials to Avoid:</b> None
<b>SECTION 8: LEAK OR SPILL INFORMATION</b>
<b>Containment/Clean-up:</b> Not applicable.
<b>SECTION 9: SPECIAL PROTECTION INFORMATION</b>
<b>Respiratory Protection:</b> None <b>Gloves:</b> None <b>Eye Protection:</b> None <b>Protective Equipment:</b> None <b>Personal Hygiene:</b> None
<b>SECTION 10: TRANSPORT INFORMATION</b>
<b>DOT Information (49 CFR 172.101)</b>  Not a regulated material.
<b>SECTION 11: HANDLING &amp; STORAGE</b>
<b>Handling:</b> No special precautions.  <b>Storage:</b> Protect from freezing.
<b>SECTION 12: REGULATORY INFORMATION</b>
<b>EPA SARA Title III Chemical Listings:</b>  <b>Section 302 CERCLA Extremely Hazardous Substances:</b> None  <b>Section 304 CERCLA Hazardous Substances:</b> None  <b>Section 312 Hazard Class:</b> Acute: No Chronic: No Fire: No Pressure: No Reactive: No  <b>Section 313 Toxic Chemicals:</b> None  <b><u>Supplemental State Compliance Information: California</u></b>  <b>Warning:</b> This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.  None known.
<b>Revision Date:</b> 02/07 <b>Prepared by:</b> Adsil - MSDS Coordinator Daytona Beach, Florida 32117 PH: 386-274-1382

## MATERIAL SAFETY DATA SHEET

<b>SECTION 1: CHEMICAL PRODUCT &amp; COMPANY IDENTIFICATION</b>			
<b>Material Identification:</b> MicroGuard AD35 HVAC/R Coil & Fin Clear Treatment (Part C)			
<b>Adsil, Inc.</b> <b>1901 Mason Avenue, Suite 101</b> <b>Daytona Beach, FL 32117</b>	<b>386-274-1382 PHONE</b> <b>386-274-1798 FAX</b> <b>CHEMTREC: 1-800-424-9300</b>		
<b>SECTION 2: OSHA HAZARDOUS COMPONENTS</b>			
<u><b>C.A.S. Number(s)</b></u>	<u><b>Wt%</b></u>	<u><b>Components</b></u>	<u><b>Exposure Limits</b></u>
67-63-0	36-38%	Isopropyl Alcohol	TWA 400 ppm, STEL 500 ppm
52125-53-8	28-32%	Glycol Ether PE	Not Established
1569-01-3	28-32%	Glycol Ether PNP	Not Established
NFPA/HMIS Code: Health 1, Flammability 3, Reactivity 0			
<b>SECTION 3: PHYSICAL DATA FOR MATERIAL</b>			
<p><b>pH:</b> Not Applicable (non-aqueous)</p> <p><b>Solubility in water:</b> Complete</p> <p><b>Appearance:</b> Clear Liquid (colorless)</p> <p><b>Odor:</b> Strong Odor (alcohol)</p> <p><b>Specific Gravity @ 25° C:</b> 0.79</p> <p><b>Boiling Point:</b> 88° C., 190° F.</p> <p><b>VOC Content:</b> 709 g./liter (Components A, B, C mixed); Method 24</p>			
<b>SECTION 4: FIRE &amp; EXPLOSION HAZARD OF MATERIAL</b>			
<p><b>Flash Point:</b> 58.0° F./12.8° C</p> <p><b>Fire Hazards:</b> Static electricity may accumulate and ignite vapors. Prevent a possible fire hazard by suitable means, such as bonding and grounding, inert gas purge, vapor dilution and the like. Vapors are heavier than air and can travel along the ground to remote ignition sources.</p> <p><b>Unusual Fire Hazards:</b> Thermal breakdown of this product during fire or very high heat conditions may evolve the following hazardous decomposition products; Silicon Dioxide, Carbon Dioxide and traces of incompletely burned carbon compounds, Nitrogen Oxides, Formaldehyde.</p> <p><b>Extinguishing Media:</b> Carbon Dioxide (CO<sub>2</sub>), Water Fog, Dry Chemical.</p> <p><b>Fire Fighting Procedures:</b> Self contained breathing apparatus and protective clothing should be worn when fighting fires involving chemicals. Heat exposure pressurizes closed containers. Evacuate the area in cases of overheating or fire.</p>			
<b>SECTION 5: HEALTH &amp; HAZARD DATA</b>			
<p><b>Eye Contact:</b> Causes eye irritation.</p> <p><b>Skin Contact:</b> Causes skin irritation.</p> <p><b>Inhalation:</b> Spray mist causes damage to the respiratory tract.</p> <p><b>Ingestion:</b> Product generates methyl alcohol, which may cause blindness and possible death, if swallowed.</p> <p><b>Signs &amp; Symptoms of Exposure:</b> Burning pain in the nose and throat (inhalation), pain, redness and tearing (eye exposure), itching or burning (skin exposure).</p>			

**Special Hazards:** Carcinogens – none known  
 Teratogens – none known  
 Mutagens – none known  
 Reproductive Toxins – none known  
 Sensitizers – When heated to temperatures above 150° C., in the presence of air, product can form formaldehyde vapors. Formaldehyde is a potential cancer hazard, a known skin and respiratory sensitizer and an irritant to the eyes, nose, throat, skin and digestive system.

#### **SECTION 6: FIRST AID MEASURES**

**Eyes:** Immediately flush with clean water for 15 minutes. Get medical attention.

**Skin:** No first aid should be needed.

**Inhalation:** Remove to fresh air. Get medical attention, if ill effects persist.

**Oral:** Get immediate medical attention. Do not induce vomiting. If conscious, give lukewarm water (pint or ½ liter) to dilute ingested material. Lie down, keep warm and cover eyes to exclude light.

**Comments:** Treat the same as methyl alcohol poisoning.

#### **SECTION 7: REACTIVITY DATA**

**Stability:** Stable

**Hazardous Polymerization:** Will not occur.

**Conditions to Avoid:** None

**Materials to Avoid:** Strong oxidizing material can cause a reaction. Water, moisture or humid air can cause hazardous vapors to form, as described in Section 5.

#### **SECTION 8: LEAK OR SPILL INFORMATION**

**Containment/Clean-up:** Disposal of collected product, residues and clean up materials may be governmentally regulated. Observe all applicable local, state and federal waste management regulations. Remove possible ignition sources and if needed, use non-sparking tools and equipment. To prevent possible spontaneous combustion, store rags, mops, absorbent, etc; used during clean up, only in appropriate containers or covered with water. Mop, wipe or soak up with absorbent material and contain for salvage or disposal. For large spills, provide diking or other appropriate containment to keep material from spreading. Clean any remaining slippery surfaces by appropriate techniques, such as washing with mild, caustic detergents or solutions or high-pressure steam for larger areas. Observe any safety precautions applicable to the cleaning material used. Use self-contained breathing apparatus and suitable protective wear, such a full-face respirator.

#### **SECTION 9: SPECIAL PROTECTION INFORMATION**

**Respiratory Protection:** Use respiratory protection NIOSH – ½ face black cartridge, minimum. Provide for local exhaust ventilation, per recommended exposure guidelines.

**Gloves:** No special protection is needed. Wash hands at mealtime and end of shift.

**Eye Protection:** Safety glasses at a minimum.

**Protective Equipment:** Eyewash station (bottle) should be in direct access of work area.

**Personal Hygiene:** Do not get in eyes or on clothing. Avoid contact with skin. Wash thoroughly after handling. Wash contaminated clothing before reuse.

**SECTION 10: TRANSPORT INFORMATION**

**DOT Information** (49 CFR 172.101)

**Proper Shipping Name:** COATING SOLUTION

**Hazard Technical Name:** SOLVENT MIXTURE

**Hazard Class:** 3

**UN Number:** UN1139

**Packing Group:** II

**SECTION 11: HANDLING & STORAGE**

**Handling:** No special precautions.

**Storage:** Keep the container closed and away from heat, sparks and open flames. Store away from water or moisture.

**SECTION 12: REGULATORY INFORMATION**

**TSCA Status:** All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

**EPA SARA Title III Chemical Listings:**

**Section 302 CERCLA Extremely Hazardous Substances:** None

**Section 304 CERCLA Hazardous Substances:** None

**Section 312 Hazard Class:**

Acute: Yes

Chronic: Yes

Fire: Yes

Pressure: No

Reactive: No

**Section 313 Toxic Chemicals:** None

**Supplemental State Compliance Information: California**

**Warning:** This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

None known.

**Revision Date:** 05/07

**Prepared by:** Adsil - MSDS Coordinator  
Daytona Beach, Florida 32117  
PH: 386-274-1382