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## EPA Energy Report

### 12.5% Energy Savings and Significant Reduction in NOX

Adsil manufactures patented, inorganic clear surface treatments, that when catalyzed, form a thin glass like film which becomes a permanent part of the substrate. The technology was developed by Dr. John Schutt, an inductee into the NASA Inventors' Hall of Fame.

Adsil's surface treatment line MicroGuard® - is used to protect surfaces from harsh environments. A primary component of Adsil's business is the HVAC market, where MicroGuard® clear, inorganic surface treatments protect non-ferrous metal coils and fins from corrosion and painted cabinets from fading. MicroGuard® surface treatments are also used on HVAC surfaces that are subject to mold growth. As per ASTM G21, MicroGuard® has been proven to not support the growth of mold.

In 2003, the EPA began a study on Adsil's MicroGuard® technology and its impact on pollution control and energy use; as a follow up of other previous third party studies. The study was accomplished as part of EPA's ongoing program to reduce toxic emissions from gas and coal fired power plants during peak demand hours for energy consumption. Adsil's MicroGuard® surface treatments was applied to 150 existing field units in the Charlotte, NC area; comprised of various brands, models, sizes and condition. Data was collected before cleaning, after cleaning, and after surface treatments application for each unit. The results revealed an average of 12.5% savings in energy due to the impact of the cleaning and a projected significant reduction in pollution of 178,000 pounds of pollutant for the 2,500 tons measured, amounting to 70.5 pounds of pollution per ton of HVAC per year.

Measurements were only taken for two weeks after the application of the MicroGuard® therefore the study was inconclusive as to whether MicroGuard® has a sustained impact on keeping the unit cleaner. A follow up to this were studies conducted by AT&T, FP&L, and TXU that showed sustained savings. These studies were conducted from 6 months to 1 year. A more thorough follow up study is being conducted by Southern California Edison in order to establish a predictable trend-line over time, which will further compliment the EPA Study.

Adsil is located in Palm Coast, Florida and sells its products through certified applicators for installation on HVAC/R units to preserve and protect these surfaces against the environment and prolong serviceable asset life. MicroGuard® surface treatments are approved for use on numerous other surfaces. Many national businesses already specify the use of Adsil's MicroGuard® protective surface treatments including Home Depot, Walgreen's, Bed, Bath & Beyond, and Checker's.

