



NOT A NEW LOOK. A NEW OUTLOOK.

SMARTKOTE®  
PANELS



AMERICAN  
BUILDINGS

A NUCOR COMPANY

# AMERICAN BUILDINGS COMPANY

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**SMARTKOTE PANELS REFLECT OUR COMMITMENT TO USING THE BEST MATERIALS IN THE MOST RESOURCEFUL WAY TO MAXIMIZE EFFICIENCY AND COST-SAVINGS. WITH THE BUILDING INDUSTRY FACING SOME OF ITS MOST SIGNIFICANT CODE CHANGES IN THE PAST 10 YEARS, FORWARD THINKING AND INNOVATION ARE CRUCIAL.**

**WE ARE NOW OFFERING WALL AND ROOF PANELS COATED WITH SMARTKOTE PAINTS.**

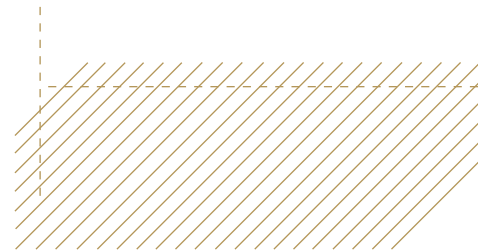
These panels feature vivid, fade-resistant color, incredible durability and environmentally friendly cool technology originally developed for Stealth Aircraft in the U.S. Military. Developed by PPG Industrial Coatings for American Buildings Company, this is by far the best paint system available in the world today. Nothing works better or lasts longer. The energy-cost savings, architectural appeal, variety of profiles, texture and color, flexibility and long-term durability make SmartKote panels a popular choice for architects and building owners.

**SMARTKOTE PANELS**

**NOT A NEW LOOK. A NEW OUTLOOK.**



**WITH THESE PANELS AND ALL AMERICAN PRODUCTS, YOU'RE BUILDING TOMORROW.**



## CASE STUDY

Two schools. Exact same size. Exact same design. Both were constructed exactly the same way and have exactly the same HVAC equipment, with their thermostats controlled at the exact same place. So how was one school able to save more than \$10,000 on its annual cooling costs?



● The difference lies in the cool coatings of their roof systems.

Baggett Elementary School and Poole Elementary School in Dallas, Georgia were identical right down to their Evergreen LOC SEAM metal roof panels. The only difference: Baggett Elementary School used traditional PVDF coated roof panels with a total solar reflectance or TSR value of 12 percent. Poole Elementary School used infrared-resistant PVDF cool pigment panels with a TSR value of 29 percent.

### **BAGGETT ELEMENTARY**

*Baggett Elementary School's panels utilized traditional pigments with a TSR value of 12 percent.*

## POOLE ELEMENTARY

*Poole Elementary School's panels utilized infrared-resistant SmartKote pigments with a TSR value of 29 percent.*



### THE RESULTS

Poole Elementary School's annual cooling cost net savings is over \$10,000 because of an added TSR of 17 percent, which equates to a projected savings of more than \$350,000 during the school's 35-year expected life cycle. These savings were confirmed in a thorough study by the Oak Ridge National Laboratory presented to the DOE/IRS in Washington, D.C. In addition, the added TSR did not jeopardize the school's ability to meet district appearance requirements. These savings represent the beauty of ABC's innovative thinking: better value in the short term and substantially improved efficiency in the long term.

## SMARTKOTE PANELS: BETTER BY FAR

When we say SmartKote is, by far, the best paint system available in the world, we're not exaggerating. Nothing works better or lasts longer.

### SMARTKOTE AT A GLANCE:

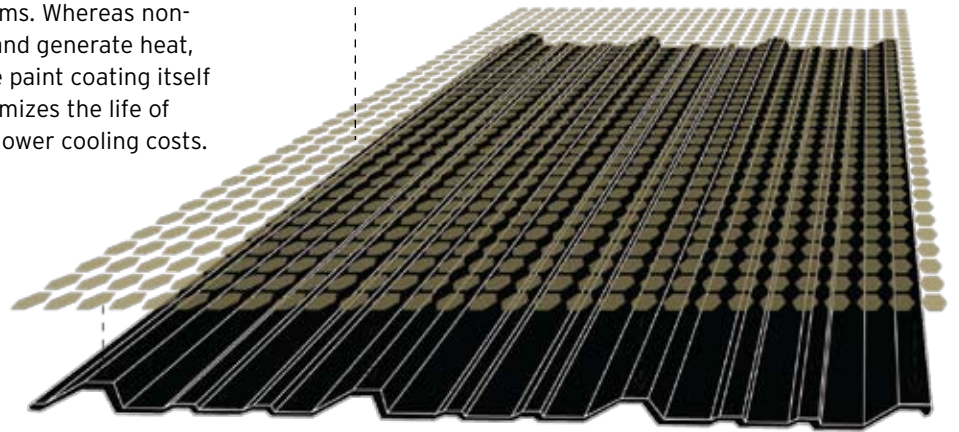
- The most energy efficient coating system on the market
- Generates lower environmental temperatures to help reduce smog
- 100% recyclable
- Maintains gloss and color
- Exceptional colors stay true for years to come
- Increased fire resistance





● This revolutionary coating system consists of **PVDF resin, acrylic resin and pigments**, which give the product its incredible color, durability (fade resistance), and energy efficient "coolness." PVDF (Polyvinylidene Fluoride) is a highly non-reactive and pure thermoplastic fluoropolymer. It is also known as KYNAR 500®, a registered trademark of Arkema, Inc. or Hylar 5000®, a registered trademark of Solvay Solexis.

PVDF resin chemistry is the most durable, long-lasting system on the market. It is transparent to ultraviolet light that breaks down other coating systems. Whereas non-cool materials absorb the sun's rays and generate heat, "cool" resins reflect them, keeping the paint coating itself cooler. This technology not only maximizes the life of your panels, it can ultimately lead to lower cooling costs.

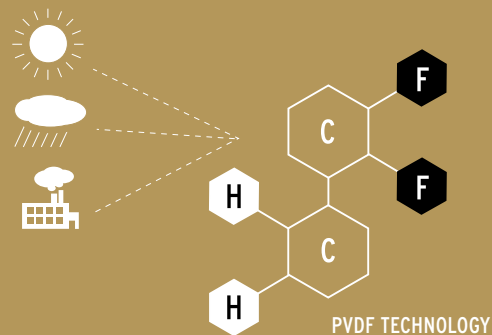


## THE SCIENCE BEHIND SMARTKOTE

Cool isn't just a meaningless marketing term. It's a technology that will literally revolutionize the building industry. Combating urban heat islands and high-energy consumption will require innovative products that meet or exceed even the most stringent industry requirements. Our cool SmartKote paint system is that type of product.

To be considered cool, products must have a solar reflectance of at least 25%. Solar reflectance is the measure of a panel's ability to not absorb certain wavelengths of the sun. Another important factor is thermal emittance, the measure of a panel's ability to release heat that it has absorbed. Put these two factors together and you get the solar reflective index, the measure of a panel's ability to reject solar heat. Cool metal roofs coated with the PVDF-based resin in SmartKote can achieve solar reflectance of over 25% and can reduce energy consumption by up to 40% as part of a total system design (as reported by the Oak Ridge National Laboratory). **ADDING SMARTKOTE WALL PANELS CAN INCREASE REFLECTANCE AND REDUCE CONSUMPTION EVEN FURTHER.**

But cool technology is only one benefit of our SmartKote panels. Durability is another. PVDF based coatings technology is the most durable, UV resistant, chemically and environmentally resistant system available in the coatings marketplace, for use in commercial and industrial building products. The carbon-fluorine chemical bond in PVDF is photochemically stable (resistant to sunlight's ultraviolet rays) and inert against acids, bases and chemical attack.



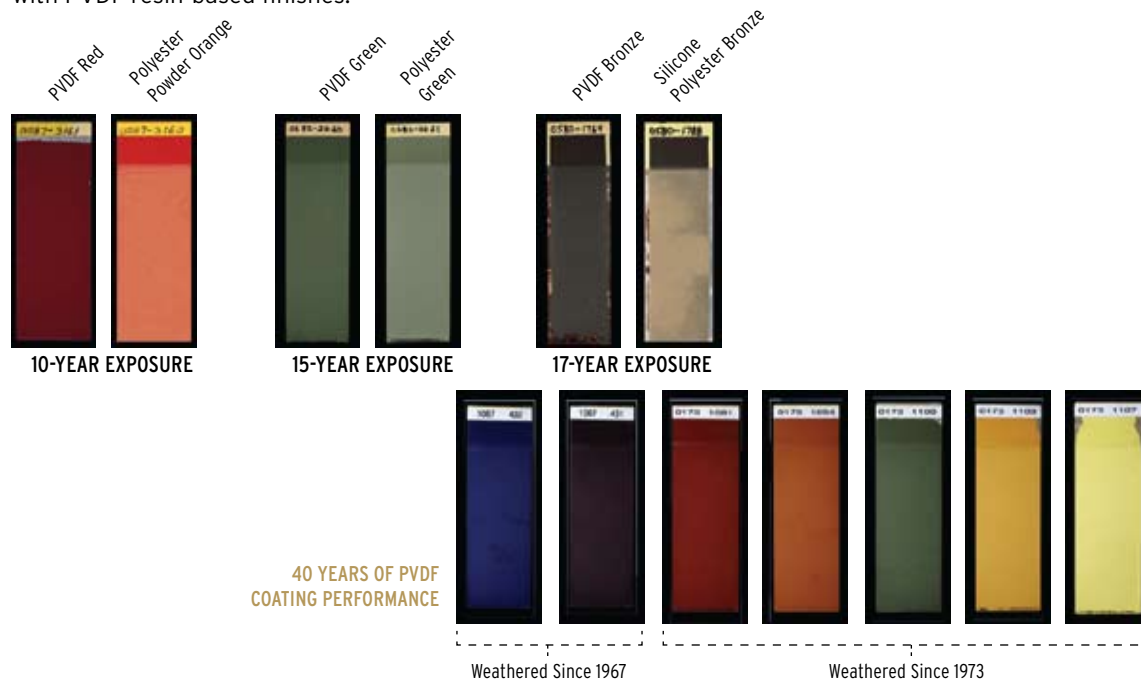
During the coil coating curing process, the PVDF powder melts and "fuses" to become a continuous high-density network, with very high tensile strength and flexibility. Additionally, during the curing process, the PVDF also "alloys" with the acrylic polymer matrix. This alloy can be termed an interpenetrating polymer network.

Such superior performance and the wide range of color choices are the reasons PVDF resin-based metal coatings provide billions of square feet of protection against weathering, aging and pollution on commercial, industrial, institutional and residential buildings around the globe. The Louvre Museum, world-famous theme parks and Las Vegas casinos count on PVDF when long-lasting color plays an important part in their visitors' experiences.



## COLOR THAT STANDS THE TEST OF TIME

Prolonged exposure at an independent test-fence facility in Southern Florida clearly demonstrates the superior weatherability of PVDF resin-based coatings over other finishes. For testing purposes the top of each panel was hidden from the sun. Comparing the top portion with the rest of the panel shows the amount of fading over 10, 15 and 17 years. Note the lack of fading with the panels coated with PVDF resin-based finishes.

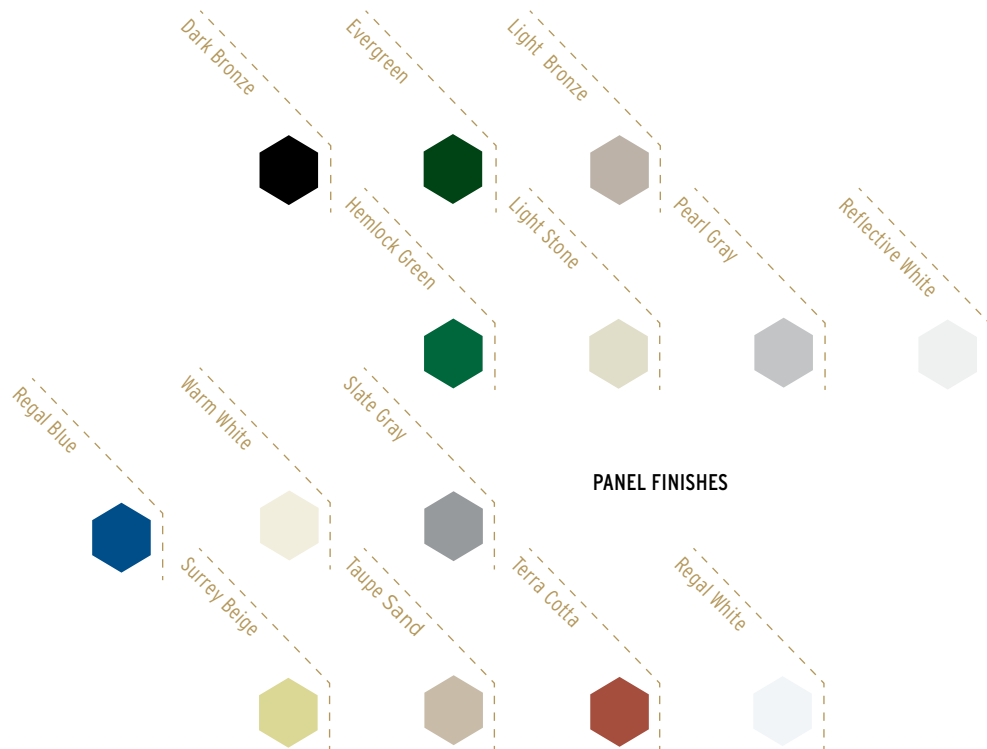


## WHY USE SMARTKOTE ON YOUR NEXT BUILDING? BECAUSE SMARTKOTE:

- Is the most energy efficient coating system on the market
- Reflects more of the sun's rays to produce cooler indoor temperatures
- Makes your building more attractive
- Generates lower environmental temperatures to help reduce smog
- Is 100% recyclable
- Complements other building products, such as stucco or concrete
- Provides increased fire resistance
- Maintains gloss and color
- Comes in exceptional colors that stay true for years to come

## COLOR WITHOUT CONFUSION

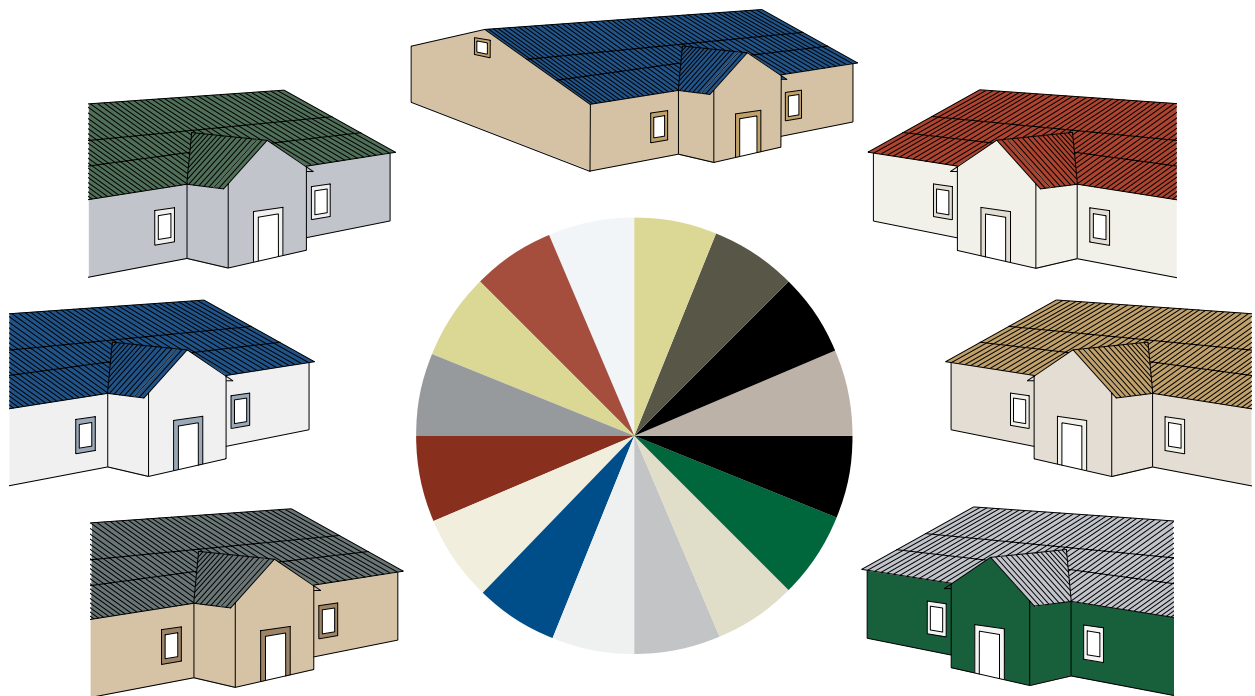
Beautiful colors and color combinations increase the resale value of a building and create a sense of pride for the building's owners. By contrast, poor color choices may diminish a building's value and curb appeal. For precisely these reasons ABC, with the help of PPG Industrial Coatings Corporation and Pat Verlodt, a leading color consultant for non-residential buildings, has created a proprietary color combinations program that takes the guesswork out of choosing colors, and helps you create combinations for virtually any project that enhance a design and complement the surroundings. *The following table lists our wide range of vivid SmartKote paint finishes.*



<sup>1</sup>Colors printed on this page may not exactly match those on an American Buildings Company structure.

## COLOR COMBINATION PROGRAM

Combining colors is not something with which many of us are very comfortable. The ultimate goal is to provide more attractive structures by applying basic color theory and principles. Using our color combination recommendations on our website will give you the best possible alternatives for walls, roof and trim.



## WARRANTIES THAT SEAL THE DEAL

Our SmartKote panels are backed by some of the best warranties in the business, with a wide variety of coverage and tougher inspections, all tailored to fit your needs. Our highly flexible multi-level warranty packages can provide you with as little or as much coverage as your project requires. Contact your sales representative for more information.

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BUILDING TOMORROW®



## ABOUT AMERICAN BUILDINGS COMPANY

American Buildings Company has always been a company of ideas, leading the industry in technology, design flexibility, quality, and value for more than half a century. All of American's products are manufactured in industry-certified facilities and are guaranteed by some of the best warranties in the industry. TALON, the industry's leading proprietary design, pricing and ordering software is unrivaled for its fast, accurate estimates, computer 3-D renderings, and built-in engineering and code compliance.



BY PROVIDING OUR CUSTOMERS WITH INNOVATIVE PRODUCTS AND IDEAS,  
INCLUDING OUR SMARTKOTE PANELS, WE'RE BUILDING TOMORROW.