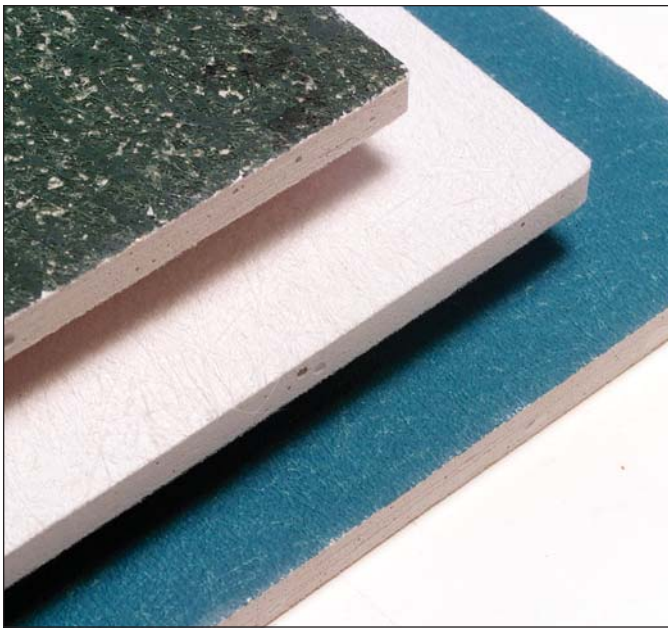


# Project Profile



## KIA Motors West Point, Georgia

**SubContractor:** All South Subcontractors Inc.

## DensDeck® Roof Board – Tough enough for the most demanding industrial applications

**R**oof cover boards have long been recognized as a key component of good roof design, acting as a protective substrate between the roofing membrane and insulation. Industrial buildings in particular require a cover board solution that is durable enough to withstand construction loads and maintenance traffic, as well as hail impact, wind uplift and snow loads. A roof board's fire resistance, moisture resistance and other unique characteristics are also critical when choosing a product for a specific industrial application.

For Kia Motors, selecting the right roof board was an important aspect of the company's \$1 billion project to build a new manufacturing plant in West Point, Georgia. Kia and its primary roof design expert for the project, All South Subcontractors Inc. of Birmingham, Alabama, were faced with many roof board choices, such as asphaltic, mineral fiberboard, plywood/OSB, wood fiberboard, perlite, and paper-faced gypsum. Ultimately, Georgia-Pacific DensDeck® fiberglass-mat gypsum board was chosen based on its superior characteristics and versatility as compared with the other roof board materials.

"Due to the large capital investment required to construct an automobile manufacturing plant, protecting the structure and assets was of paramount concern, so durability and fire resistance were key considerations in Kia's roof design," explained Reinhard Schneider, DensDeck Product Manager. "A durable single-ply membrane layered over a strong high-density cover-board like DensDeck assures adherence to the unique demands of a building that will sustain more maintenance foot traffic than many industrial structures, while also protecting the plant's roof and contents from moisture and fire damage."

### Special Needs call for Special Solutions

Among other materials considerations for roofing contractors are special requirements for environmental conditions or processes that are unique to an industry. Auto manufacturing



plants have a number of such requirements. For example, the painting and detailing process is extremely sensitive to particulate matter, and paint rooms cannot tolerate silicone in the environment.

According to Austin Lacey, the Kia project manager for All South, the Kia project presented Georgia-Pacific Gypsum with a formidable challenge—deliver a silicone-free version of DensDeck® roof board to meet the automotive plant's special needs. Georgia-Pacific Gypsum was prepared for such a challenge.

"DensDeck roof board can be manufactured to be silicone-free," noted Schneider. "The durability of the board and the availability of a non-silicone containing product made the Kia project an ideal situation in which to apply the versatile characteristics of DensDeck."

Georgia-Pacific Gypsum made a special run to produce the silicone free product, and was able to produce and deliver it with a mere two-week lead time.

"Georgia-Pacific Gypsum was a great partner with us, working with Firestone to deliver all of the roofing materials without delays to the project," Lacey described.

#### Key Cover Board Characteristics Protect Valuable Contents

For the Kia project, a quarter-inch DensDeck cover board was used as the roof substrate over two layers of isocyanurate insulation, according to Lacey. While DensDeck is versatile enough to use underneath a variety of roofing membranes, All South selected the Firestone 60 mil TPO membrane, noting DensDeck advantages for a TPO application.

"DensDeck roof board is superior for TPO membranes because it is a rigid substrate and it makes TPO lay much better, giving a really nice looking finish to the product," said Lacey.

Schneider and Lacey both agreed that many of the consultants and architects they work with specify DensDeck roof board because its rigidity and durability hold up better than other substrates and deliver a longer-lasting roof system.

"The biggest reason DensDeck roof board is often selected is its history of performance," noted Schneider. "Over twenty years of positive performance and industry recognition gives a construction specifier the assurance that DensDeck will perform as it is described."

In addition to its recognized strength and appearance properties, DensDeck roof board is non-combustible, as described and tested in accordance with ASTM E 136, offering superior fire resistance with zero flame spread and zero smoke developing when tested. The 5/8" DensDeck® Fireguard® roof board has also been classified by Underwriters Laboratories for use in certain fire-rated assemblies.

DensDeck roof board is also highly moisture-resistant. It will not wick moisture or delaminate with exposure to water, protecting the vulnerable insulation layer. Its fiberglass, inorganic facers do not support mold growth, supporting the building's long-term health and sustainability.

#### DensDeck Performs for Both New and Renovation Projects

All South uses DensDeck roof board on new construction projects, but Lacey also noted that it is ideal for renovation projects where the roof's R-values—the measure of thermal resistance used to compare insulation—are already in place. "Whether you are working with light weight concrete or poly roofing, DensDeck cover board goes right over the insulation and adheres easily to the substrate," he said.

In addition, Lacey has found that DensDeck cover boards work particularly well with re-roofing projects in which the roof's height requirements might be impacted by adding new insulation and substrate.

"If you add too much height in a re-roof project, you can have trouble meeting manufacturer requirements for ISO insulation," Lacey explained. "The quarter and half inch DensDeck roof board has minimal impact on roof height and can be installed easily around existing roof equipment and other roof structures."



#### SALES INFORMATION AND ORDER PLACEMENT

U.S.A. Midwest: **1-800-876-4746** West: **1-800-824-7503**  
South: **1-800-327-2344** Northeast: **1-800-947-4497**

CANADA Canada Toll Free: **1-800-387-6823**  
Quebec Toll Free: **1-800-361-0486**

#### TECHNICAL INFORMATION

Georgia-Pacific Gypsum Technical Hotline  
U.S.A. and Canada: **1-800-225-6119**  
[www.gpgypsum.com](http://www.gpgypsum.com)

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**CAUTION** For product fire, safety and use information, go to [www.gp.com/safetyinfo](http://www.gp.com/safetyinfo).

**HANDLING AND USE—CAUTION** This product contains fiberglass facings which may cause skin irritation. Dust and fibers produced during the handling and installation of the product may cause skin, eye and respiratory tract irritation. Avoid breathing dust and minimize contact with skin and eyes. Wear long sleeve shirts, long pants and eye protection. Always maintain adequate

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