

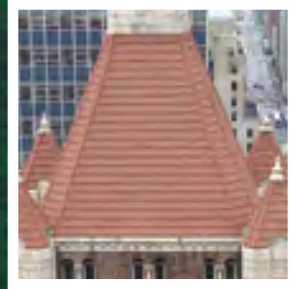
inspire



enhance



preserve



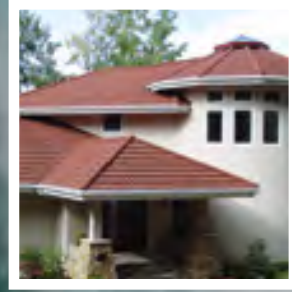
commit

DECRA[®]

Stone Coated Steel Roofing Systems

Sustainability is achieved “when current needs are met without depriving future generations of the ability to meet their needs.”
— Ray C. Anderson

DECRA Roofing Systems, Inc. is committed to manufacturing a sustainable product. Made of steel, DECRA products are durable, long-lasting and recyclable at end of life. A durable, long-lasting and recyclable product equates to less future raw materials being used to make new products. Additionally, installation over existing roofing materials is possible; thereby diverting old materials from landfills.



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Cool Roofing

Does a roof have to be white to be cool? Focusing on energy efficiency, the roofing industry is working hard to provide products that will enhance the energy efficiency of homes and buildings. The emissivity and reflectivity values of roofing products are being widely discussed. Higher emissivity and reflectivity rates lead to greater reductions in the cooling load and, in return, increase energy efficiency. However, a recent study concludes that these two issues are not the only way to define a “cool” roof.

Oak Ridge National Laboratory conducted a study to test different products and roof assemblies: dark grey asphalt shingles applied direct to deck; painted metal fastened direct to deck; stone coated steel with conventional granules on a counter-batten and/or batten system; and stone coated steel with Infrared or IR-pigment granules applied on a counter-batten and/or batten system. All were vented and field data measured the amount of heat that permeated the attic floor into the conditioned space, covering summer and winter conditions for one year.

The DOE funded the study in part because they were interested in the possible benefits of “cool” pigments when applied to roofing materials, especially stone coated metal roofs. IR-blocking granules are both highly emissive and reflective; IR-blocking pigments had already proved successful in a military application.

The panels with IR-pigments returned expected results, a 45% reduction in heat transfer as compared to asphalt shingle roofing. However, only 15% could be



attributed to the IR-pigment granules, the remaining 30% of the reduction was attributed to over the deck venting. The metal panels with dark grey conventional granules were then compared to the asphalt shingle roof – both very similar in reflectance and emittance. Again, it was found that there was a reduction in heat transfer attributable to the vented space between the panels and the deck created by the use of battens/counter-battens.

When the light grey IR-pigment stone coated panels were compared to the dark grey conventional stone coated panels – both on a counter-batten and batten system – it was noted that the conventional dark grey granular coated panels swept away more than twice the amount of heat flow than the light grey IR-pigment granular coated panels. The heat produced by the darker, conventional granules increased the airflow thereby increasing the amount of hot air swept away from the deck.

The study concluded that there is a potential trade-off between solar reflectance and over the deck venting when modeling for energy efficiency; “venting of the stone-coated metal roofs is just as important as the solar reflectance for reducing the heat gain into the attic and conditioned space.”



innovate

sustain

Benefits of recycled steel

Steel is the most recycled material in North America:

- Every ton of steel that is recycled saves 2,500 pounds of iron ore, 1,400 pounds of coal, and 120 pounds of limestone
- New steel made with recycled material uses as little as 26% of the amount of energy that would be required to make steel from raw materials extracted from nature
- According to the Steel Recycling Institute, on average, the total recycled content of steel is 25 to 30%

Durability and low maintenance

DECRA products are durable and require little to no lifetime maintenance. All profiles are made from steel, a Class "A" fire rated material, have a Class 4 impact resistance to UL 2218 and a 50-year limited warranty with a 120-mph wind warranty.

Environmentally managing existing roofing materials

St. Anthony's Retreat Center in Marathon, Wisconsin was built in 1919. The building had a failing fiber cement asbestos roof. The removal, handling and dumping are a hazard to people and the environment.

Weighing in at 350-400 lbs per square, the fiber cement shingles were heavy. Any additional weight added to the roof structure had to be minimal. DECRA Shingle was chosen for the project. Weighing only 125 lbs per square, the added weight of the product was minimal and did not compromise the roof structure. The existing asbestos roof was encapsulated and the material diverted from the local landfill. The metal shingle completely encapsulated the failing asbestos shingles, and was considered an acceptable solution by the EPA. Although not required, an ice and water shield was applied over the old shingles for the added safety of the installers. Screws were used to secure the stone coated steel roof panels to the deck through the shingles.

evolve

impact



“Metal roofing’s durability can virtually eliminate the need to use future raw materials to produce roofing... Metal is the product of choice for sustainability.”

— *Metal Construction Association*

Preserving our drinking water

DECRA products work well in conjunction with rain-catch systems. The drinking water quality of rainwater in contact with DECRA products was tested by a third-party laboratory. The run-off water meets World Health Organization (WHO) physical and chemical criteria for drinking water quality; the run-off would be odorless, tasteless and colorless with an extremely low turbidity.

For more information and test results, please visit our web site www.decra.com.





50 -Year Limited Warranty; 120 mph Wind Warranty; Highest Impact Resistance to Hail; Freeze/Thaw Resistant; Fire Safe
UL File #R14710; Florida Building Code, Miami-Dade County NOA, CCMC and ICC-ES reports available at www.decra.com.



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