

# Functional Components of a DECRA Panel

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DECRA Roofing System's unique design allows for roofing panels that contain numerous protective layers. Each of these layers serves the dual function of protection or adhesion for the next processing step.

## **Steel**

The panels are structural grade steel, with a minimum tensile strength of 37ksi. They are rigid enough to tolerate reasonable loads, while allowing profile designs without the risks of cracking or significant elastic recovery.

## **Aluminum-Zinc Alloy Coating (Zincalume)**

Protection for the rigid steel material is achieved when the steel passes through a bath of molten aluminum-zinc alloy. This coating combines the protection and strength of both aluminum and zinc. A significant benefit of the zinc component is its ability to protect exposed areas such as cut edges, drilled holes and scratches. Developers of the aluminum-zinc alloy steel have captured exposure data indicating corrosion protection of the underlying steel for more than 50 years in most environments.

## **Acrylic Priming System**

An acrylic coating is applied to both sides of the panel immediately after the application of the aluminum-zinc coatings. We developed this priming system in association with our steel suppliers to provide a uniform substrate that enhances the adhesion of subsequent coatings.

## **Basecoat**

The basecoat is formed by applying a custom designed acrylic resin binder. This specially formulated paint coating is made in two colors that will blend with the various stone granule colors. The basecoat serves two functions:

- It serves as an adhesive that bonds the stone granules to the base steel.
- It protects the underlying material from water and UV light.

The basecoat's adhesion process is found in its excellent ability to adhere to both the granules and the underlying acrylic priming system. We achieve optimum UV resistance with the use of a pure acrylic resin; the strongest polymer capable of being made into a water based paint.

## **Ceramic Coated Stone Granules**

A protective coating as well as an attractive appearance is provided by stone granules. They further enhance the resistance to UV light while providing an array of colors. These ceramic coated granules are sized and applied in such a way to insure maximum coverage of the basecoat; therefore, allowing another layer of protection against water erosion.

## **Overglaze**

An acrylic overglaze is applied as a final coating that gives the granules a semi-gloss appearance. This tough, thin, acrylic finish bonds to the granules and encapsulates them with a coating that enhances the panel's resistance to physical damage.