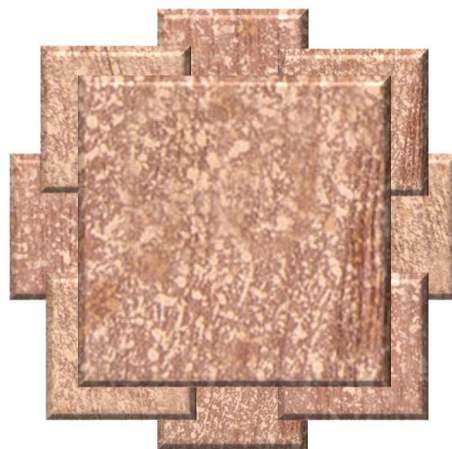




## GOLDEN RED CEDAR BLEND CR/094-11 SPOT

Ludowici colors are not painted on the surface, but fired in under extreme temperatures to ensure they retain their original tones and hues for many years to come. Color is included in our 75-year material warranty.

For more information on Ludowici colors, please see the *Art and Science of Ludowici Color* on the back of this card.



*Partial representation of expected color range shown.*

Creating the color of a terra cotta roof tile is part science and part art. There is always a range of tones within any given color. It is impossible to produce a monochromatic terra cotta roof tile.

In most cases, color is applied by spraying the surface of wet tile with glaze (a mixture of glass frit, silicas and pigments) prior to firing. At kiln temperatures over 2000 degrees Fahrenheit, the spray components fuse onto the surface, becoming an integral part of the tile itself.

Some colors are made from a two-step process involving a base coat and overspray. These colors will naturally display a broader range in tones as the overspray varies in its coverage of the base coat. A broad range will also be produced with colors utilizing high iron content.

- The variation of tones within a selected color is affected by many production factors including:
- Temperature variations in the kiln;
- Position of each tile in the kiln;
- Spray patterns and resulting coverage; and
- Subtle natural differences in clay, pigment and frit composition.

The range of tones that arise from the manufacturing process is a normal and very desirable feature of natural clay tile, imparting richness, character and a more dimensional appearance to the roof. Variation in tones should never be considered a defect or flaw. The range of colors produced may vary with each firing process.

## **Leaded Glazes**

Recognizing that leaded glazes represent a serious and real threat to the safety of workers and the environment, Ludowici discontinued their use many years ago. Clay tile roofs found on historic buildings often used leaded glazes and matching those colors using today's non-leaded glazes is virtually impossible as the tile color is profoundly impacted by glaze chemistry. While exact color match is not possible, rest assured that Ludowici's custom color development team will make the closest match possible.

## **Blending Colors**

Color blending, wherein several different colors of terra cotta roof tile are mixed on a roof (such as red, brown and gold), provides the designer or architect an opportunity to create a subtle or dramatic, one-of-a-kind design statement. Diamond or other geometric patterns can also be created.

Ludowici technical service specialists can assist in estimating the amounts of tile needed from design renderings. In addition, we can provide information on blends from previous orders for comparative purposes or for artistic inspiration. When working with blends pay careful attention to fittings. They can be produced entirely in one color or reflect the percentages of colors in the blend.

In addition, Ludowici design specialists highly recommend constructing a test patch of no less than 50 tiles as a final check prior to ordering. As with all shipments of Ludowici tile, contractors must take care when loading the roof with a blend of colors so that mix and percentages of color are uniformly maintained.

## **Enduring Color**

As our color is fired in and chemically bonded with the tile substrate, Ludowici terra cotta roof tiles will not lose their original intensity or color under normal environmental conditions. Natural clay red (unglazed) tile ages minimally too. And unlike some hard roofing products, the surface of Ludowici tile will never become marred by unsightly white salt deposits (efflorescence).

However, in areas subject to pollution, especially those with acid rain, the surface of the tiles may become weathered or subject to deposits that can slightly alter color over time. Matte finishes are more susceptible than high-gloss finishes.

Ludowici color is so durable that colorfastness is included in our 75-year material warranty. *See warranty documents for specific details and limitations.*