

# Clay vs. Composite: The **Quarrix**® Difference



DURABILITY		
CONCERN	CLAY DILEMMA	QUARRIX SOLUTION
<b>Heavy Weight/ Structural Integrity</b>	A clay barrel tile square weighs 900 -1,400 lbs. Because of extensive framing requirements clay tile is primarily a new construction product. The heavyweight load clay tile places on rafters and ceiling joists can cause a reduction in structural strength and the roof to sag over time. This will lead to cracked tiles, water intrusion, and roof failure. Rafters and joists need to be reinforced to restore and protect the structural integrity of the roof to hold the weight load of clay tiles in the long-term. The heavyweight of tile causes other costs to rise such as shipping and installation that need to be included in the overall project cost.	<p>Quarrix composite barrel tile weighs 304 lbs./square and is 67% lighter weight than comparable clay profiles. An ideal product for re-roof to replace failed materials.</p> <p>Less weight means there is no concern about the structural integrity of the roof due to weight.</p> <p>Less weight means less expense in structural, installation and shipping costs.</p>
<b>Cracking &amp; Breaking Tile</b>	Tile can easily break under pressure and is susceptible to cracking or breaking when dropped, exposed to hail, hit, walked on, and during shipping and delivery.	<p>Quarrix passed FM 4473 testing – Ice/Hail Impact testing for Class 4 hail rating.</p> <p>Quarrix will not break from golf balls, dropping tile, or walking on composite tile.</p>
<b>Walkability</b>	Walking on clay is not recommended.	Quarrix composite tile can be walked on and will not break. Caution still needs to be taken when walking on tiles.



CLIMATE & WEATHER		
CONCERN	CLAY DILEMMA	QUARRIX SOLUTION
<b>Water Intrusion</b>	<p>Clay is a naturally porous material that absorbs water. A brand with an absorption rate as low as 2%-6% is still absorbing water into the clay material. It is this rate of absorption and penetration of water through the material and hairline cracks, that when exposed to freezing temperatures, will cause the water absorbed into the tile to expand and crack. Sealing a tile roof or using glazed tiles may provide potential prevention. However, glazing can still crack and allow moisture to penetrate the clay tile.</p> <p>Higher moisture absorption rates lead to a greater potential for mildew and tile stains.</p> <p>Uses wood furring or direct-to-deck fastening system that is not water resistant and will deteriorate over time.</p>	<p>Quarrix HDPE material will not absorb water.</p> <p>Quarrix passed ASTM D638 water penetration testing.</p> <p>There is no glazing to worry about with Quarrix composite tile.</p> <p>Quarrix recommends HDPE plastic tile battens that are weather resistant to be used in tile installation to further the lifespan of the fastening system. (See Quarrix System Advantage™ for details)</p>
<b>Cold Weather</b>	Clay tiles are notorious for poor performance in areas that experience cold/ frost / ice / snow / hail. Clay tiles will become brittle, crack and break.	<p>Quarrix passed FM 4473 testing for Ice/Hail Impact.</p> <p>Class 4 Hail Impact Rated</p> <p>Will not freeze, crack or break in freezing temperatures.</p>
<b>Popping Tiles</b>	Clay tiles can pop off when exposed to cold weather and have freeze/thaw issues due to an inferior fastening system.	<p>Quarrix withstands extreme cold temperatures.</p> <p>Quarrix tiles are secured with two tile fasteners, and we recommend using out weather-resistant tile battens for the fastening system.</p>



## SAFETY

CONCERN	CLAY DILEMMA	QUARRIX SOLUTION
<b>Presence of Lead</b>	Lead can be present in glazing of clay tiles, known as lead glazing. Lead can pose a serious health hazard. Some companies have only recently discontinued lead and some may still use lead glazing. Historical buildings may have tiles with lead and require lead testing and safety precautions be taken when handling.	Quarrix does not use lead in products or during manufacturing.
<b>Silica</b>	Contains Crystalline Silica that is harmful and precautions need to be taken when cutting and in presence of dust.	Quarrix composite tile does not contain Silica.
<b>Walkability</b>	Walking on clay tile is not recommended and poses a safety hazard.	Quarrix composite tile can be walked on and will not break. Caution still needs to be taken when walking on tiles.



## BEAUTY

CONCERN	CLAY DILEMMA	QUARRIX SOLUTION
<b>Color</b>	Providing a color range percentage is common due to the variety of tones and colors that occur while making clay. Be prepared that no two tiles are alike in color or identical to the color sample provided. Clay is a natural, one-color material. To change its color, the color must be applied either by painting, spraying or chemical application. Heat is applied to bond the coloring. A second method is to glaze tiles to add color.	Quarrix color is built into our resin formula for an even coloring throughout each tile and lot. Cut open a tile and the color runs through the entire product, not just the top layer.  Quarrix adds UV-blockers to our composite formula.  Quarrix passes ASTM G155 Xenon weather testing.
<b>Algae/Moss Growth</b>	Algae and moss thrive in wet environments. Tile that holds moisture and is installed in damp, shady areas can experience mold, moss and algae growth. This will cause tile to experience deterioration and staining over time.	Quarrix composite tile will not deteriorate with mold, algae, or moss.  Quarrix tile can be easily cleaned if it algae or moss appears.

## BUDGET & EXPENSE



CONCERN	CLAY DILEMMA	QUARRIX SOLUTION
<b>Shipping Cost</b>	The average 2,000 sq ft clay tile roof will weigh 20,000 lbs and add many thousands of dollars in cost due to shipping charges.	The average 2,000 sq ft composite tile roof weighs 6,090 lbs. 67% lighter weight, which means significantly less shipping cost.
<b>Installation Cost</b>	Installation can be difficult with high-end tile and accessories which add to the overall cost of the project. Contractors state that installation and labor costs are 50-75% of the overall costs of a high-end brand Spanish barrel tile job.	<p>Quarrix is approximately half the labor costs when compared to high-end Spanish barrel clay brands.</p> <p>Quarrix tiles are pre-drilled and marked for easy installation. And lightweight material makes them easier to maneuver on the roof. There's no acclimation or waiting time needed for our tile. This means less time installing and reduced labor costs. We always recommend using our System Advantage for a better, faster installation.</p>
<b>Maintenance Cost</b>	Clay roofs require additional maintenance. Plan for potentially sealing the roof and repairing broken tiles.	No additional maintenance is needed to Quarrix composite tile.
<b>Overall Costs</b>	Clay field tiles tend to be an affordable roofing product at first glance. Pricing swings greatly depending on the quality and brand of clay tile used. Specialty accessories, quality of labor and shipping prices quickly escalate project costs to \$3,000* a square installed price. Maintenance is needed throughout the life of the roof including foundational maintenance.	<p>Composite field tiles are generally more expensive than clay field tiles. However, when you consider the entire project with accessories, labor, and shipping, Quarrix is considerably less expensive. On average, the overall Quarrix composite tile project is about half the price per square installed when compared to high-quality, grade 1 clay tile products.</p> <p>Quarrix is not comparable to cheap, clay tile products.</p>

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