



Empire Niagara Concrete

Polymeric Concrete Tile Roof System

PRODUCT TECHNICAL DATA

DESCRIPTION

Empire Niagara Concrete is a polymer based Class A and C roof tile designed to provide the look of a flat concrete roof tile. Empire Niagara Concrete is manufactured with a state of the art formulation using virgin and recycled polyolefin polymers.

Empire Niagara Concrete is 12" (305 mm) wide, 22" (559 mm) long, 3/4" (19 mm) nominal thickness, and are available in fourteen (14) standard colors.



ADVANTAGES

Empire Niagara Concrete provides the look of a flat concrete roof tile with these added advantages:

- High impact resistance that provides protection from hail, falling branches, foot traffic, ice and snow damage.
- The color in Empire Niagara Concrete has been added during formulation providing for color throughout the product. As with all roofing products, natural weathering will occur.
- EcoStar provides warranties for Empire Niagara Concrete for up to 50 years.
- Direct to deck application
- Lightweight - Roof Tile Loading company services not required

INSTALLATION

Temperature – If tiles have been stored in temperatures below 45°F (7°C), they must be restored to a temperature above 45°F (7°C) before installation. Ambient temperature should be at least 34°F (1°C) and rising.

Substrate – Empire Niagara Concrete should only be installed on a minimum of 1/2" (13 mm) plywood, minimum 7/16" (11 mm) OSB or minimum 3/4" (19 mm) tongue and groove wood decking. Empire Niagara Concrete should not be applied over existing roof materials. Existing roof materials must be removed down to the deck, prior to installation.

Slope – Empire Niagara Concrete is not recommended for slopes less than 3/12 (14°). On roofs less than 6/12 (27°), Empire Niagara Concrete must be installed with a maximum exposure of 9" (229 mm). On roofs 6/12 (27°) or greater, Empire Niagara Concrete may be installed with either a 9" (229 mm) or 10" (254 mm) exposure.

Underlayment – Prior to installation, **Glacier Guard™** underlayment should be applied to all rakes, valleys, ridges, hips, eaves and any protrusions. **Aqua Guard™** is then applied over the remaining deck surface. For Class A fire rated assembly, **GAF VersaShield**, or EcoStar-approved alternate, should be used instead of **Aqua Guard™** and should cover the entire roof deck, including the areas covered by **Glacier Guard™**.

Fasteners – Fasteners must be ring shank stainless steel. **EcoStar Fasteners** are available in either hand drive style or pneumatic coil.

Color Variation – All Niagara Concrete tiles come with shade variation. EcoStar tiles that have been ordered and supplied to the job site under one EcoStar sales order number are blended at the factory and do not need to be blended onsite before installation. It is always the responsibility of the applicator to make frequent inspections from the ground or other vantage point to ensure that random shading occurs. EcoStar will not be held responsible for correcting the appearance of non-random installations. Roofers must inspect the roof frequently to prevent customer dissatisfaction.

NOTE: If EcoStar tiles have been supplied to the job site under two or more EcoStar sales order numbers, all tiles must be blended together on-site before installation. Specific blending instructions can be found at www.ecostarllc.com on the "Resource Library" page. EcoStar will not be held responsible for correcting the appearance of unblended installations.

Natural weathering will produce further shade variations, even in tiles appearing to be identical in color when new.

Ventilation – The use of ridge venting systems is highly recommended. Mushroom cap style vents may be used, but ridge venting provides better venting and improves the aesthetic appearance of the roof system.

Please refer to the Niagara Concrete Installation Guide for specifics of installation.

PRODUCT SPECIFICATIONS

	12" Tiles
PRODUCT CHARACTERISTICS	
Length	22" (559 mm)
Width	12" (305 mm)
Nominal Thickness	3/4" (19 mm)
PACKAGING INFORMATION	
Tiles per bundle	10
Weight per bundle	24 lbs. (10.89 kg)
Bundles per pallet	72
Weight per pallet	1,728 lbs. (784 kg)
Linear feet per bundle	10 ft. (3.05 m)
FORMULATION	
Materials	Thermoplastic Olefin
PHYSICAL PROPERTIES (Typical)	
Operating Range	-25°F to 200°F (-32°C to 93°C)
Tensile (D-412)	1,500 psi (10,342 kpa)
Water Absorption (D-570)	0% by wt.
APPLICABLE STANDARDS	
UL Listed 790 Fire Resistance	Class A and C
UL 2218 Impact	Class 4
Texas Dept. of Insurance	Listing Pending
Miami-Dade	Listing Pending

WARRANTIES

EcoStar warrants this product to be free of defects in workmanship and materials at the time of shipment from EcoStar's factory. See www.ecostarllc.com for available warranties.