

## SECTION 7307 CONCRETE/ CLAY TILE, METAL, & SLATE ROOF UNDERLAYMENT

### Part 1 – General

#### 1.01 Summary

##### A. Section Includes:

1. Mechanically fastened roof underlayment system.
2. Provide and install underlayment in compliance with manufacturer's specified installation requirements.

##### B. Related Sections

1. Section 6100: Rough Carpentry; Roof Sheathing and nailers
2. Section 7620: Sheet Metal Flashings and Trim
3. Section 7320: Concrete/Clay Roof Tile
4. Section: 7610: Architectural Metal Roofing
5. Section: 7317: Real and Synthetic Slate

##### C. References

1. ICC/ES ACC 188, Roof Underlayments
2. ICC/ES AC 48 Roof Underlayment for Use in Severe Climate Areas
3. ICC/ES AC 152 Adhesive Attachment of Concrete or Clay Roofing Tiles per ASTM 1623
4. ICC/ES AC08 Concrete Tile Roof Underlayment on Spaced Sheathing
5. Florida Building Code (FBC)
6. 2003 International Building Code (IBC)
7. 2003 International Residential Code (IRC)
8. BOCA National Building Code 1999 (BNBC)
9. 1999 Standard Building Code (SBC)
10. 1997 Uniform Building Code (UBC)
11. Texas Department of Insurance
12. National Roofing Contractors Association
13. Western States Roofing Contractors Association

#### 1.02 Performance Requirements

- A. Provide and install roof underlayment and roof flashing system that does not permit the passage of water and will withstand 12 month UV resistance to sun light.
- B. Install roof underlayment that has passed the requirements set forth in ICC/ES Report 1708.
- C. Provide roof underlayment that has service temperatures between -50 degrees F and 230 degrees F.

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- D. Provide a roof underlayment that is slip-resistant to work over even in wet conditions.
- E. Provide a roof underlayment that is resistant to uplift from high winds.

### 1.03 Submittals – must comply with Division 1

- A. Product Data: Provide product data sheets for each type of product indicated in this section, including certified product test results.
- B. Shop Drawings: Provide manufacturers standard installation details, certified product test results as applicable to materials, installation instructions and approved shop drawings for the roof system specified.
- C. Provide samples of roof underlayment and associated fasteners for verification of quality.
- D. Sample Warranty

### 1.04 Quality Assurance

- A. Manufacturer Qualifications: Manufacturer to have ICC/ES and FBC listed reports and provide data from independent testing per Slip Resistance; Test Method National Standard of Canada CAN GSB-75.1-M88 or equivalent ASTM test per an approved ICC/ES independent testing company.

#### Average Coefficient of Friction

Rubber – dry: 0.63  
Rubber – wet: 0.51  
Leather – dry: 0.48  
Leather – wet: 0.50

- B. The formation or presence of mold or fungi in a building is dependent upon a number of factors including, but not limited to, the presence of spores and nutrient sources, moisture, temperatures, climatic conditions, relative humidity, and heating/ventilating systems and their maintenance and operating capabilities. These factors are beyond the control of Kirsch Building Products LLC (Kirsch) and Kirsch shall not be responsible for any claims, repairs, restoration, or damages relating to the presence of any irritants, contaminants, vapors, fumes, molds, fungi, bacteria, spores, mycotoxins, or the like in any building or in the air, land, or water serving the building.

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### **1.05 Delivery, Storage and Handling**

- A. Packing, Shipping, Handling and Unloading: Deliver materials with identification labels intact. Schedule deliveries to avoid construction delays but minimize jobsite storage.
- B. Storage and protection: Store materials protected from exposure to harmful weather conditions and direct sunlight. As recommended by manufacturer, store materials at a temperature between 40 degrees F and 100 degrees (4.4 – 37.8 degrees C). If exposed to lower temperatures restore materials to 40 degree F (4.4 C) minimum temperature before application.

### **1.06 Warranty**

- A. Upon original pre-installation of final roof system, specified underlayment will not materially deteriorate from exposure to sunlight for 12 months.
- B. Upon installation of final roof system, specified underlayment will not allow water to penetrate the roofing substrate due to decomposition beneath the primary roof covering for 30 years.

## **Part 2 – Products**

### **2.01 Materials**

- A. Acceptable Product: Sharkskin Ultra™ as manufactured by: Kirsch Building Products LLC, 1464 Madera Road, Suite 387, Simi Valley, CA 93065  
Tel: (805) 750-0084 Fax: 805-526-1116  
[www.sharkskin.us](http://www.sharkskin.us)
- B. Substitutions:
  - a. Substitutions must fully comply with specified requirements
  - b. Refer to section 01630 - Product options and substitutions for substitution request procedures.
- B. Physical Properties of Roof Underlayment membrane
  - 1. High tensile strength polypropylene woven core fabric, coated on both sides with UV resistant polypropylene containing anti-oxidant additive, and slip-resistant fiber surface.

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### 2.02 Materials

- C. 100% Polypropylene based

### Part 3 Execution

#### 3.01 Examination

- A. Verify that a roof slope of 3:12 or greater exists for proper water shedding.
- B. Determine, with the presence of the installer, that conditions are satisfactory. (i.e. remove sharp objects and debris on roof deck, etc.)
- C. Conflicts resulting from inspection should be resolved prior to underlayment installation.

#### 3.02 Installation

Underlayment shall be installed per printed instruction from the manufacturer. Overlaps run with the flow of water in a shingle-like manner slip-resistant printed side up. Install using 3/8" standard galvanized, copper and or stainless steel roofing nails, 1" round plastic cap nails, or as per local code. Fastener spacing may vary based on local building code.

- A. Nail upper flange of underlayment using 3/8" roofing nails or per local code, Start 2" down from top edge of underlayment and run 12" to 16" O.C. (depending on roof pitch, weather conditions and exposure time).
- B. Nail lower flange/bottom edge of underlayment 2" from the fascia board at 12" to 24" O.C. (depending on roof pitch, weather conditions and exposure time).
- C. Underlayment must turn down rake edge a minimum of 1" and be nailed every 12" to 24" O.C. (depending on weather conditions and exposure time).
- D. Nail 24" O.C. in field or as needed based upon weather and safety conditions.
- E. Overlap underlayment from 4" at all horizontal laps with fastener spacing of 12" to 24" O.C.

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- F. Overlap underlayment by a minimum of 12" at all vertical laps with fasteners at 6" O.C.

**3.03 Cleaning and Protection**

- A. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to owner's acceptance. Remove construction debris from project site and legally dispose of debris.
- B. Protection: Protect installed product's finished surfaces from damaged during construction.