

**SECTION 7307 CONCRETE/ CLAY TILE, METAL, AND SLATE
REFLECTIVE INSULATING ROOF UNDERLAYMENT**

Part 1 – General

1.01 Summary

A. Section Includes:

1. Reflective insulating roof underlayment.
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 08 Concrete Tile Underlayment on Spaced Sheathing
3. Florida Building Code (FBC)
4. 2003 International Building Code (IBC)
5. 2003 International Residential Code (IRC)
6. BOCA National Building Code 1999 (BNBC)
7. 1999 Standard Building Code (SBC)
8. 1997 Uniform Building Code (UBC)
9. Texas Department of Insurance
10. National Roofing Contractors Association
11. Western States Roofing Contractors Association

1.02 Performance Requirements

- A. Provide a reflective insulating roof underlayment that provides nail sealability per ASTM 1970/ AC 48 from an independent ICC accredited lab.
- B. Provide and install reflective insulating roof underlayment and roof flashing system that does not permit the passage of water and will with stand 12 month UV resistance to sun light.
- C. Provide a reflective insulating roof underlayment that has passed the requirements set forth in ICC/ES Report 1708 and Miami/Dade TAS 104.
- D. Provide a reflective insulating roof underlayment that has service temperatures between -50 degrees F and 230 degrees F.
- E. Provide a reflective insulating roof underlayment that is slip-resistant to work over even in wet conditions.

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- F. Provide a reflective insulating roof underlayment that is resistant to uplift from high winds.
- D. Provide a reflective insulating roof underlayment that carries a 50 year warranty.
- E. Provide a reflective insulating roof underlayment with an emittance of 0.04 or better.

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, Miami/Dade testing per TAS 104 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

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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.

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 50 years.

Part 2 – Products

2.01 Materials

- A. Acceptable Product: Sharkskin Ultra SA™ 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
- B. Substitutions:
 - a. Substitutions must fully comply with specified requirements
 - b. Refer to section 01630 - Product options and substitutions for substitution request procedures.
- C. Physical Properties of Roof Underlayment membrane:
High tensile strength polypropylene woven core fabric, coated on both

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sides with UV resistant polypropylene coating containing anti-oxidant

additive, with slip-resistant non-woven fiber surface embedded in top coating layer and reflective insulation layer bonded to the bottom side.

2.02 Materials

- A. 100% Polypropylene based
- B. Reflective insulating composite

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, damaged roof sheathing and debris on roof deck, etc.)
- C. Conflicts resulting from inspection should be resolved prior to underlayment installation.

3.02 Installation

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

- A. Reflective insulating underlayment is laid horizontally parallel to the eave of the roof, across vertical wood/metal/plastic battens installed over a solid wood deck to create an air space below the underlayment or across rafters, spaced 24" O.C., with a minimum 4-inch horizontal lap and with a minimum 6-inch vertical lap with vertical laps breaking over vertical battens/rafters.
- B. Reflective insulating underlayment can also be installed over a solid wood deck with reflective insulating side facing up provided the installed primary roof covering provides an air space above the reflective insulating side of the underlayment.
- C. Use straight blade utility knife or scissors to cut.

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- D. Reflective insulating underlayment is fastened to the vertical battens/roof rafters or solid wood deck using corrosion resistant 3/8-inch E.G. nails, No. 12 gage corrosion-resistant metal round cap, tin tag, or plastic round caps fastened with corrosion resistant staples or corrosion resistant construction staples. Do not over drive fasteners as this may damage the underlayment. The reflective insulating underlayment shall be fastened as necessary to hold in place and allow for a safe walk able surface for the installer.

- E. Tinted lenses are recommended to be worn during installation.

3.03 Cleaning and Protection

- A. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace any damaged installed underlayment. Clean installed products in accordance with manufacturer's instructions prior to owner's Acceptance, which is to remove all loose debris and leave deck in clean broom swept manner. Remove construction debris from project site and legally dispose of debris. Protection: Protect installed product's finished surfaces from damaged during construction.