

ECODUR1 COOL ROOF COATING TECHNICAL SHEET

PRODUCT OVERVIEW

Ecodur1 is a fiber reinforced premium cool roof coating with superior adhesion and impact resistance. With no maximum thickness and a low-sag formula, Ecodur1 is a 1 coat solution on most substrates – generally requiring no base or topcoat. Ecodur1 is energy efficient and highly reflective, meeting the requirements of California Energy Commission (CEC) Title 24, and is listed by the CRRC. Ecodur1 is VOC-free, non-toxic and made out of sustainable materials, making it the environmentally-friendly choice as well as the top performing.

INTENDED USAGE

Ecodur1 waterproofs and protects a variety of substrates, including: acrylic (& cementitious), metal, mineral cap, asphalt, concrete, single ply (TPO, PVC, CSPE, EPDM) and more. It is intended as a restorative coating to extend the life of the existing roofing systems, when properly prepared, clean, dry, and tight.

PHYSICAL PROPERTIES AND PERFORMANCE CHARACTERISTICS

DURABILITY - ASTM C627: 16,000 passes of an average sized car. No debonding or deterioration

ESTIMATED TENSILE STRENGTH - ASTM D412: 475 PSI

PULL-OFF STRENGTH FROM STEEL - ASTM D4541: 1000 PSI with 95-100% cohesive

ESTIMATED ELONGATION - ASTM D412: 20-50%

HEAT RESISTANCE - CONTINUOUS: 212°F / 100°C

MINIMUM SERVICE TEMPERATURE:

-20°F to -40°F / -30°C to -40°C

WATER ABSORPTION - ASTM D570:

0.3% - 30 g/m² @ 185°F / 85°C for 30 days

PERM RATING - ASTM D1653: USA PERM rating of 5 PERMS for 0.030 to 0.050 inches thickness

UN-CURED PRODUCT PROPERTIES

MIX RATIO BY WEIGHT: 83 parts catalyst (part A) 17 parts resin (part B).

POT LIFE: Less than 45 minutes. Decreases with heat.

CURE TIME: Walkable in 12 hours. 24 to 36 hours to full cure.

RECOAT WINDOW: Endless. Ecodur1 will always bond to clean, dry Ecodur1 and other Ecodur products.

SOLIDS: 100% solids, solvent-free, VOC-free

MAIN COMPONENTS: Part A: castor oil, hydrated gypsum, titanium oxides, glass fiber - Part B: Polymeric (MDI)

FINISHED PRODUCT CHARACTERISTICS

ODOR: Mild, pleasant vegetable oil and gypsum odor prior to curing - dissipates completely upon full cure.

WATER RESISTANCE: High resistance to water, sea water, hot or cold.

SOLVENT RESISTANCE: High resistance to most petro-chemical solvents with few exceptions. Refer to chemical compatibility charts.

UV RESISTANCE (SRI/CRRC): Solar Reflectance Index SRI 110 initial and SRI 83 aged.

ADHESION: Bonds to steel, concrete, itself and other Ecodur products, wood, asphalt, tar, paints, etc.


PULL-TESTING (BEFORE APPLICATION): For best results, conduct a pull test (TieTek T272 or 325, 4 inches wide) to test the surface and to ensure no contaminants are present before application.

STANDARD APPLICATION: Safety glasses, gloves, and protective clothing must be worn at all times. Mechanically mix all of part A for at least 5 minutes **making sure to scrape sides and bottom**. Scrape all product from lid and sides into bucket. Cordless drills and regular speed corded drills are not recommended for mixing as the product contains gypsum that settles during storage. Double auger mixers or low-speed mud mixing drills are recommended. After pre-mixing part A, add full part B while mixing. Continue mixing, while moving mixer angle and position continuously, until fully combined, 4-6 minutes. Be careful to ensure part B gets stirred and mixed in all the way to the bottom by bringing mixer up and down during stirring. Pre-plan your work area and make sure you can use all mixed product in 30-40 minutes. Dump product into work area and spread with notched squeegee, back roll immediately. There is no need to maintain a wet edge as product will continually bond to itself. Cure until tack free [approximately 24 hours at 65°F (23°C)]

SMALL BATCH: Use full kits only. *Any attempt to break kits into smaller portions voids all warranties.*

STORAGE: Do not allow stored product to freeze. Store in a cool, dry place. Part B must be kept free of moisture. Keep container closed. Part B absorbs moisture from the air if left opened and can produce CO₂ gas, which can cause pressure build up.

SHELF LIFE: Unopened containers have an undetermined shelf life. It is recommended that you use all product within 2 years. If product has been stored longer than 6 months, shaking can aid in freeing settled gypsum.

	Rated Product ID #: 1392-0001		
		Initial	Aged
	Solar Reflectance	0.86	0.69*
	Thermal Emittance	0.89	0.88*
<small>The ratings above are subject to CRRC rating program conditions, requirements, and limitations. Visit coolroofs.org for important information and disclaimers about CRRC rating conditions, requirements, and limitations.</small>			
<small>*CRRC Rapid Ratings: Interim laboratory-aged values that simulate naturally-aged values and will be replaced by the measured three-year naturally-aged values upon completion of the weathering process.</small>			