

# cool roofs

**Cool roofs can offset the Urban Heat Island Effect, where air temperatures in densely built cities run as much as five degrees hotter than in surrounding areas.**

**Adding highly reflective white or silver material deflects the sun's rays, which lowers roof and internal building temperatures. As a result, you'll use less electricity, reduce the strain on the City's electric grid, lower carbon emissions and improve air quality.**

## Cool Roofs + the NYC Construction Codes

The 2008 Construction Codes require all new buildings to have 75% of their rooftops white or an ENERGY STAR® rating of highly reflective. Many types of materials can be used to achieve a reflective white roof, including cool roof coatings. Limited exceptions to this requirement include: pitched roofs at 25%; small setbacks; green (or planted) roofs; landscaped recreational areas; and existing buildings with work permits issued before July 1, 2009.

## Determining if a Cool Roof Coating is Right for You

A cool roof coating is rolled or sprayed onto flat roofs. When newly installed, cool roof coatings deflect 70 – 90% of the sun's heat — but you must confirm that your rooftop is appropriate for coating.

### Proper Roofs

Metal  
Granule  
Smooth asphalt  
EDPM rubber  
Smooth aluminum

### Unsuitable Roofs

Clay tile  
Gravel  
Spray foam  
Wood, slate or asphalt shingles  
TPO or PVC

## Preparing for a Cool Roof Coating

Installing a cool roof can be an easy do-it-yourself project with a paint roller. There are no work permit or application requirements. Just be sure that the coating won't affect the roof's warranty and that the coating product is rated for this use.

## Financial Benefits

The financial benefits vary: A reflective coating can reduce air conditioning costs by 50% in a one-story building, 25% in a two-story building and 10% in a five-story building. A self-applied coating, which has no labor costs, typically pays for itself after three years. Any slight increase in winter heating bills will be well offset by summertime savings.

Cool roofs also cut long-term maintenance costs. They can last longer, since they won't expand and contract from extreme heat absorption.

## SNAPSHOT: Coating Your Roof

- 1 Determine if you can coat your roof; be sure the reflective coating won't affect the warranty.
- 2 Watch weather reports. Roofs must be dry to do this work, and it can't be too hot or cold.
- 3 Plan for safety. Protect yourself from any tripping hazard or danger.
- 4 Inspect and repair any damage. Roofs must not have any blisters, cracks, peeling paint, loose screws, poor drainage or other issues.
- 5 Measure your roof to calculate how much coating material the manufacturer recommends.
- 6 Clean your roof. Use brooms and pressure washers.
- 7 Divide your roof into sections. This will help you apply the coating evenly.
- 8 Coat your roof – twice. The first coat must dry overnight before the second is applied.
- 9 Clean your roof annually.