

Elastizell

Insulating Concrete Roof Decks

- ▶ Positive Drainage
- ▶ Fire Ratings
- ▶ Wind Uplift Ratings
- ▶ Seismic Ratings
- ▶ Dimensionally Stable
- ▶ Permanent
- ▶ Moisture Resistant
- ▶ Non-Combustible
- ▶ Strong
- ▶ Economical
- ▶ Approved
- ▶ Roofing Compatible



Elastizell Insulating Roof Deck System

www.elastizell.com

Elastizell Insulating Concrete Roof Decks are accepted as a “Green” product by BuildingGreen Inc , publishers of *Environmental Building News*, *Green Building Advisor*, and *GreenSpec*. This is because Elastizell Roof Decks reduce energy load requirements and facilitate renovations by resloping and increasing R-values. Elastizell Roof Decks are a durable, sustainable, and low-maintenance system. Elastizell Insulating Concrete Roof Decks are listed in the GreenSpec Directory.

Sustainable Roof Decks

Elastizell Insulating Concrete Roof Decks help reduce overall energy consumption by providing permanent insulation that does not suffer from the thermal drift characteristics associated with rigid board insulation. Elastizell Insulating Concrete combined with EPS insulation board provides a heat sink beneath the roofing membrane. This reduces thermal shock from solar heat and then cooling at night or by rain. The reduction of thermal shock lengthens the life of the roofing membrane.

When re-roofing over rigid insulation board, the insulation must be replaced. **This is not the case with the Elastizell Insulating Concrete System since only the roofing membrane is replaced.**



An Elastizell Roof Deck (cast-in-place), provides a slope-to-drain system, plus a strong, permanent roofing base.



Here is a damaged rigid insulation roof deck system. All of the insulation must be replaced when re-roofing.

Elastizell and LEED

LEED = Leadership in Energy and Environmental Design

Elastizell Insulating Concrete Roof Decks have been used on many LEED approved projects. Elastizell Insulating Concrete Roof Decks may assist with the following LEED points (LEED-NC Green Building Rating System for New Construction and Major Renovation Version 2.2 - October 2005):

Materials & Resources:

MR Credits 1.1 and 1.2: Consider reuse of existing, previously occupied buildings, including structure, envelope, and elements. Maintain 75% of existing walls, floors & roof (Maintain 95% for MR Credit 1.2). **(1 or 2 points possible)**

MR Credits 3.1 and 3.2: Use salvaged, refurbished, or reused material, products, and furnishings for at least 5% (10% for Credit 3.2) of building materials. **(1 or 2 points possible)**

MR Credits 4.1 and 4.2: Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least 10% (for MR Credit 4.1, 20% for MR Credit 4.2) of the total value of materials on the project (based on cost). **(1 or 2 points possible)**

MR Credits 5.1 and 5.2: Use building materials or products that have been extracted, harvested, or recovered, as well as manufactured within 500 miles of the project site for a minimum of 10% (for MR Credit 5.1, 20% for MR Credit 5.2) of the total materials value (based on cost). **(1 or 2 points possible)**

Energy & Atmosphere:

EA Prerequisite 2: Design the building to comply with ASHRAE/IESNA Standard 90.1-1999 (without amendments) or the local energy code, whichever is more stringent. **(Required)**

EA Credit 1: Reduce design energy cost compared to the energy cost budget for energy systems regulated by ASHRAE/IESNA Standard 90.1-1999 (without amendment), as demonstrated by a whole building simulation using the Energy Cost Budget Method. **(1-10 points possible, depending on improvement in proposed building performance rating over baseline building performance rating).**

Reduced Impact of Renovation

In re-roofing applications, Elastizell can be cast over an acceptable, existing membrane still on the roof. Wet insulation material must be removed. When a roofing membrane fails over rigid insulation board, the entire system must be torn off and replaced, since rigid insulation board is damaged by water. The Elastizell Composite System is not damaged by water. **The encapsulated EPS board is completely protected - only the roofing membrane need be replaced.** This significantly reduces the amount of material taken to the landfill, since only a new membrane is installed on the roof.

For re-roofing existing roof decks that originally used polyisocyanurate insulation board, only the insulation that is wet and damaged needs to be removed. If the old roof remains in place, the trouble and expense of tear-off are avoided and the threat of damage to the building's interior is minimized.