



*Metacrylics Premium Reinforced Elastomeric Roofing Systems*

## ***CALIFORNIA TITLE 24***

### ***TECHNICAL BULLETIN***

#### **HIGHLIGHTS:**

- Title 24's latest revision becomes law throughout California in October 2005
- All new roofs installed must have at least 0.70 reflectance and 0.75 emittance to meet Title 24 requirements.
- *Metacrylics Elastomeric Roofing Systems* exceed Title 24 requirements by the widest margins available in any roofing product.

#### ***WHAT IS CALIFORNIA TITLE 24?***

Title 24 was established to combat the serious depletion of energy, land, and water resources threatening California's environmental quality. In efforts to increase energy efficiency, Title 24 has set basic roof requirements for reflectance and emittance that meet an energy budget for a building, based on its climate zone location. This energy budget is created based on the building type and its components, including wall construction, roofing, lighting, A/C, etc. The energy budget allows the Design Professional and Building Owner to choose components that may not meet Title 24 in one construction component, while compensating with more energy efficient components in other areas in order to meet the budget for the building. Unless the budget is met, the building permit will not be issued. Adopted in November 2003, California's latest revision of Title 24 will take effect in October 2005.

## **ROOFING REQUIREMENTS:**

According to Section 118 of Title 24, a "Cool Roof" is a roofing material with high solar reflectance and high emittance that reduces heat gain through the roof. Commercial roofing products that qualify include coatings, most specifically elastomeric coatings including white acrylic coatings.

The values for a cool roof must be equal to or greater than 0.70 reflectance and 0.75 emittance, as identified by the Cool Roof Rating Council (CRRC). High reflectance keeps much of the sun's energy from being absorbed; high emittance assures that when a roof does warm up, the heat can escape via radiation into the atmosphere. Title 24 also requires that liquid-applied coatings meet the minimum requirements of ASTM D6083, testing such properties as initial tensile strength, initial elongation, elongation after 1,000 hours, accelerated weathering and permeance.

To measure energy efficiency according to Title 24, two methods can be used; the "Prescriptive Approach" or the "Performance Approach." There are two methods within the Prescriptive Approach. First, Section 143(a) allows individual components to be listed with accompanying budget amounts, which are then totaled and compared to Title 24 requirements. This method is referred to as the "Envelope Component Approach." Second, Section 143(b) allows for "Envelope Tradeoff," where one highly efficient component can be substituted to offset the low energy efficiency of another. For example, using high efficiency roof materials, such as METACRYLICS ACRYLIC WHITE, can be more economical than installing other energy efficient products, such as insulated windows. This is referred to as the "Overall Envelope Approach".

The Performance Approach compares the source energy use for a proposed building against that of the energy budget. If the source energy calculated is less than that of the energy budget, the building will pass.

## **METACRYLICS TITLE 24 QUALIFYING COATINGS:**

The table below outlines how METACRYLICS' ACRYLIC WHITE products exceed Title 24 requirements by the widest margins available in the roofing industry - Your guarantee to the maximum savings and environmental benefits. A complete list of rated products can be found on the Cool Roof Rating Council's website at: <http://www.coolroofs.org/ratedproductsdirectory.html>.

| <b>Title 24 Minimum Requirements</b> | <b>0.70</b> | <b>0.75</b> |
|--------------------------------------|-------------|-------------|
| <b>METACRYLICS ACRYLIC WHITE</b>     | <b>0.87</b> | <b>0.90</b> |
|                                      | <b>+17</b>  | <b>+15</b>  |

For information about METACRYLICS' products, visit our website at [www.metacrylics.com](http://www.metacrylics.com) or call (800) 660-6950 / (408) 280-7733.

For more information about Title 24 or to download a complete copy of the Energy Efficiency Standards, visit the California Energy Commission's website at: <http://www.energy.ca.gov/title24/>

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