



RHOPLEX™ EC-2540

100% Acrylic Polymer

Introduction

RHOPLEX™ EC-2540 is an all-acrylic polymer designed for use in a white protective coating to extend the life of existing roofs. Coatings based on RHOPLEX™ EC-2540 are an excellent choice for use over asphaltic substrates, providing an environmentally friendly water-based alternative to solvent-based aluminized asphalt roof coatings. In addition, RHOPLEX™ EC-2540 offers excellent flexibility and adhesion while resisting damage due to UV light, asphalt staining and dirt pickup.

Advantages

- Excellent adhesion when applied over various roofing substrates, including built-up asphalt, modified bitumen, metal, concrete and others
- A barrier to ultraviolet light, which rapidly degrades the surface of asphaltic materials
- Significantly lowers roof surface temperature, which can help reduce cooling bills
- Resistance to asphalt staining (“bleed through” resistance)
- Excellent dirt pickup resistance
- Excellent flexibility at temperatures as low as 0°C or 32°F (below the temperature at which unmodified asphalt becomes brittle)
- Application by spray, brush or roller
- Formulations with less than 50 g/L volatile organic compounds (VOC)
- User-friendly (soap and water cleanup) and environmentally friendly

Typical Physical Properties

These properties are typical but should not be considered specifications.

Appearance	Milky white liquid
Solids content, % by weight	55 ± 0.5
pH (as packed)	9.5 ± 0.3
Density, lbs/gal	8.76
Glass transition temperature (T _g), onset, DSC, °C	-15
Brookfield viscosity, cPs	100-400
Specific gravity	1.05
Storage precautions	Protect from freezing

Application Recommendations

Coatings based on RHOPLEX™ EC-2540 should be applied at a minimum of 10 dry mil thickness (about 1 gal/square) per pass over unaged or aged asphaltic substrates. Depending on the conditions of the existing roof in place, two coats (10-15 dry mil each) may be necessary. The wet coating will sometimes discolor immediately when applied over aged asphalt surfaces. However, this water soluble discoloration will disappear after a few rainfalls.

Water-based coatings based on RHOPLEX™ EC-2540 technology should NOT be applied:

- At temperatures below 5°C (40°F)
- At very high (>90%) relative humidity or when rain is expected
- When temperatures can be expected to fall below the dew point within the next six hours
- On roofs collecting ponded water (The National Roofing Contractors Association [NRCA] considers ponding water on any type of roof unacceptable; see the NRCA Roofing and Water Proofing Manual)
- Over polyurethane foam (RHOPLEX™ EC-2540 is not recommended for use over polyurethane foam [PUF]. Roof coatings based on RHOPLEX™ EC-1791, RHOPLEX™ EC-2885 or RHOPLEX™ EC-3000 are recommended over polyurethane foam.)

Test Methods

For a complete list of test procedures commonly used for evaluating elastomeric roof coatings, refer to ASTM Standard D6083 for guidelines and references to common roof coating test methods.

Formulation Guidelines

Fine tuning of a formulation may be necessary to achieve a balance of performance properties. However, the substitution of one material for another (considered to be its generic equivalent) may substantially alter this balance, especially when changes in the nature of formulating ingredients, the amount used or certain extreme situations are present.

It is strongly recommended that a battery of performance tests be implemented to periodically assess formulation performance. Such testing should be done with inclusion of a control formulation previously determined to possess a satisfactory balance of performance properties to qualify all raw material substitutions and formulation changes. These tests should address mechanical performance, water resistance and formulated product stability criteria in arriving at an overall performance balance.

Contact your local Dow representative for suggested starting point formulations and related information.

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