CONSTRUCTION CHEMICALS

Acrylic Elastomeric Roof Coatings

North America

Keep yourself covered

Elastomeric Roof Coatings

Improve building envelope durability and efficiency with award-winning Dow roofing solutions. Our solutions for elastomeric roof coatings offer several benefits, including:

- Long-term thermal performance and energy efficiency (Cool Reflective Roof Coatings can reduce building cooling costs by up to 20%)
- Increased flexibility and crack resistance
- Reduced heat penetration
- High tensile strength for weather and UV protection
- Roof assembly longevity

Advancing acrylics

While Dow introduced the first acrylic polymer for house paints in the 1950's, it was quickly determined there could be broader applicability for this technology. Fast forward to the early 1980s and enter the acrylic elastomeric roof coating (ERC).

Designed as a stronger, yet flexible, membrane, ERCs are applied much thicker than house paint yet still offer optimized rheology for easier application.

Acrylics have a history of excellence in their robust durability and simple soap and water cleanup, offering a lower VOC alternative to solvent-based predecessors across a variety of applications, and ERCs are no exception. These waterborne technologies also allow for high build and quick-set design options which don't require additional time or equipment to cure.

Thus, acrylic technology has facilitated the ability to pass evolving regulatory requirements across the country, while meeting construction codes and consumer preferences to deliver a high-quality solution for new and retro-fit roofs.

Beyond this, ERCs also heighten the focus on diminishing solar energy absorbed by buildings which contribute to the Urban Heat Island effect. These specialized coatings offer increased solar reflectivity and improved thermal emissivity to improve building energy efficiency.

Learn More

For the full catalog of binders and their perfromance ratings for Elastomeric Roof Coatings, please visit www.dow.com/roofing.

Sustainable significance

Sustainability remains a steadfast priority at Dow and ERCs offer a distinct opportunity to identify and deliver solutions that address biological resistance, recycled materials, emissions reductions, hybrid technologies and more.

Waterborne solutions

Opting for acrylic technologies reduces volatile organic VOCs while still offering tremendous durability, as well as easy soap and water cleanup.

Waste reduction

The application of a roof coating can extend the life of an existing roof minimizing the need to tear off a roof and send those materials to a landfill. In fact, whether the roof coating installation is new or retrofit, regularly scheduled recoating of that roof can significantly reduce the need to ever landfill the original roofing assembly and lead to a long-term viable solution for that roof.

Energy efficiency

From the building owner dealing with utility bills to the occupants dealing with comfort level of the built environment, energy efficiency and performance of buildings are important. ERCs can help reduce cooling costs by up to 20%.

Substrate versatility

With the increasing complexity of roofing systems, ERCs are tasked with delivering exceptional adhesion and outstanding performance across a growing number of roofing material substrates.

Dow's portfolio of acrylic polymers for ERCs provide a quality range of options across a broad spectrum of substrates to maximize customer product lines with good, better and best offerings.

Best practice product suggestions are provided in **Table 1**. These suggestions are not to be interpreted as specifications and do not guarantee performance.

As always, please consult your Dow representative to discuss the best solution for your substrate.

Table 1. Product suggestions by substrate

Substrate	Product Suggestion				
RHOPLEX™ Binder	EC-1791	EC-2020	EC-1791QS	EC-2885	EC-2540
Foam	●	●	●	●	
Fresh asphalt					●
Aged asphalt	●	●	●		●
Aged TPO, PVC	●	●	●		
Aged concrete	●	●	●		●
New concrete First apply specialty concrete primer/sealer	●	●	●	●	●
Metal First apply specialty metal primer	●	●	●	●	●
EPDM First apply RINSEALABLE™ Primer RP-2	●	●	●		
Re-coat acrylic	●	●	●		●

The graphic representations are presented here for illustrative purposes only and should not be construed as product specifications.

Transforming value

Working together to solve industry challenges, our experts are dedicated to researching, developing, testing, and partnering with you to bring lab-based solutions to real world applications.

Whether its ponded water resistance, one-coat application, primer-less adhesion or broadening adhesion across substrates, we're prepared to seek new solutions together.

With a truly global footprint and reliable back-integration, we're well positioned to offer what you need, when you need it.

Once you have what you need, we're still here to help, providing technical service through testing and application support.

We want you to have confidence that we're here to collaborate with you until we find the formulation that fits your needs.

Investing together

A building owner or other key decision-maker is often confronted with the choice of maintenance versus capital investment for a roofing project.

Either way, an elastomeric roof coating provides a low cost, sustainable solution.

We're eager to partner with our customers on solutions that extend asset life and protect our environment.

Featured products

Performance Overview

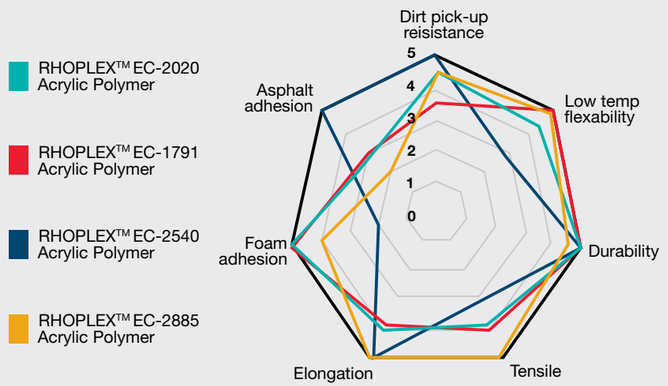
Elastomeric Roof Coatings (ERC) binders powered by Dow offer a balance of desired properties tailored to meet varying performance requirements

Products featured in **Figure 1** showcase the breadth and depth of offerings designed to help our customers extend the life of a building's most critical asset.

This range of products tested showcases a strong balance of properties across our portfolio of ERC binders.

Each formulation tested is >50% solids, meets or exceeds ASTM D6083 standards and exceeds Title 24 and Energy Star requirements.

Figure 1. Performance versatility of RHOPLEX™ Acrylic Polymers for ERCs



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Binder	Description	Applications	Key features
RHOPLEX™ EC-1791	Waterborne, 100% acrylic emulsion specifically designed for elastomeric roof and wall coatings with outstanding adhesion to a wide range of substrates (**including polyurethane foam**) and good water ponding resistance.	• Aged modified bitumen • Aged smooth and granulated asphalt • Metal EPDM • Spray polyurethane foam • Cured concrete	• Versatile and robust • Excellent adhesion • Excellent low-temp flexibility and dirt-pickup resistance
RHOPLEX™ EC-2885	Waterborne, 100% acrylic emulsion developed as high performing, high tensile strength polymer offering improved toughness, **hail resistance** and roof traffic protection while maintaining excellent elastomeric properties.	• Aged modified bitumen • Metal • Spray polyurethane foam • Cured concrete	• Versatile and robust • Excellent adhesion • Excellent low-temp flexibility and dirt-pickup resistance • Improved mechanical properties when compared to all-purpose products
RHOPLEX™ EC-2540	Waterborne, 100% acrylic emulsion designed for use in a white protective coating to extend the life of existing roofs, offering a **sustainable waterborne alternative** to solvent-based aluminized asphalt roof coatings.	• Aged modified bitumen • Aged smooth and granulated asphalt • Metal • Cured concrete	• Improved UV barrier • High solar reflectivity • Excellent dirt-pickup and asphalt bleed resistance • Spray, brush and roller applicable • Low VOC (<50g/l)
NEW **RHOPLEX™ EC-2020**	**New high-solids** 100% acrylic polymer designed for improved flexibility, dirt pick-up resistance and adhesion to multiple substrates for high-quality elastomeric roof coatings capable of meeting the **ASTM D6083 TYPE I and II standards**.	• Aged modified bitumen • Aged smooth and granulated asphalt • Metal • Spray polyurethane foam • EPDM • Cured concrete	• High-solids • Good balance of flexibility and dirt-pickup resistance • Improved bleed block • Excellent choice for moderate climates

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About Dow

Dow (NYSE: DOW) combines global breadth, asset integration and scale, focused innovation and leading business positions to achieve profitable growth. The Company's ambition is to become the most innovative, customer centric, inclusive and sustainable materials science company, with a purpose to deliver a sustainable future for the world through our materials science expertise and collaboration with our partners. Dow's portfolio of plastics, industrial intermediates, coatings and silicones businesses delivers a broad range of differentiated science-based products and solutions for its customers in high-growth market segments, such as packaging, infrastructure, mobility and consumer care. Dow operates 106 manufacturing sites in 31 countries and employs approximately 35,700 people. Dow delivered sales of approximately $39 billion in 2020. References to Dow or the Company mean Dow Inc. and its subsidiaries. For more information, please visit www.dow.com or follow @DowNewsroom on Twitter.

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