



**DOW**



# ROOFING INNOVATION

Material science to enable durability and energy efficiency

# HISTORY OF EXCELLENCE



Exploring and delivering

## TOGETHER

to transform the **roofing industry** for the buildings of tomorrow

## 40+ YEARS EXPERIENCE

in **roofing science** – including product, application, market and specification development

## 4 Dow businesses dedicated to roofing customer innovation

- Construction Chemicals
- Polyurethanes
- Performance Silicones
- Packaging & Specialty Plastics

## >37

R&D centers providing customers the opportunity to **quickly access better solutions around the globe**

## Offering a wide breadth of chemistries:

- Acrylics
- Silicones
- ISO
- SPF
- 1K and 2K PU
- TPO
- PVC
- EPDM



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**DOW**

A close-up, low-angle view of a modern building's facade, showing a complex grid of white structural elements and glass panels. The perspective is looking up, creating a sense of height and architectural detail.

**Can we enable  
more energy-  
efficient buildings  
through roofing  
innovation?**



# DRIVING SUSTAINABLE CHANGE IN ROOFING

## OUR COMMITMENT IN ACTION

Solving industry challenges through a circular economy, climate protection and safer materials



### WASTE REDUCTION

- Offering **elastomeric roof coatings and roof membranes** with long-term durability
  - *Increased life expectancy reduces tear-offs and landfill waste*
- Exploring opportunities to **recycle asphalt**



### ENERGY EFFICIENCY AND LOWER EMISSIONS

- Helping reduce the overall urban heat island effect with **cool reflective roof coatings and white roofing membranes**
  - *Cool roofs can reduce cost of cooling a building by as much as 20%*



### SAFER MATERIALS

- Offering **sustainable plasticizers** that don't migrate from roofing membranes into the environment
- Enabling **customer formulations** to be free of chemicals of concern, including APEO, formaldehyde and zinc oxide



### SUPPORT SERVICES

- **Product and customer support for third-party certifications**, including: GreenCircle certifications, USGBC LEED certifications, cool roof ratings and Energy Star

## BUILDING & CONSTRUCTION INDUSTRY IMPACT

### REDUCING WASTE



Construction sector accounts for nearly  
**40%**  
of waste

### IMPROVING ENERGY EFFICIENCY



**36%**  
of the world's energy is consumed by the building and construction sector

### LOWERING EMISSIONS



Buildings are responsible for nearly  
**40%**  
of CO<sub>2</sub> emissions

### ADAPTING TO CLIMATE CHANGE



More extreme weather conditions require stronger materials



# CREATING MATERIALS FOR THE ROOF OF TOMORROW



## INNOVATIVE

- Versatile technology and chemistry
- Alternative approaches to design for comfort and aesthetics
- Engagement across the value chain



## DURABLE

- **Weatherability**, including resistance to water, UV, hail and ponded water
- **Chemical and fire resistance**
- Thermal aging stability
- Flexibility
- Extending replacement protection



## SUSTAINABLE

- Energy efficiency
- Extension of roof life
  - Reduced tear-off leads to less landfill waste
- Low-VOC, non-migrating ingredients free of chemicals of concern
- Third-party certifications
- Use of recycled materials



## EFFICIENT

- Quick and customizable formulation development
- Simplified application
- Rapid cure for faster return-to-service
- Faster and lower-cost installation

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**How does  
technology  
transform  
a roof?**



# ROOFING SOLUTIONS

## LOW SLOPE & COMMERCIAL ROOFING



MEMBRANES

Single Ply

TPO, EPDM, PVC



COATINGS

ERC

Acrylics, 1K-2K PU,  
Silicones



ADHESIVES &  
SEALANTS

Adhesives, Sealants &  
Liquid Flashing

Acrylics, PU, Silicones



INSULATION

Spray in Place, Board

SPF, ISO

## STEEP ROOF & RESIDENTIAL ROOFING



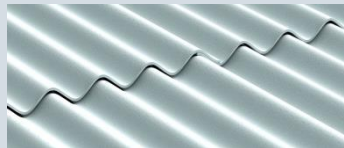
GRANULATED METAL  
ROOF TILE

Basecoats & Topcoats



CONCRETE ROOF TILE

Clear Sealers &  
Slurry Coatings



FIBER CEMENT

Modifiers & Sealers



ASPHALT SHINGLES

Modifiers

Coatings, Redispersible Latex Powders (RDP), Binders, Modifiers, Dispersants, Surfactants & Plasticizers

Acrylics, Silicones, Polyolefins, Plasticizers



# MEMBRANES

Redefining flexibility for  
all extremes



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- Features **advanced materials** for thermoplastic polyolefin (TPO), polyvinyl chloride (PVC) and **ethylene propylene diene terpolymer (EPDM) roofing membrane systems**
- Highly versatile solutions can be used to develop **custom-tailored formulations** that fit specific designs, production processes and end-use requirements for customers and value chain partners





# COATINGS

Progressing high-performance options



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- **Long-term, sustainable** option to protect existing roofs; recoating vs. replacing a roof deck eliminates tear-off waste
- **Cost-effective, simple application and quick cure** ensures rapid return to service
- **No specialized training** needed
- **Easy clean-up** powered by waterborne technology

# ADHESIVES & SEALANTS

Furthering durability  
and design flexibility



**DOW**

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- **Vast offering of silicone sealants and coatings** for structural glazing, weatherproofing and insulating glass
  - **Polyurethane systems** that offer high-performance coating, adhesive and sealant solutions
  - **Acrylic binders and additives** that offer durability in applications ranging from **cool roof coatings** to **cementitious waterproofing membranes**

# INSULATION

Boosting energy  
efficiency

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- **Materials for spray foam insulation** contribute to **energy efficiency** and meet more **stringent fire performance**
- A broad range of **product offerings for panel insulation** offer advanced moisture protection, **excellent insulation performance that contributes to a reduced carbon footprint** and enhanced flame retardancy



# GRANULATED METAL ROOF TILES

Increasing longevity,  
protection and aesthetics



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- **100% acrylic emulsion polymers** for base coats to embed granules and topcoats to add strong final finish
- **Rheology Modifiers (dispersants, surfactants, thickeners)** to improve color and gloss retention
- Offers excellent efflorescence and water whitening resistance

# CONCRETE ROOF TILES

Reinforcing performance  
strength

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- **Offering comprehensive range** of acrylic emulsion polymers and silicone additives for topcoats, coatings and sealers for the protection of concrete roof tiles
- **Facilitating reliable weatherization** properties
- **Quick cure capabilities** to support rapid fabrication for efficient production and cost savings
- **Enhancing resistance** to efflorescence and water whitening



# FIBER CEMENT

Advancing aesthetics and  
water resistance



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- **Offering proven performance** with a portfolio of acrylic emulsion binders and additives for corrugated sheets and roof slates
- **Flexible formulations** improve durability, and water-whitening, alkali and efflorescence resistance
- **Facilitating long-lasting and reliable water repellency** with silicone hydrophobers for coated and uncoated fiber cement substrates

# ASPHALT SHINGLES

Enhancing sustainability and  
processability

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- Polymers, binders and additives contribute to **improved durability, tear resistance and impact resistance** to hail and high winds in asphalt shingles
- Offering **formaldehyde-free solutions**
- **Improved processability and line efficiency** extend benefits across value chain



# COLLABORATING TO SUSTAINABLY ADDRESS GLOBAL NEEDS

## INDUSTRY ASSOCIATION ENGAGEMENT

Engaging across the value chain to drive innovation for city of tomorrow, today

### Material Science Supplier Representation



Single Ply  
Roofing  
Industry  
Association



National Women  
in Roofing



Roof Coatings  
Manufacturers  
Association



Asphalt  
Institute



ASTM



Cool Roof  
Rating Council

Channeling Dow's materials science expertise as we collaborate and innovate with customers and partners to create solutions that positively impact the world

### Partnership

Collaborating throughout the value chain to develop higher-performing materials across roofing system applications

### Leadership

Building on 40+ years of expertise to create roof systems for the next generation of residential, agricultural and commercial buildings

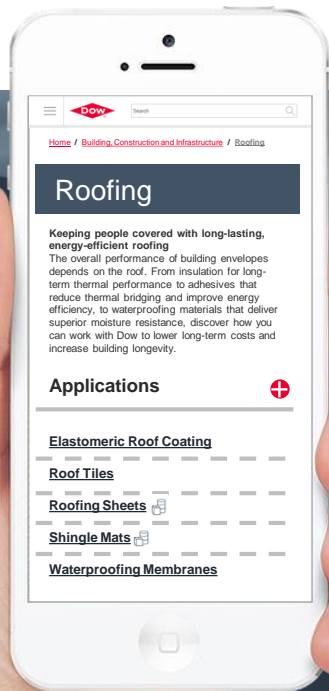
### Stewardship

Advocating for and enabling more sustainable material options to address the full lifecycle of a roof system





# PRODUCT SUMMARY



Visit [www.dow.com/roofing](http://www.dow.com/roofing) to search for products by application area, features, benefits and physical properties



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Seek

Together™