



**ENERGY STAR**  
INFRARED HEAT REFLECTIVE



COOLING  
OUR URBAN  
ENVIRONMENT

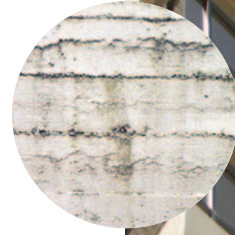


**Crack Free Elastomeric Wall Coatings**  
**Heat Reflective, Anti-carbonation**  
**Protection For Seafront**  
**Masonry Facades.**

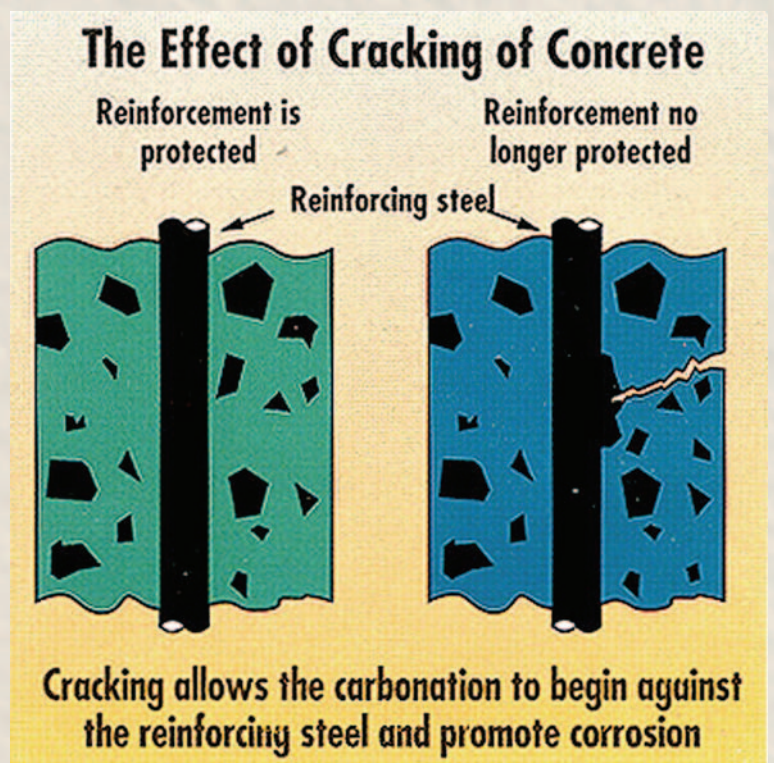


## **CRACK-FREE** Protection for your buildings

Masonry Wall retrofit has always been a premature expense to building owners. Where the general integrity of the existing paint finish is sound, excluding unsightly failures over continually moving cracks in the substrate.



Other than poor aesthetic appeal, cracks in a buildings protective finish leaves the building vulnerable to premature masonry failures as the cracks allow the ingress of water, chloride ions, (salts), and environmental gases such as, (So<sub>2</sub> and Co<sub>2</sub>) into the masonry substrate and expose the concrete and it's reinforcement to their potentially destructive effects.



## ***The Best Elastomeric Wall Coatings Go Unnoticed!***

Nowadays, with the cost of labor and access exceeding 80% of retrofit, your selection of materials used to protect and decorate your building has become one of the most critical aspects of any masonry wall retrofit.

Astec Elastomeric Wall Coatings ensure protection year in year out against the ingress of water, carbon dioxide, chloride ions and all of their potentially destructive effects. Moreover, their unique surface curing chemistry gives a high level of resistance to dirt pick-up.

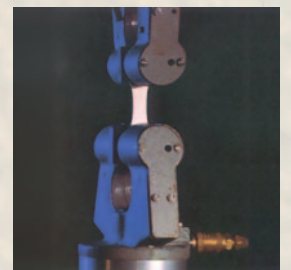
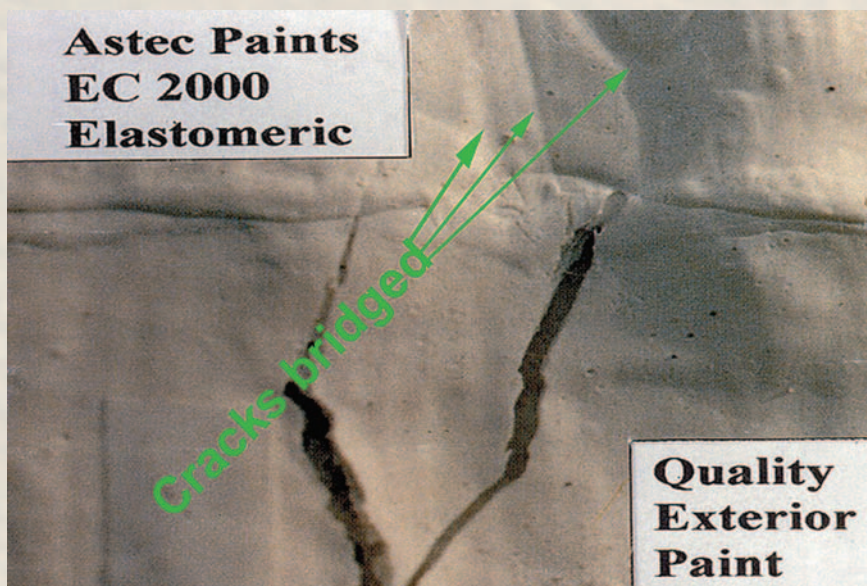
Unlike normal paint, Astec elastomeric wall coatings maintain their elasticity with time. Substrate movement for whatever reason leads to cracks. These cracks are easily bridged during initial application and remain bridged throughout the worst ravages of cold winters and hot humid summers.



### ***FOR YOUR ABSOLUTE CONFIDENCE....***

Energy Star Dirtguard I.R. Elastic possesses the ability to bridge a forthcoming crack 4.9 times its dry film thickness.

( 350 microns dry will accommodate a forthcoming crack of 1.75 mm ).



## Why absorb the sun-When you can reflect it.

A cool building envelope is one design element you can not afford to over look when renovating an energy efficient building.

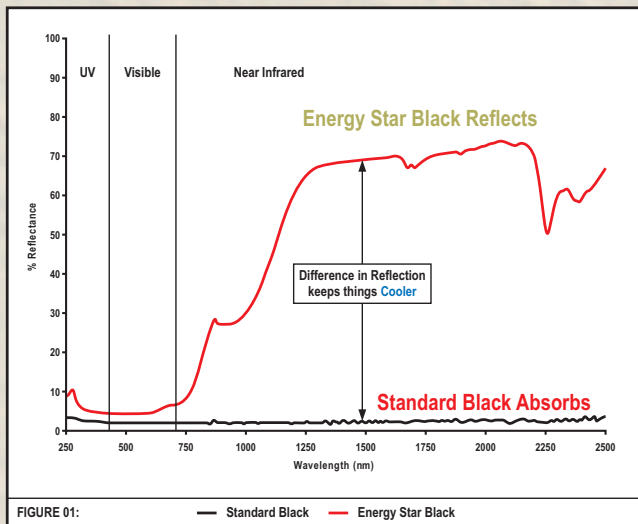
During masonry wall restoration It makes sense to take the opportunity and select coatings that render the building envelope highly reflective to sunlight, as Cool walls will reduce the amount of sunlight your building will absorb, reduce air-conditioning running costs and increase internal summer comfort for occupants.

**Fact:** a 1°C drop in temperature can provide a 10% power saving, and as such a considerable overall power savings for a property. Macquarie University web-page Energy and Emissions – Sustainability.

Astec Energy Star infrared heat reflective coating systems reflect fully 50% of solar heat by infrared reflection. Even in darks colours, their low solar absorbance and high emittance, significantly reduces absorbed heat in the building envelope.



## Infrared heat is reflected - reducing absorbed in the building.



The IR heat signature was captured by an infrared camera from the rear of two panels during a Solar Radiation Exposure Test. One panel was Astec Energy Star® Low Sheen and the other, a competitor's premium exterior acrylic. Both panels were identical in colour.



**Fact:** Research indicates that reducing the upper surface solar absorbance of 1m<sup>2</sup> of a roofs area by 0.25 is equivalent to removing a one off amount of 64 kg of CO<sub>2</sub> emissions from the atmosphere for the life of the roof. 14,080 kg / 220 m<sup>2</sup> roof. Department of climate change discussion paper.



## Certified Performance:

Astec Energy Star products are the first, and only range of thermally regulated roofing finishes, texture coatings and elastomeric deck and wall membranes to be CodeMark certified and approved for guaranteed compliance with the B.C.A., Building Code of Australia section J – Energy Efficiency Guidelines.

## Leaders in Green, Sustainable, Low V.O.C. Products:

Sustainability is at the core of our business philosophy. We are proud of our portfolio of leading brands that make a positive difference to the environment and the health of our buildings. With more than 95% of all products being low in V.O.C. and certified by Good Environmental Choice Australia, as green sustainable products.

## Quality Management and Manufacture:

Astec Paints Australasia's management and manufacturing systems have met the rigorous requirements of the ISO 9001 Quality Management International Standard. It assures our customers that Astec is committed to meeting and maintaining world standards for quality products, continuous improvement, and customer satisfaction.



## Testing and Compliance:

### Independent thermal testing

- ASTM C 1371-04, "Determination of Emittance of Materials Near Room Temperature."
- ASTM E 1980-01, "Standard Test Method for determining Solar Absorptance Values at Room Temperature."
- ASTM C 1549-02, "Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer."
- ASTM E 903-96, "Standard Test Method for Solar Absorptance, Reflectance, and Transmittance

of Materials Using Integrating Spheres."

- ASTM E 1980-01, "Standard Test Method for determining Solar Reflectance Index."

### Third party compliance

- Complies with Australian Standards AS /NZS 4859.1, (Materials for the thermal insulation of buildings).
- B.C.A. (Building Code of Australia CodeMark Certified. Certification No:GM-09-CM30010.
- Good Environmental Choice Australia Certified. Certification No:AST-2007.



Masonry wall restorations - Seafront Apartments Maroochydore QLD

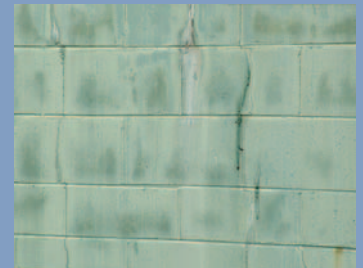
**OBJECTIVE:**

Restore the aesthetical appeal of the building with a new modern colour scheme, repair all salt eroded masonry defects, reduce the internal temperatures of the building, encapsulate the entire building with an elastic crack bridging membrane to stop the ingress of water and chloride ions. Extend the time between repaints from 7 to 15 years.



**SCOPE:**

- Clean and neutralize salt contamination.
- Repair salt eroded masonry.
- Repair concrete spalling.
- Bind friable masonry surfaces.
- Apply heat reflective crack bridging membranes.



**WARRANTY:**

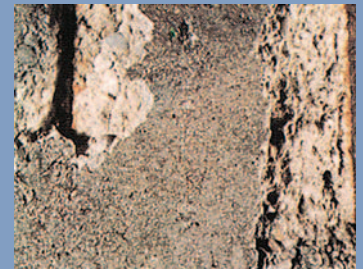
- 15 year Astec Accredited applicator workmanship warranty.
- 15 Year manufacturer material warranty.

Concrete repair and anti-carbonation protective coating system – 3 x 26,000 m<sup>2</sup> concrete cooling towers, Yallorne Energy, Latrobe Valley, Victoria.

**OBJECTIVE:**

The concrete structures were un-coated since they were constructed and had been left exposed to the environmental gases of the power plant. As a result, the pH of the concrete had dropped over years allowing the steel reinforcing to severely corrode and jeopardize the integrity of the structures.

The project required an exceptional system to repair the concrete spalling and a coating system that would provide long-term crack resistant anti-carbonation protection to the masonry.

**SCOPE:**

- High pressure clean entire structure.
- Sonic test for spalling concrete.
- Repair concrete spalling.
- Bind friable masonry surfaces.
- Treat all surfaces for under-film mould re-growth.
- Apply Astec crack bridging membrane.

**WARRANTY:**

- 15 year Astec Accredited applicator workmanship warranty.
- 15 Year manufacturer material warranty.

## Heritage Masonry wall restoration – Melbourne, Victoria.

**OBJECTIVE:**

Accurately restore the heritage facade to it's original state. Remove all loose and carbonated renders to ensure pedestrian safety below. Epoxy inject and stainless steel pin all potential areas of masonry failure. The project required skilled matching of the existing renders to ensure the uniform heritage appearance was retained. Stabilize all friable masonry surfaces and coat the entire project with a crack bridging elastic skin to provide long-term protection against the ingress water and Co2.

**SCOPE:**

- High pressure clean entire structure.
- Sonic test for spalling concrete.
- Repair concrete spalling.
- Epoxy injection / Stainless steel pinning.
- Bind friable masonry surfaces.
- Treat all surfaces for under-film mould re-growth
- Apply Astec crack bridging membranes.

**WARRANTY:**

- 15 year Astec Accredited applicator workmanship warranty.
- 15 Year manufacturer material warranty.



**DETAIL:**

- Energy Star heat reflective elastomeric wall coatings.
- Elastomeric waterproofing of all concrete roofing desks.
- Mooloolaba, QLD.



**DETAIL:**

- Energy Star heat reflective elastomeric wall coatings.
- Elastomeric waterproofing of all concrete roofing and podium desks.
- Sub basement waterproofing.
- Noosa Heads, QLD.



**DETAIL:**

- Energy Star heat reflective elastomeric wall coatings.
- Sub basement waterproofing.
- Mooloolaba, QLD.



**DETAIL:**

- Astec elastomeric wall coatings.
- Gold Coast, QLD.



**DETAIL:**

- Astec Armatex textures and crack bridging elastomeric wall coatings.
- Melbourne, VIC.



**DETAIL:**

- Remove existing texture system. Apply Astec Armatex textures and crack bridging elastomeric wall coatings.
- Melbourne, VIC.



**DETAIL:**

- Astec elastomeric wall coatings.
- Mooloolaba, QLD.



**DETAIL:**

- Export to Japan.
- Astec elastomeric wall coatings.
- Tokyo, Japan.



**DETAIL:**

- Astec elastomeric wall coatings.
- Gold Coast, QLD.



**DETAIL:**

- Astec elastomeric wall coatings, Maroochy Sands.
- Waterproofing to car parks.
- Mooloolaba, QLD.



**DETAIL:**

- Export to China.
- Primers and elastomeric coating system applied during new construction.
- China.



**DETAIL:**

- Export to U.A.E.
- Energy Star Armatex texture system to walls of 130,000 m<sup>2</sup>.  
 Energy Star reflective coating system to roof of 70,000 m<sup>2</sup>.  
 Specified to tolerate 50 deg C heat.
- Abu Dhabi.



## Trust Our Experience and Reputation for Quality:

Our impressive portfolio of projects spanning almost three decades is testimony to our reputation for quality. Throughout Australia and Asia to the deserts of U.A.E, our products have proven to survive long-term in the world's most extreme environments which is why Astec is the energy efficient choice of the building and restoration industry.

PERFORMANCE DATA		
PROPERTY	TEST METHOD	MEASURED RESULT
Moisture vapor transmission rate. @ 25°C, g/m <sup>2</sup> /hour	ASTM E96	1.2
Elongation (%) 40°C 25°C 0°C - 10°C	ASTM D412-1992	725 640 349 218
Tensile Strength ( kg/cm <sup>2</sup> ) 40°C 25°C 0°C - 10°C	ASTM D412-1992	32.9 36.1 76.2 109
Low Temperature Flexibility	Excellent	No cracking over a 3mm mandrel bend at 23°C, at 0°C and at -18°C.
<b>Crack-Bridging Ability (25°C)</b>	<b>4.9</b>	<b>EC 2000 will bridge a “forthcoming” crack, 4.9 times its dry film thickness.</b>
Heat - Aged Stability (10 days / 60°C )	Excellent	No syneresis, settling or viscosity change greater than 10%
Moisture Vapour Transmission Rate (Perms)	156 (42.7g/m <sup>2</sup> /24 hrs)	Low MVTR figures can cause problems on masonry substrates.
Water swelling @ 25°C, maximum, %	ASTM D471	8.8
Accelerated dirt pick-up resistance	Excellent	
Natural Exposure: North Vertical North 45° North 5°	Excellent Excellent Excellent	No dirt pick-up, chalking or other forms of degradation after one year. Some dirt pick-up in Asian tests but easily removed.
<b>RESISTANCE TO CARBON DIOXIDE PERMEABILITY</b>		
Air Equivalent (m) Concrete Equivalent (cm)	65 16	“Standard” recommendation minimum figures are 50m (air) and 12.5cm (concrete)

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