

Buildings and Infrastructure



# Welcome to Planet Possible

Our commitment to doing more with less

When people ask us what **sustainability** means to AkzoNobel, we tell them that our success depends on it. We know only too well that our future hinges on our ability to **do radically more while using less.**

**More innovation, less traditional solutions; more renewable energy and materials, less fossil-based; more value chain focus, less introverted thinking.**

We are **determined to turn** what is an obvious challenge into a **clear opportunity** and bring **more value** to our customers and society in general.

AkzoNobel provides products and expertise that bring **sustainable value and benefits** across all areas in the Buildings and Infrastructure market:



# How?

By proving that the world being limited by resources doesn't mean our ambition and imagination have to be restricted as well.

So we have adopted a strategy of **radical efficiency** which involves us working with customers and suppliers to open up infinite possibilities in a finite world.

It's our commitment to finding opportunities where there don't appear to be any.



# Connect with the leader in the industry

There is still a long journey ahead of us, but we are proud of what we have already achieved to make sustainability an integral part of our business strategy and culture.

Our long-standing reputation as a leader in the field of sustainability is evidenced by our consistently high ranking on the influential Dow Jones Sustainability Index (DJSI) over the last eight years.

YEAR	RANKING
2013	1 <sup>st</sup> place / Materials Industry Group leader
2012	1 <sup>st</sup> place / Super sector leader
2011	2 <sup>nd</sup> place
2010	2 <sup>nd</sup> place
2009	2 <sup>nd</sup> place
2008	2 <sup>nd</sup> place (joint)
2007	1 <sup>st</sup> place / Super sector leader
2006	2 <sup>nd</sup> place

Regarded as one of the world's foremost sustainability indices, the DJSI benchmarks the sustainability performance of leading companies based on environmental, social and economic performance, including forward-looking indicators. It assesses various criteria, including supply chain management, operational eco-efficiency, product stewardship, human capital development and occupational health and safety.

But while we are proud to be a sustainability leader, **we are not standing still**. As we strive for continuous improvement throughout the entire value chain, one of our latest commitments is to reduce the cradle-to-grave carbon footprint of our products by more than 25 per cent by 2020 (compared with 2012).

This means that our efforts will also help to create sustainable benefits for our customers, be it by increased energy efficiency, reduced material losses or improved productivity.

MEMBER OF  
**Dow Jones  
Sustainability Indices**  
In Collaboration with RobecoSAM

At AkzoNobel, we are committed to working together with customers and suppliers to deliver sustainable value across the entire supply chain and support the sustainability ambitions of our partners.



Park Ventures  
Ecoplex building  
Bangkok, Thailand

AkzoNobel products:  
Dulux Weathershield Ultima,  
Dulux EasyCare





# Rely on our share in your certification

Voluntary green building certifications\* (LEED, BREEAM, GRIHA, DGNB and others) are designed to promote and challenge design, materials and construction practices to reduce the environmental impact of buildings and improve occupant health and well-being. These standards have resulted in water savings and reduced energy demand. Beyond that, they have increased the acceptance, use and development of new technologies and approaches to meet building and occupant goals.

We at AkzoNobel are aware that paints and coatings make up only a comparably small proportion of all substances and technologies that determine the environmental footprint of a building or new construction project. However, within our scope, our existing products make a leading contribution to certification and we are committed to developing materials and technologies that offer further clear sustainability benefits for our customers.

As a “green” building, Park Ventures Ecoplex has been designed to save up to 25 percent of the energy usage and more than 60 percent of the water usage of an equivalent high-rise, commercial building. This, together with numerous other aspects of its design, led to it gaining Thailand’s first LEED award for mixed-use buildings, and at the highest, platinum, level.



LEED  
(USGBC’s Leadership  
in Energy and  
Environmental Design)

BREEAM  
(Building Research  
Establishment Environmental  
Assessment Method)

GRIHA  
(India’s Green Rating  
for Integrated Habitat  
Assessment)

DGNB  
Deutsche Gesellschaft für  
Nachhaltiges Bauen e.V.  
(German Sustainable  
Building Council)

# Products and functionalities for today and tomorrow:

## VOC reduction

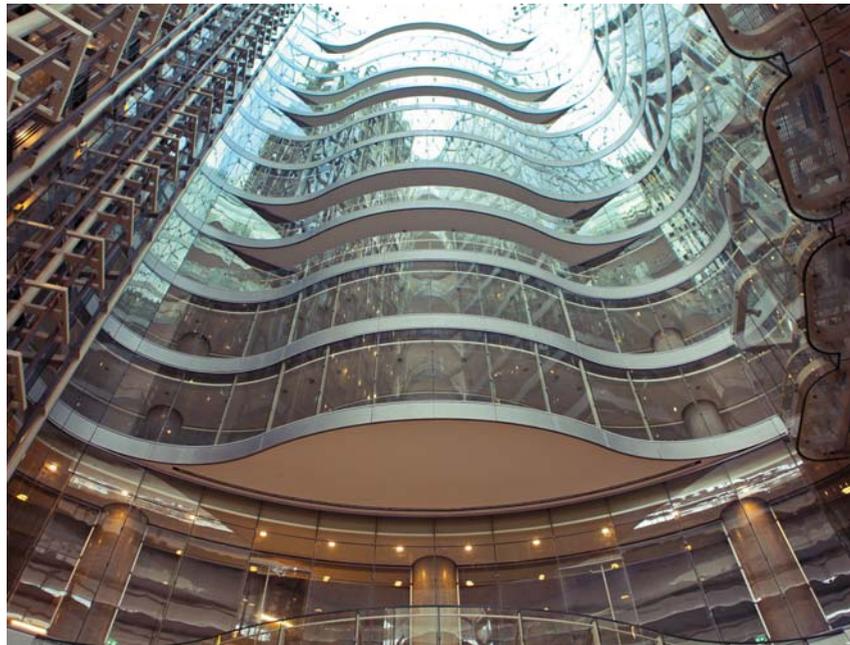


**1 Bligh Street**  
Sydney, Australia

**AkzoNobel products:**  
Interzinc®, Interplus®,  
Interfine®, Intercure®,  
Interthane®

### Reduced emission coatings for improved indoor air quality

Lower VOC coatings are at the heart of our current coatings product range. Our research and development efforts are focused on further VOC reduction, **lowering other emissions** and **reducing embedded carbon**.



Our paints, which are **used both externally and internally**, were chosen to complement the low-impact design of the building, offering a combination of low volatile organic compounds (VOCs), high performance and long-term color and gloss durability.

For example, internal steelwork is coated with Intercure 99, a single-coat protective system that not only cures quickly—**saving both time and energy** compared with conventional two-coat systems—but also has a level of VOCs significantly below the limit set by GBCA.

Opened in 2011, 1 Bligh Street is the most energy-efficient office building in the country, with a 6 Star Green Star rating awarded by the Green Building Council of Australia (GBCA).

# Reflection

## Solar reflective coatings

Our coatings can help **lower cooling energy costs** by reducing heat gain in interior spaces, while helping counteract the urban heat island effect. AkzoNobel offers a number of technologies that are available for application to exterior building surfaces such as roofs, cladding and walls.

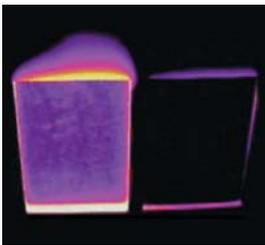
### Heat island effect

Growth in urban areas has produced urban heat islands, which may be as much as 12 degrees warmer than surrounding, less developed areas. Surface temperatures of roads, sidewalks, and building roofs may be 70 degrees higher than the ambient air temperature. These higher temperatures result in high air conditioning costs and the need for greater electrical production. Using highly reflective roofing materials is proven to reduce energy costs.



## We are leaders in cool roof coatings

Through the use of a thermal imaging camera, a visual record is made of the temperature of the test materials. The panel on the left uses traditional pigments, while the panel on the right uses Cool Chemistry pigmentation.



## Light reflective paints

Our patented Light & Space coating technology **reflects more light** compared with more conventional coating systems.

The result: **brighter rooms** and **energy savings** through reduced artificial lighting or smaller windows.



**LKAB Mine**  
Kiruna, Sweden

**AkzoNobel products:**  
Dulux Trade Light & Space™

The AkzoNobel paint used in the underground workshops reflects up to 40 percent additional light compared with conventional coatings. The result is a brighter, more pleasant working environment.

## Benefits above and below ground

Light & Space works on the principle of both reflecting more light and absorbing less light, making rooms feel bigger, brighter and less gloomy. This leads to a reduced need for artificial lighting and to potential energy savings of up to 22 percent.

# Durability

## More durable technologies

Monitored and tested for decades, our outdoor and indoor paints and coatings are **designed to last**.

Your benefit: Extended maintenance and repaint cycles that help to **reduce both maintenance costs and environmental impact**.

Eternity, the Essential Collection for Green Building is a 20 shades color range of heat reflective powder coatings. As part of our Interpon D2000 range, it comes with exceptional durability—a proven 21 year on-building track record.



## Aspria Club

AkzoNobel decorative paints make sure that interior walls and spa facilities look exactly the way the renowned Sparcstudio in London had designed them to be. And stay that way thanks to their hard-wearing features.

# Protection

## Special functionalities such as anti-graffiti and anti-microbial

Underneath their good looks, our coatings **work hard to protect** your structures and walls, for example making graffiti and other stains easier to clean. Used anywhere with high levels of public contact, our proven anti-microbial technologies help to protect our paints and coatings for extended service.

The result is not only a **higher level of protection**, but also **cost savings** thanks to reduced maintenance efforts.



Aspria Club, Hamburg, Germany  
AkzoNobel products: Sikkens

# Bonding

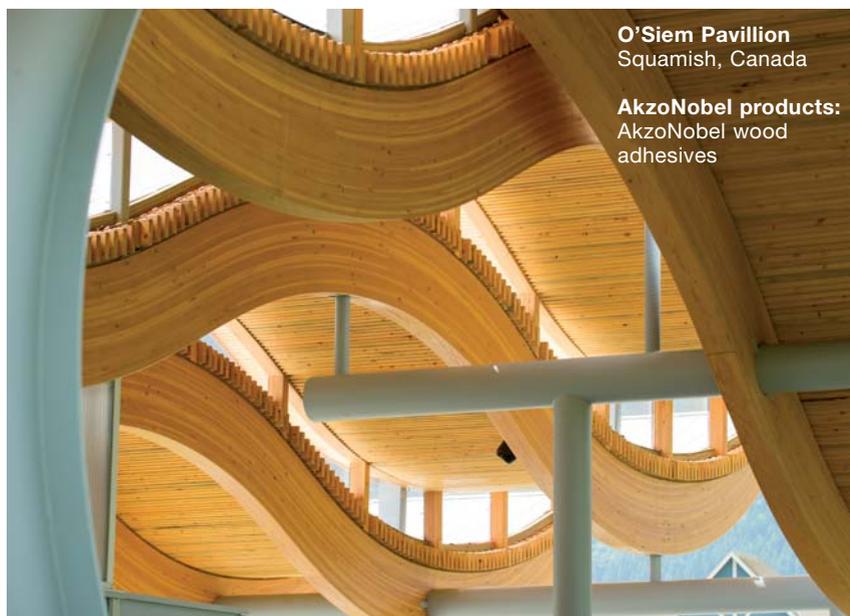
## Laminated beam adhesive and application equipment technology for optimized material use and bonding

AkzoNobel's wood adhesives provide a critical foundation for wood building products and structures. We are working hard to make the wood industry even more sustainable by **replacing chemicals** in our products with others that have a reduced impact on the environment, and finding ways to manufacture and apply these products **using less energy**.



### Windmills

Balsa wood is used for windmills as it provides the strength and low density required for proper movement by wind. AkzoNobel's adhesive products help to transform the balsa wood panels into strong, yet lightweight blades.



O'Siem Pavillion  
Squamish, Canada

**AkzoNobel products:**  
AkzoNobel wood  
adhesives



The use of adhesives to create glulam (laminated) support beams significantly reduces the amount of energy that is required in the manufacturing process, reduces waste and produces less water waste, creating sustainable strength.

# Sustainability is at the forefront of everything we do

Without AkzoNobel, the world around us would be a very different place. Our paints, coatings and specialty chemicals businesses are **constantly striving to develop better and more sustainable products and technologies** for you to use every day. You will find our expert solutions across key industry segments, be it Buildings and Infrastructure, Transportation, Industrial or Consumer Goods.

We recognize that population growth, climate change and resource scarcity are driving major transformations in the Buildings and Infrastructure sector. And we believe we can play a key role in addressing these challenges by focusing on getting the greatest positive impact out of the products and services we offer—from the fewest resources. Our commitment to sustainability is not just tokenism. **We're actively working to help our customers achieve their environmental targets.**

Our research and development is firmly focused on exploring ways to develop more sustainable products, be that in their manufacture, their application, their capabilities or their lifecycle.

At the same time, we are implementing **sustainability targets at all levels** throughout our business, from transport to packaging, raw material extraction to the use of water. By 2020, products with a sustainability advantage for customers will account for 20 percent of revenue.

[www.akzonobel.com/planetpossible](http://www.akzonobel.com/planetpossible)



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The Media-TIC Building in Barcelona, Spain, won the prestigious prize of World Building of the Year at the World Architecture Festival in 2011.

One of the reasons for the award was a CO<sub>2</sub> reduction rate of 95 percent through the use of sustainable, energy-efficient technologies.

**AkzoNobel products:**  
Interchar®





## **Our commitment to doing more with less.**

We have a track record of sustainable innovations in the built environment such as:

- Coatings that can reduce surface heat gain from sunlight to help lower cooling costs
- Light reflective coatings for brighter rooms and energy savings from lower wattage lighting
- More durable coatings for reduced maintenance and repaint cycles
- Laminated beam adhesive and application equipment technology for optimized material use and bonding
- Liquid paints that contain less solvents and powder coatings that contain no solvents at all



[www.akzonobel.com](http://www.akzonobel.com)

AkzoNobel is a leading global paints and coatings company and a major producer of specialty chemicals. We supply industries and consumers worldwide with innovative products and are passionate about developing sustainable answers for our customers. Our portfolio includes well-known brands such as Dulux, Sikkens, International and Eka. Headquartered in Amsterdam, the Netherlands, we are consistently ranked as one of the leaders in the area of sustainability. With operations in more than 80 countries, our 50,000 people around the world are committed to delivering leading products and technologies to meet the growing demands of our fast-changing world.

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Front cover:

**The Cooled Conservatories  
of Singapore's Gardens  
by the Bay**

Singapore, Southeast Asia

Rising to almost 60 meters, the Cooled Conservatories won the prestigious prize of World Building of the Year at the World Architecture Festival in 2012.

**AkzoNobel products:**

Interzinc®, Intergard® and Interthane® protective coatings