REYNOLUX®

Sustainability
Brochure

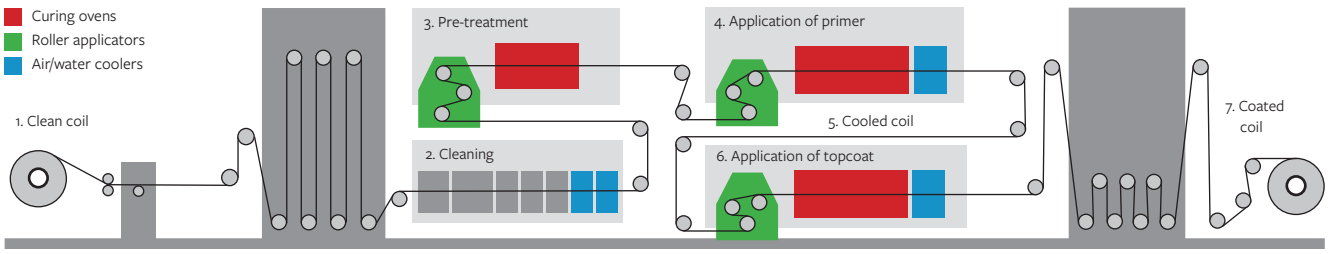
Sustainability at Arconic Architectural Products SAS.

Responsible production thanks to modern coating technology.

Coil-coating is an economical, efficient, high-quality and environmentally-friendly method for applying coatings to aluminium sheets & coils. The continuous high-tech coating process quickly applies a uniform coating. As a member of the ECCA (European Coil Coating Association), we adhere closely to the prescribed quality and environmental standards.

The advantages.

- **High precision**
  Roller application ensures an even and precise coating thickness and uniformity of colour. This reduces the amount of coating used and reduces waste.
- **Less cleaning**
  Chemical pre-treatment by cleaning rollers ensures good adhesion between metal and coating, increasing the corrosion resistance. Coil-coating reduces or even eliminates the need for the time-consuming and cleaning of products.
- **Lower VOC emissions**
  In classical coating techniques, chemicals for pre-treatment, solvents and waste pollute the environment. With the coil-coating process we capture the volatile organic compounds (VOCs) and feed them to an incinerator.
- **Good carbon footprint**
  According to calculations by the ECCA, the complete CO_2 footprint in the coil-coating process is 0.53(CO_2)/m². This value represents an improvement of 7% compared to 2009.
- **Quality**
  Coil coating optimizes finish characteristics – durability, superior quality, absolute colour accuracy and reproducibility.



We produce with respect to the environment, thanks to modern coating technology. Our commitment is reflected throughout the supply chain, in material and process optimisation and protecting the environment. Our objectives are to reduce greenhouse gas emissions even further, to increase use of renewable energy sources, to use energy more efficiently and to continuously increase recycled content.

Reduction of VOC emissions.

99.7% of all volatile organic compounds (VOCs) produced during coil-coating are captured and destroyed in an incinerator. What remains is a residue of only 0.5%. Altogether, only 0.8% VOCs are emitted, which is far below the applicable requirements.

Reduction of water consumption.

In the coil-coating process, we use water for cleaning and rinsing the sheets, as well as for pre-treating the metal and cooling it after stoving. We are constantly working to reduce water consumption. By cleaning the water and reusing it, we were able to reduce water consumption between 2003 to 2011 by 89%.

1991: Introduction of alkali-cascade rinsing.

1995: Investment in rinse-free pre-treatment technology led to a waste water reduction of 59%.

2005: The introduction of a closed water circuit led to a reduction in cooling water consumption of 70%. In one of the coil-coating lines we were able to reduce the monthly water consumption from 15,000 m^3 to 1,500 m^3.

Waste prevention.

We sort and recycle recyclable materials such as cardboard, paper, wood, steel, aluminium and plastic. Our entire production creates only a small amount of waste material per tonne produced. 80% of the hazardous materials, including those in waste water, are recycled by specialist companies. The wastewater is recycled, and 90% can be reused as fresh water.

Development of environmentally-friendly coatings.

We dedicate ourselves every day, not only to the creation of new colours and aesthetic effects, but also to working closely with our suppliers so we can provide our customers with the most environmentally-friendly products possible. Our Reynolux® products are intended to meet market requirements and the different applications needs. We are continuously improving the coatings in terms of their composition (solvents and pigments), their durability and their cleaning requirements.

- We have voluntarily stopped the use of strontium chromate for our colours.
- Colours are now produced only with lead-chromate-free pigments.
- We voluntarily avoid using pigments or solvents that are carcinogenic, mutagenic or toxic for reproduction.

We verify the sustainability of our products.

To ensure the sustainability of Reynolux® aluminium sheets & coils, we record their complete life cycles. As part of the voluntary environmental product declaration (EPD) we describe the environmental impact resulting from the manufacture and use of our products. At the same time, we also demonstrate the high recyclability of our products. With this, we give our customers the assurance of working with an environmentally-friendly product.

Aluminium – Building material for the present and for the future.

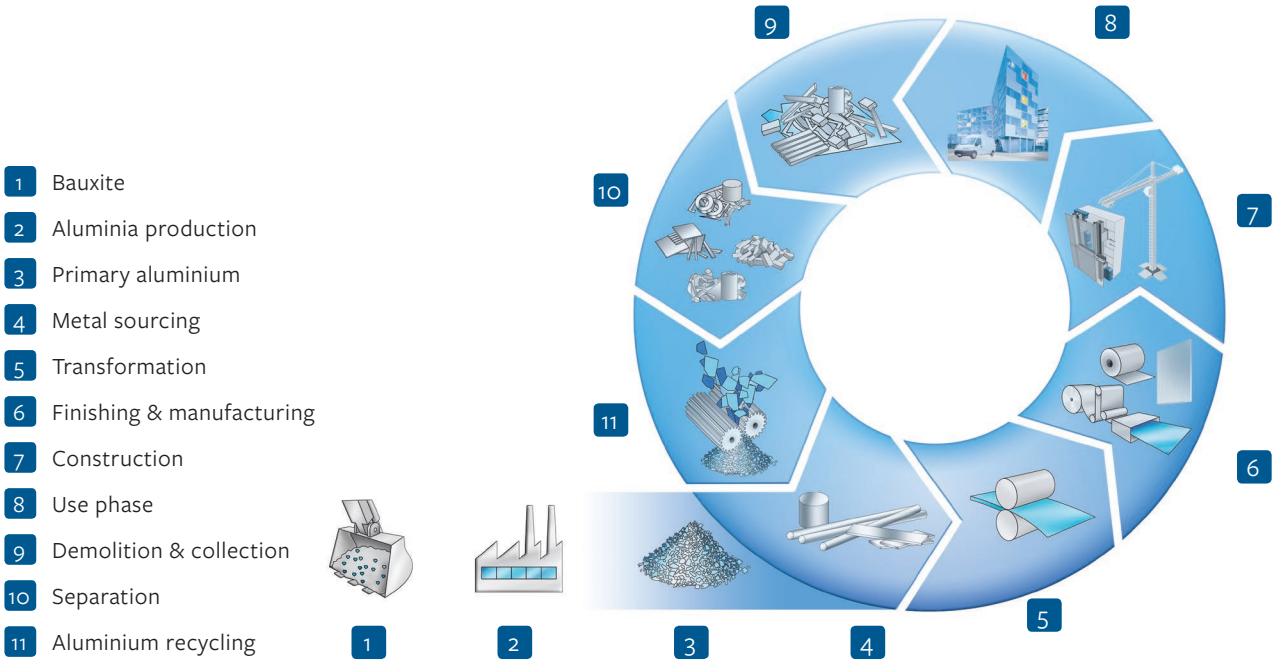
The mining and production of primary aluminium consumes a great deal of energy. However, 55% of aluminium is produced using renewable energy in the form of hydroelectricity. In addition, aluminium is 100% recyclable. More than half of the aluminium currently produced in Europe comes from recycled raw aluminium.

Material savings
The high strength of aluminium means it can be used to support heavy loads with low usage of materials, and to strengthen other materials.

Design freedom
The great stiffness of the metal opens up a greater design freedom.

Recyclability
Aluminium can be recycled while retaining basic properties because its metal bonds are restored even after several recycling operations. Hence, about 70% of the aluminium produced in the past hundred years is still in use today. In the European construction sector even 92% of the aluminium is sent for recycling. Just 5% of the energy that is necessary for the production of primary aluminium is needed to recycle used aluminium and re-melt it again at low cost.

Durability
Metal construction products such as Reynolux® sheets & coils include weather, earthquake, corrosion and UV resistance among their properties. Hence they are highly durable without diminishing aesthetic appeal.



Environmental data available upon request.

EPD - Europe

The EN15804-compliant EPD (Environmental Product Declaration) files for Reynolux® pre-painted aluminium sheets & coils are based on the ISO 14040 standard. They list the environmental qualities of the product as well as its lifecycle analysis (LCA): ecological footprint, lifecycle, recycling of the product. This European document is based on the requirements of the German DGNB certification.

LEED - USA

The LEED certification is the American system for the evaluation of environmental structures. Reynolux® pre-painted aluminium sheets & coils are helpful to support projects with the maximum two points.

We provide environmentally-friendly products for new construction and renovation.

Reynolux® aluminium sheets & coils are ideal for projects that need to meet certain environmental requirements and require external thermal insulation.

The advantages of the ventilated facade.

Reduced energy consumption
Back-ventilated curtain facades fit like a second skin around the building and ensure optimal external thermal insulation based on the following properties:

- High thermal inertia
- Minimisation of thermal bridges
- Increased thermal performance

This in turn reduces the energy consumed in buildings for heating and air conditioning. This makes ventilated facades the most efficient product for the external thermal insulation to improve the energy balance of a building.

Reduction of CO_2
The energy savings also reduce CO_2 emissions. In this way, Reynolux® products contribute to new building such as in the compliance with modernised statutory environmental policies, such as EnEV, RT 2012, DGNB, Effinergie and for passive houses or LEED projects.

Modern and healthy buildings
With a ventilated facade even older buildings can be restored to a healthy and robust status. Insulation from outside not only improves the preservation and aesthetics of the building, but simply turns an unsightly facade into an affordable, modern and attractive facade.

An extensive renovation plan of the city of Le Mans and a housing association had the aim of enhancing a social housing district with contemporary architecture and the integration of insulating and energy-saving components. In addition, the existing facades of six high-rise buildings were provided with external thermal insulation. Instead of uniform, prefabricated concrete components, the architect and installer used Reynolux® Building pre-painted aluminium in three high-gloss finishes.

Six “Herriot et Suisse” high-rise blocks | Le Mans | France | Nomade Architectes | Inter-Pliage |
Product: Reynolux® Building pre-painted aluminium 1.47 mm, 3 special finishes: champagne, gold and bronze with 30 % gloss

We produce attractive, economical and environmentally-friendly products. Aluminium is widely used not only in facades, but also for many other indoor and outdoor applications. These include building fixtures, furniture, interior designs, exhibition stands and signage. The material offers advantages in particular with its durability, weather resistance, easy and low-cost care and maintenance, insulating properties in ventilated curtain facades and the versatile design and processing options.

Creativity and research for the environment.

AAP extends these advantages with the particular properties of its products. For environmentally-friendly projects, we supply aluminium products that provide additional help for the environment – be it through material savings or finishes that mimic the look of wood, concrete, stone with a lighter weight, more durable alternative..

WOOD

Reynolux® Wood are facade sheets & coils with a coil-coated wood-look surface. This allows architects and facade builders to conserve forest resources while benefiting from the aesthetics of natural building materials and the advantages of pre-painted aluminium sheets & coils. Moreover, the durability is greater than for real wood: The surface is scratch resistant and retains its elegance for decades – that's why we guarantee it for up to 20 years.

- Good resistance to environmental influences and UV
- Durability
- Flexible and deformable; making curves and 3-D components possible

XXL

A further contribution to environmental protection is provided by Reynolux® XXL products in 2,000 mm width.

- Shorter installation times
- Reduced processing and construction cost per square metre
- Reduced aluminium waste through minimal trimming
- Reduced number of visible joints

GREENSHIELD

Our product has reflective properties which add in roof cooling. Instead of transferring the heat of sunlight to the building, the roof reflects it off. This reduces the energy consumption for air conditioning. In general, shades of white have a high solar reflectance. On request, AAP can provide Reynolux® aluminium roofs with special coatings that have very high reflectivity.


Broadway Malyan


Ioda Architectes, BE Helios

About Reynolux®

With Reynolux® coil-coated aluminium Arconic Architectural Products SAS (AAP) based in Merxheim, France, offers a wide range of products for architecture and construction. AAP is certified according to the international standards ISO 9001 and 50001 as well as OHSAS 18001. Reynolux® aluminium sheets & coils are coated in France.

AAP has ISO 14001 certification, indicating its voluntary engagement in reducing the impact of its activity on the environment at all levels: water, energy or waste.

CAD files and BIM objects

BIM objects library: You can now import our 5 facade systems with our pre-painted sheets & coils, as well as our 140 textures in your projects to get the most realistic renderings.

Scan the QR-code now!

Disclaimer

As our customer, you are solely responsible for selecting the proper materials (Arconic Architectural Products SAS's (AAP) products) based on your customer's demand, the intended utilization, the technical characteristics of the product integration in the project, the compatibility with other utilized material, and if applicable, how these products are incorporated into other products. Laws and building and safety codes governing the design and use of AAP's products vary widely. AAP does not control how AAP products are transformed or otherwise configured or used, nor how AAP's products are combined with other materials. AAP assumes no responsibility for any of the foregoing. It is the responsibility of the owner, the architect, the general contractor, the installer and the fabricator/transformer, consistent with their roles, to determine the appropriate materials for a project in strict conformity to all applicable national, regional and local building codes and regulations. AAP is dependent upon Customer to provide true, accurate and complete information relating to product purchases. Any laboratory testing information provided by AAP applies only to the particular product or assembly tested and does not necessarily represent how products will actually perform in use. Reports and test data corresponding to a particular tested product sample or assembly are not a guarantee that the same product or assembly would always achieve the same test result. Please ensure the product is used in a system that complies with applicable fire safety regulation.

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