

IT'S TIME FOR A



BIO REVOLUTION







**bio**

ICA COATINGS



# BIO AND WATER-BASED: A TRUE REVOLUTION

## A NEW HORIZON OF ENVIRONMENTAL SUSTAINABILITY

**Oil-free, CO<sub>2</sub> emissions cut and attention to people's health.** This brand-new product line from ICA Group shakes up the chemistry world achieving new goals. BIO water-based coatings are made with recycled raw materials and through a production cycle with a lower environmental impact.

## BIO-INNOVATION IN WATER-BASED COATINGS FOR WOOD

The creation of outstandingly innovative products like the BIO range is the result of several years of **study, experimentation and collaboration with a leading international company in the chemical industry - DSM from Holland.**

As early as 2013, ICA Group R&D laboratories began to devise and run tests on a new formula with a view to environmental sustainability - BIO water-based coatings. The result is a **range of products which are high-performance, eco-friendly and made through a socially responsible production cycle.**

The collaboration with DSM, a major technological partner with significant experience in the production of resins from renewable sources, led to the **introduction of innovative materials deriving from renewable sources for formulating water-based coatings.**

IRIDEA BIO and ARBOREA BIO - namely formulated for interior furnishings and for wooden items and frames located outdoors - are ICA Group's latest technological breakthrough and are high-performance products in technical terms which fully respect the environment and the well-being of its end users.

# NOT JUST FOR THE ENVIRONMENT

## RENEWABLE AND SUSTAINABLE

IRIDEA BIO and ARBOREA BIO coatings are made with **renewable materials deriving from innovative refining processes aimed at converting “waste” vegetable matter that is not fit for human consumption, and which are oriented towards a circular economy.**

## HIGH EFFICIENCY AND OUTSTANDING PERFORMANCE

In addition to being highly sustainable, ICA Group vegetable-based coatings set new standards in terms of performance and quality for the chemical industry.

These revolutionary coatings offer **similar or even higher features than equivalent oil-derived products from ICA, in terms of hardness, chemical-resistance, light-resistance and processability.**

They have been **formulated with acrylic-based bio-resins** and, compared to other products on the market made with alkyd resins from renewable sources, they are **quicker drying** and have **greater non-yellowing properties.**

What is more, **IRIDEA BIO** monocomponent and bicomponent base coats are easier to sand and more resistant when subsequent coats are applied, meaning they can be used in intensive industrial processing cycles. Moreover, **ARBOREA BIO** coating cycles were subject to the most stringent weathering tests with extraordinary results in terms of performance. In addition to the exceptional durability of the coating film, the tests also highlight an excellent aesthetic result and natural look thanks to the use of low opacity top coats.

iridea  bio  
ICA COATINGS

arborea  bio  
ICA COATINGS



# FOR INTERIORS AND EXTERIORS, WITH A SOCIALLY RESPONSIBLE PRODUCTION CYCLE

## A MATTER OF RESPONSIBILITY

**We all should consider how we can reduce our impact on the environment.**

ICA Group took on this challenge creating a more sustainable coating compared to oil-based products, thanks to the use of renewable sources.

## ICA BIO REVOLUTION

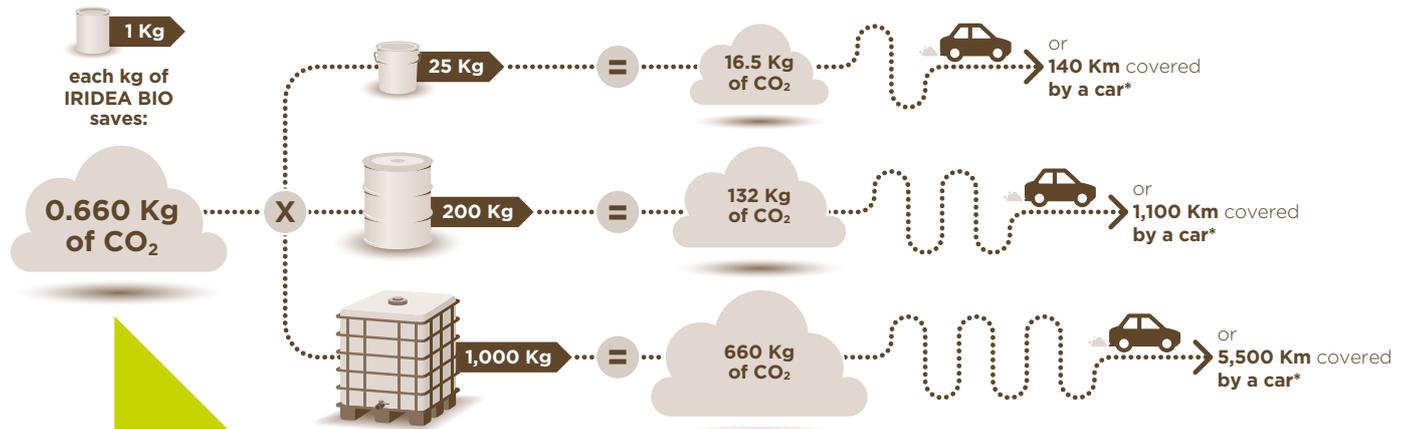
BIO water-based coatings **are made with non-toxic and eco-friendly renewable raw materials (water + BIO resin), with a very low VOC content (volatile organic compounds) and through a production cycle that drastically reduces CO<sub>2</sub> emissions.**

The result represents an important step toward sustainability.

1,000 kg of **IRIDEA BIO**, for interior furnishings, allows to save 660 kg of CO<sub>2</sub>, which is equivalent to the CO<sub>2</sub> emissions of a car travelling 5,500 km. For instance, applying coating on a wardrobe saves the equivalent emissions of a car travelling 410 km.

Its “sister” coating **ARBOREA BIO**, for wooden items and frames located outdoors, allows an even greater saving, equal to 530 kg of CO<sub>2</sub> emissions with the same amount (1,000 kg): the CO<sub>2</sub> equivalent of a car travelling 4,400 km.

## SUSTAINABILITY DATA FOR iridea bio



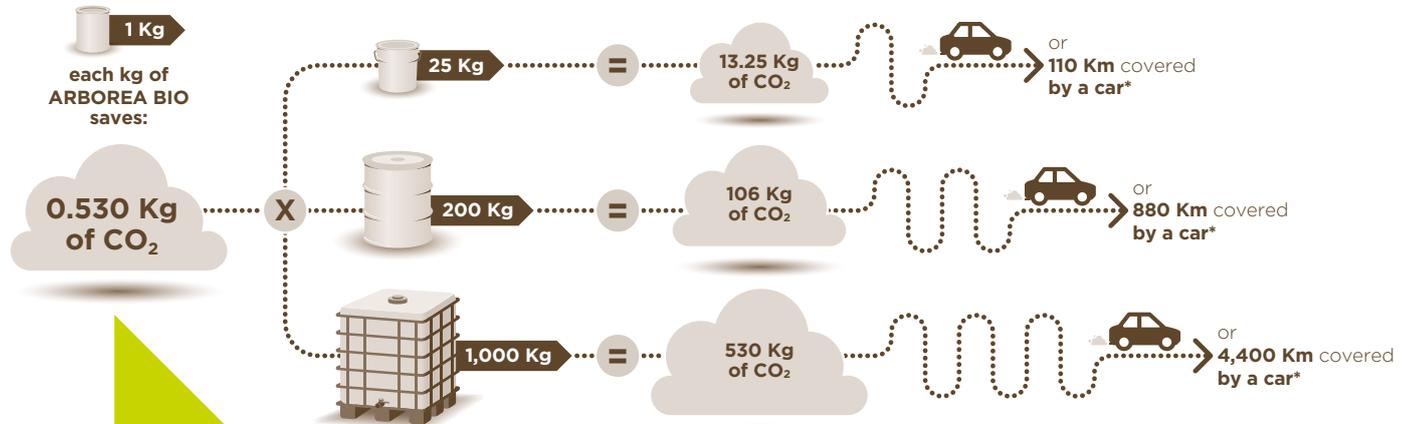
Applying an iridea  bio white bicomponent cycle on a 100 m<sup>2</sup> coatable surface allows for saving:

48 Kg of CO<sub>2</sub>\*\*



or 410 Km covered by a car\*

## SUSTAINABILITY DATA FOR arborea bio



Applying arborea  bio on 50 standard size windows (140x130 cm) allows for saving:

32 Kg of CO<sub>2</sub>\*\*\*



or 270 Km covered by a car\*

\*The calculation was made using the average value of 119.5 g of CO<sub>2</sub>/km emitted by a newly registered car according to the EEA Report No. 27/2016.

\*\*Calculated on reference products FAB452BIO and AOB510G25BIO, including overspray.

\*\*\*Calculated on reference product LA3211BIO, including overspray.



# WELL THOUGHT-OUT AND AWARD-WINNING REVOLUTION

## TESTED FOR BIOGENETICS BY THE ACADEMIC WORLD

Tests have been run on BIO coatings **in collaboration with the University of Camerino and the Sapienza University of Rome**, in order to assess the biogenetic nature of the materials used; this involves investigations into the carbon contained in the coatings to determine whether it comes from fossil sources or plant biomass. The Carbon-14 dating technique demonstrated that the **renewable content percentage ranged between 30% and 40% on dry product**.

This method is **a further proof and guarantee that IRIDEA BIO and ARBOREA BIO are innovative products, but above all are sustainable for the environment and for the health of those who live it**. Besides it contributes to a healthier workplace and to a green and natural home environment.



UNIVERSITÀ  
DI CAMERINO



SAPIENZA  
UNIVERSITÀ DI ROMA

## AN INNOVATION AWARDED BY THE INDUSTRY SECTOR

IRIDEA BIO won the **Interzum Award: Intelligent Material & Design 2017** in the “**High Product Quality**” category.

This is a topnotch award set up by **Interzum**, the world largest event for the furnishing industry, which is assigned every year in Cologne by an international jury of five independent experts in the world of design and architecture.





## FEATURES & BENEFITS

- Made with up to 75% non-toxic and ecological renewable raw materials (water + BIO resin).
- Excellent hardness and high chemical-physical resistance and lightfastness.
- Fast drying, non-yellowing properties and superior hardness compared to products available on the market and formulated with alkyd resins deriving from renewable sources.
- Superior sandability and resistance to overcoating.
- Ideal for high throughput industrial cycles.
- Transparent (even with a natural effect) and pigmented version with an unlimited number of color variations.
- Pleasant touch and slippery surface.
- Contains 30-40% renewable content calculated on dry resin.
- Extremely low VOC content.
- Healthier work environment for departments that come into contact with the coatings, as it doesn't emit unpleasant odors.
- Oriented towards the principles of circular economy and the reuse of waste materials.
- Drastic reduction of CO<sub>2</sub> emissions.

\* Information on the emission level of volatile compounds in indoor air, with a risk of inhalation toxicity on a scale ranging from A + (very low emissions) to C (high emissions).





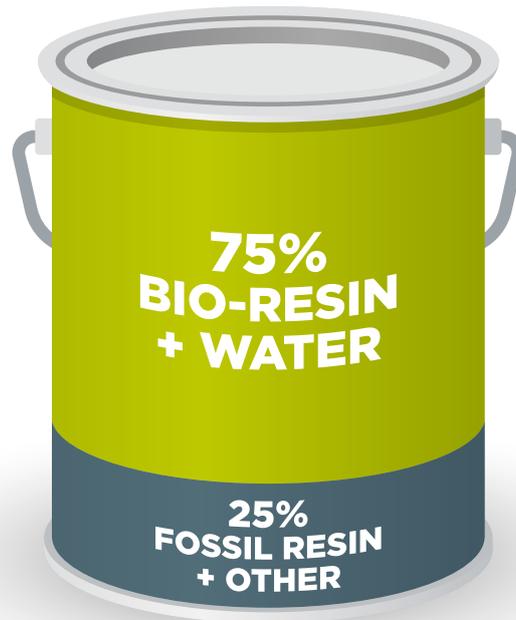
## FEATURES & BENEFITS

- Made with up to 75% non-toxic and ecological renewable raw materials (water + BIO resin).
- Excellent lightfastness and weather resistance.
- Fast drying, non-yellowing properties and superior hardness compared to products available on the market and formulated with alkyd resins deriving from renewable sources.
- Resistance to overcoating.
- Resistance to blocking.
- Ideal for high throughput industrial cycles.
- Transparent (even with a natural effect) and pigmented version with an unlimited number of color variations.
- Contains 30-40% renewable content calculated on dry resin.
- Extremely low VOC content.
- Healthier work environment for departments that come into contact with the coatings, as it doesn't emit unpleasant odors.
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The resins used for  
**iridea**  **bio** and **arborea**  **bio**  
coatings (around **40%** of dried product or coating film)  
come from renewable plant sources.  
Therefore, these coatings contribute both to reduce  
the use of non-renewable sources and to  
**cut CO<sub>2</sub> in the Earth's atmosphere**  
thanks to the photosynthesis of the natural substances  
used instead of oil.

That's why **IRIDEA BIO and ARBOREA BIO coatings**  
**help to reduce the greenhouse effect**  
**caused by CO<sub>2</sub> and are in line with the latest**  
**green policies adopted around the world.**

# ICA BIO COATINGS: LESS CO<sub>2</sub> + MORE BENEFITS FOR EVERYONE



Example of BIO transparent  
water-based coating for interiors

## LEED CREDITS

LEED is the most popular energy efficiency and sustainability certification in the world and is issued through a structured evaluation process based on the assignation of credits.

The new ICA BIO coatings meet the requirements to earn LEED credits, thanks to their extremely low environmental impact.





[bio.icaspa.com](http://bio.icaspa.com)





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