



# PRE-COATED METALS

PROCESS & PROTECTIVE FILMS,  
LAMINATORS, TECHNICAL TAPES



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## ABOUT NOVACEL

As a **40-year-old worldwide leader in surface solutions**, Novacel proposes a comprehensive offer to its customers, ranging from industrial process films to technical tapes and paper products, machines and associated services.

Novacel continuously focuses on expertise and innovation to provide its customers and partners with the most appropriate recommendations to add value to their materials and to help enhance their industrial efficiency.

Novacel is present in **90 countries** with more than **750 employees** and several production sites worldwide. In line with its 'Beyond the Surface' ethos, Novacel is deeply committed to sustainability and innovation for People and the Planet. Novacel is part of the Compagnie Chargeurs Invest Group.

# NOVACEL, YOUR EXPERT FOR PRE-COATED METAL SURFACES

Pre-painted metals are versatile and can be used almost everywhere: on building exteriors and interiors, industrial appliances and transport.

Thanks to a wide variety of surface structures and colors as well as excellent workability and resistance to corrosion, pre-coated metals can satisfy all creative requirements. They also meet production needs in terms of quality and sustainability on construction sites.

However, pre-coated metals are vulnerable materials. They go through multiple severe processing operations before becoming finished products. The whole manufacturing process is therefore challenging for them, and they require the right solution to avoid being damaged.

As your committed partner, Novacel makes a point of staying ahead of new technical developments and changes in technology. We remain at your side, anticipating the risks and opportunities that arise and adjusting our solutions to support your pre-coated metal surfaces.

## WHY USE NOVACEL SOLUTIONS?

### > A Global Solution Provider

Novacel offers complete solutions with processing films, technical tapes, paper products, machines and associated services.

### > Unique features for your specific needs

We create innovative solutions to improve your industrial efficiency and ensure the well-being of people, such as films dedicated to new surfaces or processes, low noise, easy peel and easy unwind.

### > Expertise & Technical support

Our teams are dedicated to providing you with the best experience and assisting you from the initial search for the right solution right up to its final implementation.

### > A Strong CSR Commitment

Novacel works continuously on its carbon footprint by improving its production, creating eco-responsible solutions and putting human well-being at the heart of its strategy.



*Novacel is a long-term active member of the European Coil Coating Association (ECCA) and also has a number of partnerships with customers' R&D laboratories.*

# — NOVACEL'S RESPONSIBILITY

Novacel CSR Strategy is organized around three pillars:

- **Preserving the planet's resources**
- **Building a dynamic, human-centered and inclusive industry**
- **Fostering a responsible industrial community**

As a responsible manufacturer, Novacel takes responsibility for the impacts of its decisions and activities on society and the environment. Given this, reducing the environmental impact of our products by innovating right from their initial conception up to their end-of-life and taking care of teams' and customers' health are at the heart of Novacel CSR Strategy.

**Oxygen**, Novacel's unique range of more responsible products, promises to:

- **Reduce fossil raw materials as far as possible**
- **Maximize use of renewable resources**
- **Reduce carbon emissions**
- **Be recyclable\***



Moreover, increasing human wellbeing at work is a daily preoccupation at Novacel, both internally and externally. Novacel is constantly developing technologies with this in mind in order to decrease repetitive strain injury (RSI) and increase the quality of the work environment:



In addition, Novacel promotes operational excellence and staff engagement through regular team upskilling and training. Finally, through our responsible purchasing charter, we strive to adhere to ethical business practices with our partners and our employees' approach to their work is governed at all times by the Compagnie Chargeurs Invest Group Code of Conduct.

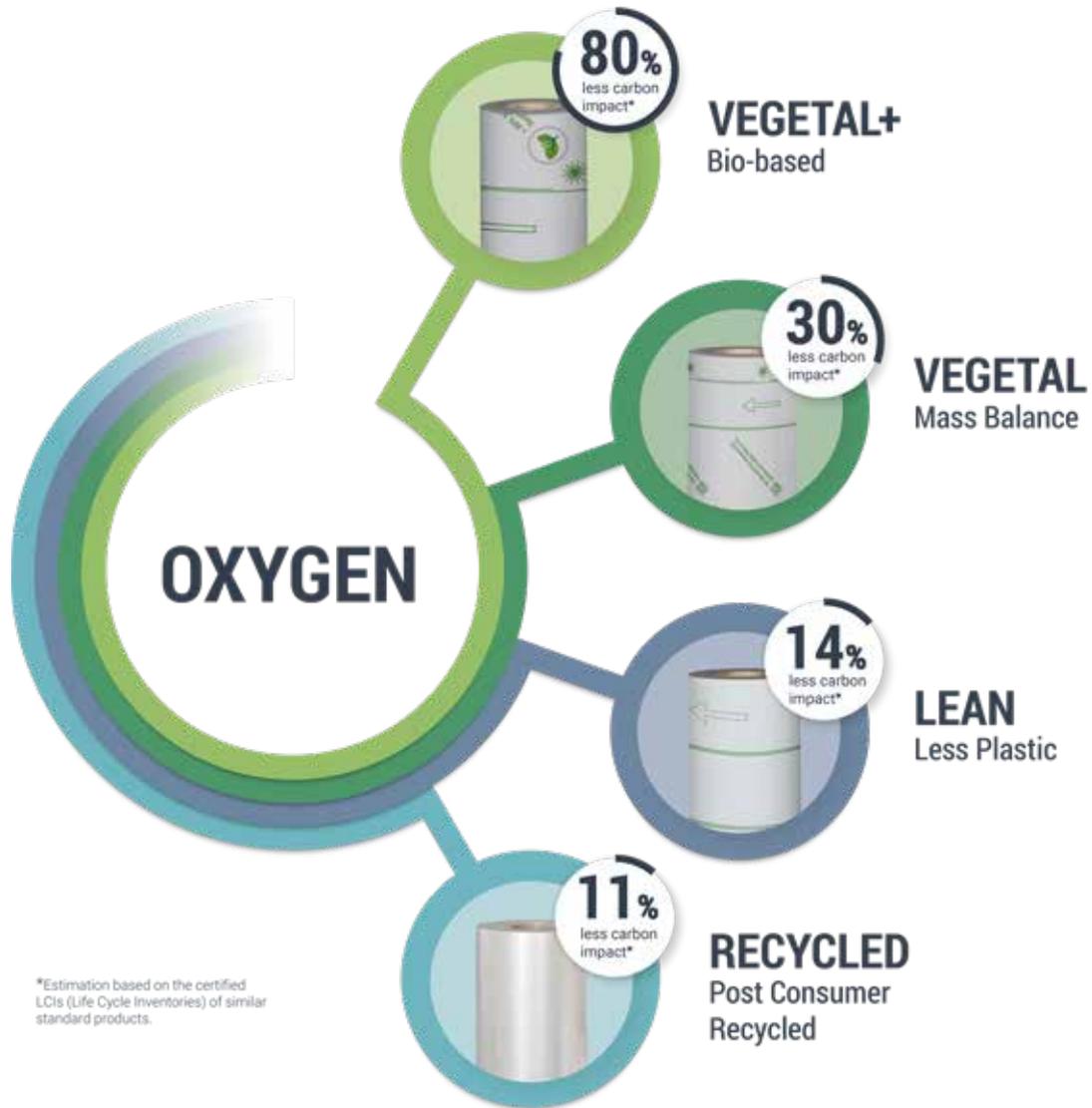
*\*Recyclable using the forms of recycling defined by ISO 472:2013 Plastics*

# — OXYGEN, NOVACEL ECO-CONCEIVED RANGE

Manufacturers of pre-coated metals are driven by sustainability and seek to protect the environment. They are committed to reducing their carbon footprint by using less fossil-based film on their materials or even by significantly increasing the overall post-consumer recycled content.

In this context, on top of its commitment to responsibility, **Novacel has designed the first eco-conceived range of process and protective films**, adapted from its successful and well-established products engineered for Pre-coated Metals.

## Novacel OXYGEN, 4 technologies to reduce your carbon impact:



**Novacel is certified ISCC+ for its Oxygen vegetal range.** By sourcing ISCC-certified mass-balanced material, Novacel contributes to replacing virgin fossil resources with renewable feedstocks and reaffirms its commitment to best environmental practices.



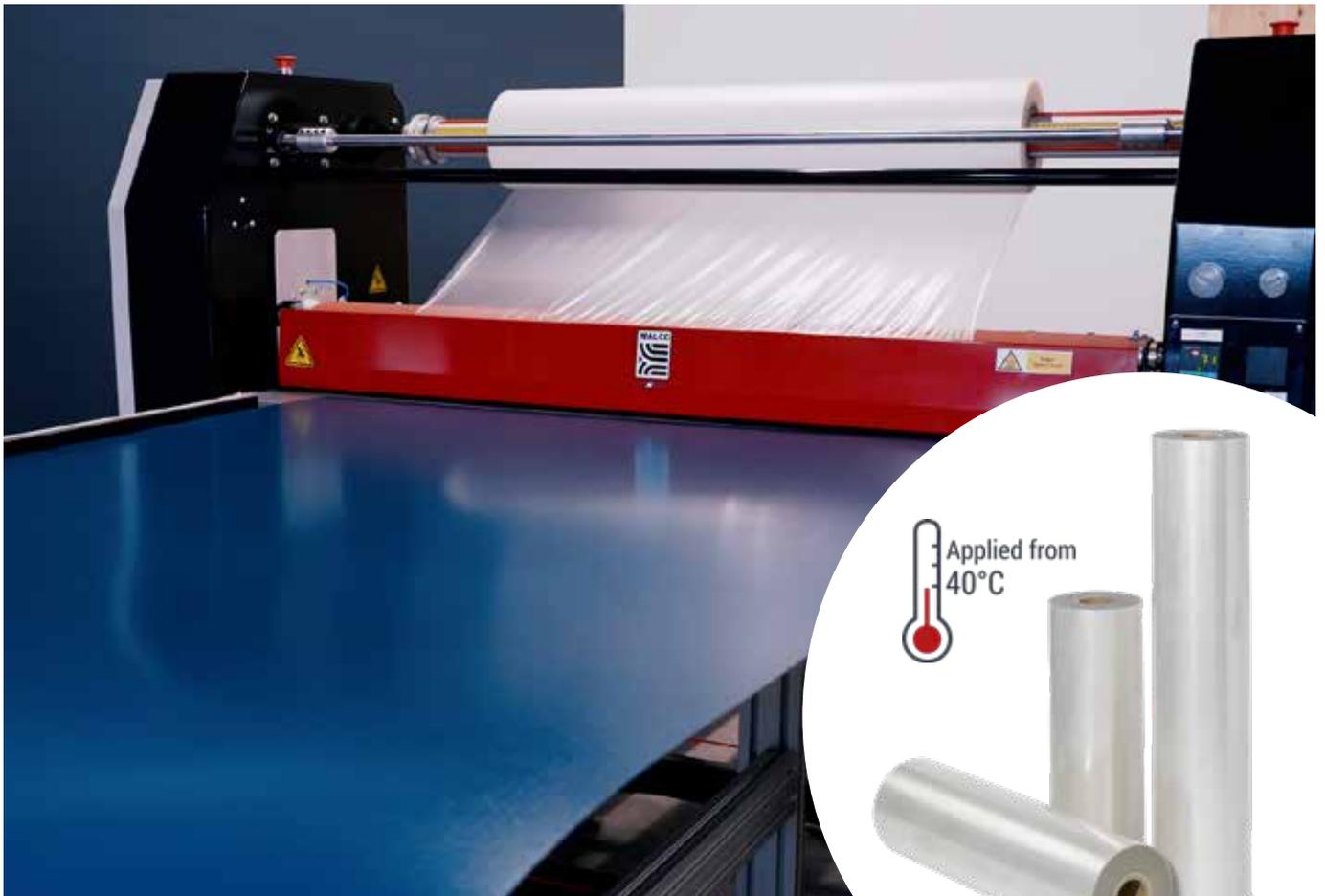
**Novacel is certified Plastica Seconda Vida (audited by SGS) for its Oxygen recycled range.** This certifies the percentage of recycled content in our products. It is a guarantee of trust and credibility towards our customers worldwide.

Find all Oxygen codes and their specificities in green in the tables inside the brochure.

# — VERSATIS, THE UNIQUE VERSATILE FILM FOR MULTIPLE SURFACES

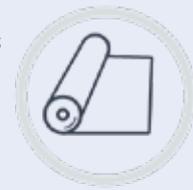
**NOVACEL VERSATIS 4444** is suitable for various types of finishes and manufacturing processes. This solution is a heat-activated film formulation, requiring a minimum of 40°C. It is **easy to apply and remove**.

Offering a "**second-skin effect**" to your products, it is **designed for pre-painted steel and aluminum** applications. Versatis perfectly **adapts to multiple types of paint systems** with both **smooth** and **textured surfaces**.

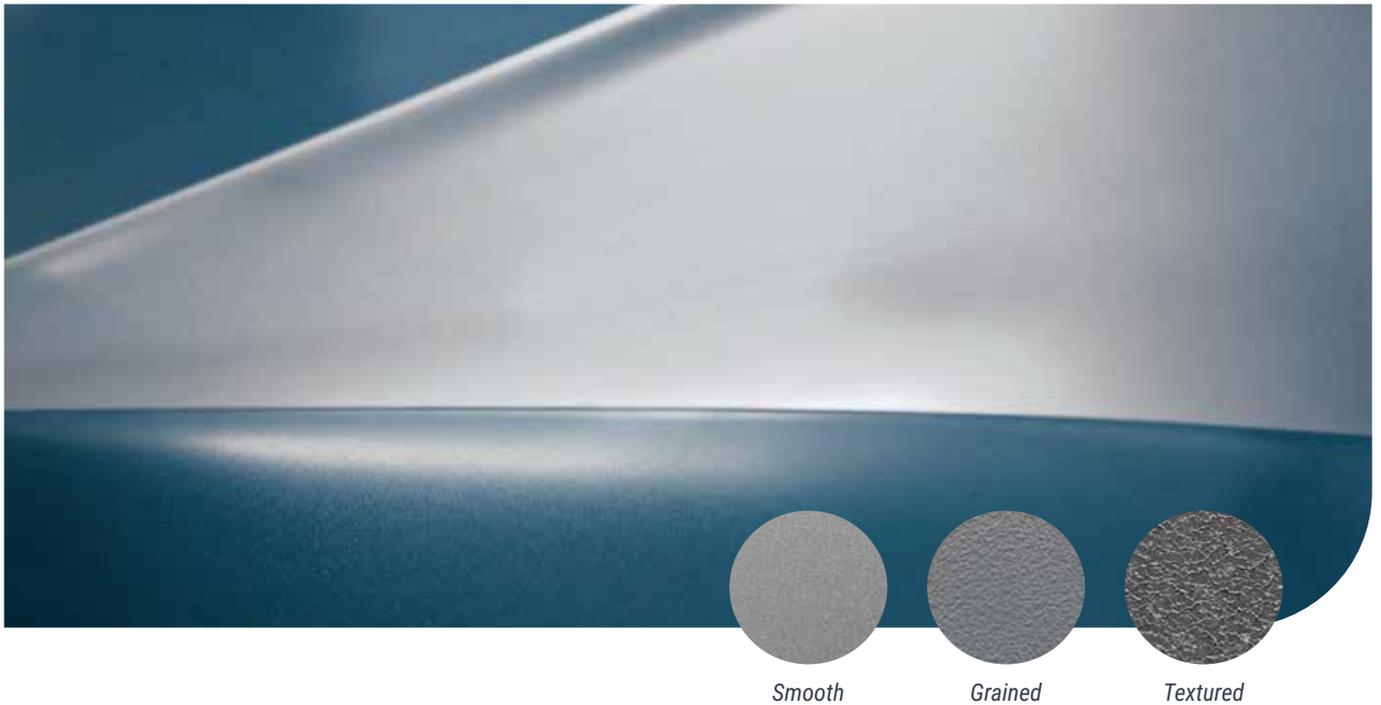


## BENEFITS

- **A unique solution suitable for all type of pre-painted metal** finishes with various paint systems
- **Perfect adhesion** to your surfaces: a clear transparent solution for a "second-skin effect"
- **No glue residue and no defects** left on your materials
- **Easy removal**
- **Productivity and efficiency gains:** can replace up to 10 film products
- **Reduction of your waste**



**MULTIPURPOSE**



Smooth

Grained

Textured

## CHARACTERISTICS

Type of film	Polyolefins
Printable	No
Adhesive type	Heat-activated film formulation (minimum 40°C)
Adhesion level	High
Thickness	50 µm
Color	Transparent
Outdoor life	3 months worldwide
CO <sub>2</sub> impact	Assessment ongoing

## A HOLISTIC SOLUTION FOR UNMATCHED VERSATILITY AND EFFICIENCY

The **VERSATIS solution** has a specific adhesive activation which requires a minimum of 40°C for **easy and flawless application** to the surface. If you do not possess the technology required to apply this film, Novacel can provide you with **cost-effective heat application equipment options**.

A special module designed by WALCO, Novacel's special machines brand, can be **easily added to your existing production line**. This **comprehensive offer** is tailored for all types of pre-coated metal finishes and manufacturing processes, providing **unmatched versatility** and **efficiency** across a range of applications worldwide.

## A MORE RESPONSIBLE SOLUTION TO REDUCE YOUR CARBON FOOTPRINT



CO<sub>2</sub> REDUCTION

Versatis can reduce your carbon footprint by cutting the waste caused by rolls not being fully utilized on medium to short runs of a particular finish or texture. Because it is a glue-free product, Versatis can be easily recycled\* after removal. This solution contributes to a more sustainable manufacturing process, making Versatis a responsible choice for your business.

\*Recyclable using the forms of recycling defined by ISO 472:2013 Plastics

# — FILMS FOR BUILDING & ARCHITECTURE

## GENERAL USE

The construction industry and architects are increasingly turning to pre-painted metal to meet their design visions for both commercial and residential installations. **Pre-painted metal's versatility** for shaping and weather resistance, the **esthetic possibilities** for color and texture, options and the **environmental benefits** all make it ideal for both interior and exterior construction applications.

Pre-painted metal is increasingly used for insulated panels,

roofing, garage doors and a wide range of other building components. The construction market involves **severe processes** such as roll forming, bending and foaming, which require the **right film solution to protect the end-products**.

With its close relationship with producers and R&D laboratories, Novacel is constantly innovating to design a broad **range of films dedicated to a variety of construction shapes and surface finishes** surfaces.



### NOVACEL ASSETS

- **Stable adhesion**
- **Optimal resistance** to mechanical and thermal processes
- **No impact** on the surface
- **Worldwide outdoor resistance** (up to 12 months)
- **Perfect protection against environmental impacts** (moisture, UV radiation, etc.)

### OXYGEN, A MORE ECO-RESPONSIBLE RANGE: 3186, 3100, 3133

- **Winter range:** removal down to -20°C
- 25% recycled polyethylene content
- -11% less CO<sub>2</sub> emission with 0.09 kg CO<sub>2</sub>/m<sup>2</sup> \*
- Recyclable\*\*



\* Minimum reduction based on certified LCIs (Life Cycle Inventories)

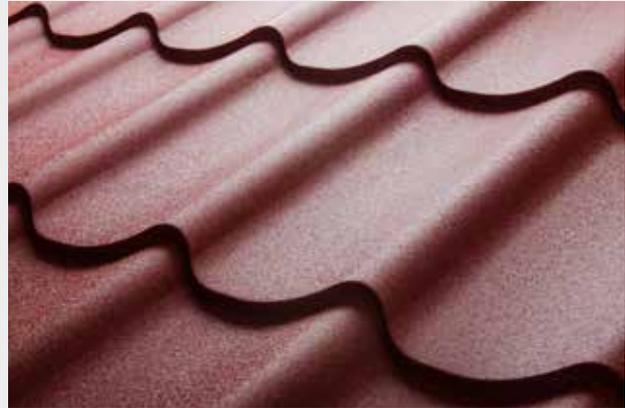
\*\*Recyclable using the forms of recycling defined by ISO 472:2013 Plastics

## NOVACEL PREMIUM SOLUTIONS

### THE OLYMPEAKS RANGE

The creativity of prescribers tends to favor more **textured, matt and colored surfaces** with the look of natural materials. To meet the construction industry's requirements, our range has been designed in partnership with the laboratories of paint manufacturers and coil coaters.

OLYMPEAKS provides **perfect adhesion** to matt, rough or wrinkled substrates. It is specifically formulated to **preserve the integrity of your surfaces** throughout all industrial processes and offers a **worldwide outdoor guarantee**.



### THE ANTI-COIL COLLAPSE RANGE

Producers of **large coils** have a major need for solutions to prevent coils collapsing. Novacel has designed a dedicated "anti-collapse" range to **protect coils up to 12 tons**. It allows you to increase your productivity and get the full benefit of the protection at the end of the paint line with no risk of the coil slumping.

Grade	Thickness (µm/mils)	Adhesion	Outdoor resistance	Colors	Specific characteristics
4152	28 µm / 1.1 mils	Medium high	3 months	Clear transparent	For semi-glossy surfaces
3120	28 µm / 1.1 mils	Medium high	3 months	Clear transparent	Oxygen Recycled and Winter film - For semi-glossy surfaces
3186	30 µm / 1.3 mils	Medium high	3 months	Clear transparent	Oxygen Recycled and Winter film - For semi-glossy and lightly matt surfaces
3100	33 µm / 1.3 mils	Medium high	3 months	Clear transparent	Oxygen Recycled and Winter film - For semi-glossy surfaces
9042	33 µm / 1.3 mils	Medium	3 months	Clear transparent	Anti-coil collapse film
9371	35 µm / 1.4 mils	Very high	3 months	Clear transparent	For matt and metalized surfaces
3133	35 µm / 1.4 mils	Very high	3 months	Clear transparent	Oxygen Recycled and Winter film - For matt and metalized surfaces
9383	45 µm / 1.8 mils	High	3 months	Clear transparent	Olympeaks film - For embossed and matt surfaces
4444	50 µm / 2.0 mils	Medium high	3 months	Clear transparent	Innovative versatile solution for various finishes
9562	90 µm / 3.4 mils	Ultra high	3 months	Black and white	Rubber film for rough and wrinkled surfaces

# ALUMINUM COMPOSITE PANELS

**Aluminum Composite Panels (ACP)**, consisting of Aluminum Composite Materials (ACM), are flat panels comprising two thin coil-coated aluminum sheets bonded to a non-aluminum core. This type of material is specifically designed for the construction, renovation and refurbishment of ventilated facades.

It provides solutions that can be **adapted to all types of architecture**. ACPs are **easy to install** and are **resistant to chemicals, moisture, corrosion and UV radiation** as compared to conventional cladding materials.

Novacel has designed the **perfect solutions to preserve your ACPs** and to be **easily removable without damaging the surface**.

## NOVACEL ASSETS

- **Optimal resistance** to mechanical processes
- **Prevention of surface damage** and retention of the original finish
- **Worldwide outdoor resistance** (up to 12 months)
- **Clean surface** after removal

## OXYGEN 3000, OUR ECO-CONCEIVED SOLUTION:

- Thickness: 70 µm
- Uses 30% vegetal oil waste via a mass balance approach
- Around -30% less CO<sub>2</sub> emission with 0.16 kg CO<sub>2</sub>/m<sup>2</sup>\*
- Recyclable\*\*



Grade	Thickness (µm/mils)	Adhesion	Outdoor resistance	Colors	Specific characteristics
4800	50 µm / 2 mils	Medium high	6 months	Clear transparent	For smooth, glossy, lightly structured and semi-matt surfaces
4444	50 µm / 2 mils	Medium high	3 months	Clear transparent	An innovative versatile solution for various finishes
4254	50 µm / 2 mils	Very high	6 months	Clear transparent	For smooth, glossy, lightly structured and semi-matt surfaces
4233	70 µm / 2.8 mils	Medium	6 months	Black and white	For smooth, glossy, lightly structured and semi-matt surfaces
3000	70 µm / 2.8 mils	Medium	6 months	Black and white	Oxygen Vegetal grade Rubber film for smooth / glossy, lightly structured and semi-matt surfaces

\* Minimum reduction based on certified LCIs (Life Cycle Inventories)

\*\*Recyclable using the forms of recycling defined by ISO 472:2013 Plastics

# FILMS FOR APPLIANCES

In the appliances market, **pre-painted metal** is mainly used for refrigerators, washing machines, and ovens, **offering an aesthetic finish**. New coating trends and technologies provide **added features**, such as fingerprint resistance for refrigerators and heat resistance for dishwashers.

With its extensive expertise, Novacel has created a **high-quality range tailored to market needs**. Our film formulation guarantees **retention of the premium visual aspect** of your surfaces, as well as **Easy-peel technology** to enable quick, efficient removal.

## NOVACEL ASSETS

- **Premium quality** for high visual aspect
- **Fast and effortless unwinding**
- **Easy removal**
- **Perfect match** with specific coating
- **Stable adhesion**
- **Worldwide outdoor resistance** (up to 12 months)

## OXYGEN 3074, OUR ECO-CONCEIVED SOLUTION:

- Thickness: 70 µm
- Uses 30% vegetal oil waste via a mass balance approach
- Around -30% less CO<sub>2</sub> emission with 0.16 kg CO<sub>2</sub>/m<sup>2</sup> \*
- Recyclable\*\*



## NOVACEL PREMIUM SOLUTION, EASY-PEEL:

Novacel's Easy-Peel range is a historic Novacel innovation designed for **extremely fast and effortless film removal**. The faster you peel, the easier it is to peel off the film, transitioning from smooth to sticky and slippery. These films also

help **protect your workers from musculoskeletal disorders** (MSDs) by making unwinding pain-free. Novacel Easy-Peel films, such as **4800 & 4254**, offer a perfect solution without compromising adhesion throughout the manufacturing process.



Grade	Thickness (µm/mils)	Adhesion	Outdoor resistance	Colors	Specific characteristics
4800	50 µm / 2 mils	Medium high	6 months	Clear transparent	For smooth, glossy, lightly structured and semi matt surfaces - exists in a yellow and blue version
4254	50 µm / 2 mils	Medium high	6 months	Clear transparent	For smooth, glossy, lightly structured and semi matt surfaces - exists in a yellow and blue version
4444	50 µm / 2 mils	Medium high	3 months	Clear transparent	A new versatile solution for various finishes
4274	70 µm / 2.8 mils	Medium high	6 months	Clear transparent	For smooth, glossy, lightly structured surfaces
3074	70 µm / 2.8 mils	Medium high	6 months	Clear transparent	For smooth, glossy, lightly structured surfaces

\* Minimum reduction based on certified LCIs (Life Cycle Inventories)

\*\*Recyclable using the forms of recycling defined by ISO 472:2013 Plastics

# FILMS FOR SIGNAGE AND COMMUNICATION

Pre-painted metal is a popular choice for signage and communication ACPs due to its **durability and versatility**, offering a **wide range of customization options** to meet your specific needs and branding requirements.

Novacel has designed a broad range of **solutions that can help preserve materials** throughout the entire manufacturing process, as well as during installation and long-term use. We are constantly innovating to provide **high-resistance films** to prevent paint and graphics on signage from deteriorating due to exterior environmental impacts.

## NOVACEL ASSETS

- **Stable adhesion**
- **Optimal resistance** to mechanical processes
- **No impact** on the surface
- **Worldwide outdoor resistance** (up to 12 months)
- **Resistance** to environmental conditions
- **Fast, effortless unwinding and easy removal**

## OXYGEN 3000, OUR ECO-CONCEIVED SOLUTION:

- Thickness: 70 µm
- Uses 30% vegetal oil waste via a mass balance approach
- Around -30% less CO<sub>2</sub> emission with 0.16 kg CO<sub>2</sub>/m<sup>2</sup>\*
- Recyclable\*\*



Grade	Thickness (µm/mils)	Adhesion	Outdoor resistance	Colors	Specific characteristics
4800	50 µm / 2 mils	Medium high	6 months	Clear transparent	For smooth, glossy, lightly structured and semi-matt surfaces
4444	50 µm / 2 mils	Medium high	3 months	Clear transparent	An innovative, versatile solution for various finishes
4254	50 µm / 2 mils	Very high	6 months	Clear transparent	For smooth, glossy, lightly structured and semi-matt surfaces
4233	70 µm / 2.8 mils	Medium	6 months	Black and white	For smooth, glossy, lightly structured and semi-matt surfaces
3000	70 µm / 2.8 mils	Medium	6 months	Black and white	Oxygen Vegetal grade Rubber film for smooth / glossy, lightly structured and semi-matt surfaces

\* Minimum reduction based on certified LCIs (Life Cycle Inventories)

\*\*Recyclable using the forms of recycling defined by ISO 472:2013 Plastics

# FILMS FOR GENERAL INDUSTRY

Due to their **durability and versatility**, **pre-painted metals** suit a **wide range of general industrial applications**: industrial machine casings, industrial boilers, air conditioning, sanitary applications, among others.

Thanks to its in-depth knowledge of the market and in partnership with producers' R&D laboratories, Novacel has developed **targeted, high-quality solutions** for your surfaces. Our products **support all manufacturing processes, preserve the materials** and ensure the longevity of the technical properties of pre-coated metals.

## NOVACEL ASSETS

- **Specific, stable adhesion** systems
- **Optimal resistance** to mechanical and thermal processes
- **Worldwide outdoor resistance** (up to 12 months)
- **No impact** on the surface

## OXYGEN 3140, OUR ECO-CONCEIVED SOLUTION:

- Thickness: 45 µm
- -25% recycled polyethylene content
- -11% CO<sub>2</sub> less emission with 0.09 kg CO<sub>2</sub>/m<sup>2</sup>\*\*
- Recyclable\*\*



Grade	Thickness (µm/mils)	Adhesion	Outdoor resistance	Color	Specific characteristics
4155	45 µm / 1.8 mils	High	6 months	Clear transparent	For rough and matt surfaces
9383	45 µm / 1.8 mils	High	3 months	Clear transparent	For rough and matt surfaces
<b>3140</b>	<b>45 µm / 1.8 mils</b>	<b>High</b>	<b>3 months</b>	Clear transparent	<b>Oxygen Recycled grade - For rough and matt surfaces</b>
4444	50 µm / 2 mils	Medium high	3 months	Clear transparent	An innovative, versatile solution for various finishes
9384	80 µm / 3.2 mils	Medium high	12 months	Clear transparent	For very rough and wrinkled surfaces



\* Minimum reduction based on certified LCIs (Life Cycle Inventories)

\*\*Recyclable using the forms of recycling defined by ISO 472:2013 Plastics

# — NOVACEL TAPES

Whether you are producing or shipping pre-coated metals, secure attachment of metal coils with **reliable tapes is essential for the safety of your personnel and the protection of your**

**products.** Novacel has developed a range of **technical tapes** for high tensile strength and long elongation in order to **avoid lift-up or tearing during handling.**

## NOVACEL ASSETS

- **Metal coil end tabbing tapes:** a single-sided adhesive range offering strong adhesion and high tensile strength to secure metal coils that is easy to remove and leaves no residue on coils
- **Metal overlap splicing tapes:** a double-sided adhesive tape with heavy stress and high temperature resistance,

offering high efficiency for metal-manufacturing processes

- **Metal butt splicing and coil core starting tapes:** a high-adhesive, single-sided reinforced range offering maximum efficiency for metal splicing and coil core starting applications



Grade	Color	Carrier/backing	Type of adhesive	Total thickness (µm)	PAL/A	Tensile Strength (daN/cm)	Removability
BN6489	Black	MOPP	/	100	300	28MD*	*
BN6490	Blue	MOPP	/	110	250	30MD*	***
BN811	Transparent	PET	Acrylic Solvent	90	400	/	No
BN53	Green	PET	Silicone	80	300	/	**
BN6440 (mono-oriented)	Transparent	PP reinforced	/	130	1000	25 MD*	No
BN6441 (cross weave)	Transparent	PP reinforced	/	130	1000	27 MD*	No

\*MD : Machine Direction

# — LAMINATION MACHINES

With its Omma and Walco brands, **Novacel Special Machines (NSM)** proposes the **ultimate lamination technology** dedicated to the pre-coated metals industry based on long experience and know-how with innovative, often exclusive, and reliable invariably reliable solutions.

Our **Laminators** ensure easy, fast lamination, as well as wrinkle- and bubble-free film on any size and any flat surface. They can be used both on production lines and as standalone units and can be equipped with either manual or automatic cutting technology.



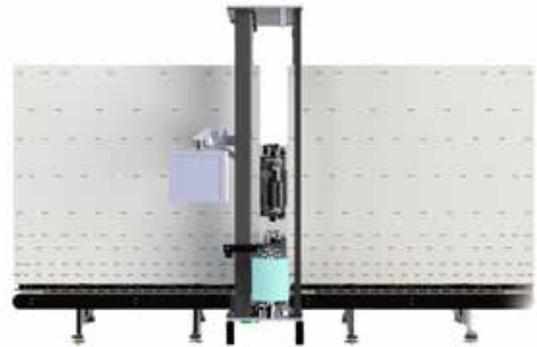
**TX: Horizontal Laminator**



**Pro-jet: Horizontal Laminator**

## NOVACEL ASSETS

- **TX**, an in-line or off-line laminator with a high-precision automatic cutting system, designed and patented for the application of films on pre-coated metal surfaces
- **Pro-jet**: standard application machines with manual cutting
- **VX Smart**: a standalone vertical laminator for single application of the process film on pre-coated metal surfaces
- **Services**: installation and startup, maintenance, troubleshooting and software updates



**VX Smart: Vertical Laminator**

Lamination	Machine	Standard dimension	Thickness	Film application	Lamination Characteristics	Specific characteristics
Horizontal	TX	Widths: 1,400 mm (55") up to 1,700 mm (67")	4 mm (0.16") up to 80 mm (3.1")	Single or double-sided	Precise film application	- Automatic length detection - Automatic cut
Horizontal	PRO-JET	Widths: 1,400 mm (55") up to 3,300 mm (132")	5 mm (0.2") up to 80 mm (3.1")	Single or double-sided	Suitable for low/medium batch production	- Entry-level applicator - Manual cut
Vertical	VX Smart	Minimal linked to the film roll size – Up to 3,000 mm (118")	4 mm (0.16") up to 80 mm (3.2")	Single	Standalone vertical laminator	- WALCO® patent on film positioning and cutting system - Entry-level machine - Reduced footprint (approximate length 7 m)

# — BENEFIT FROM NOVACEL SERVICES TO EASE YOUR BUSINESS

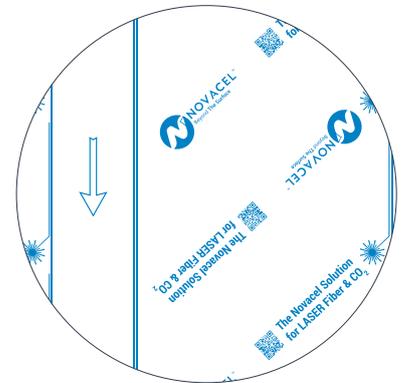


## PRODUCT RECOMMENDATION

Benefit from Novacel expertise: choose the best solution for your materials and surfaces, make your processes even more efficient and your carbon impact even lower. A whole team is dedicated to product recommendations to make sure your expectations are satisfied more effectively, and this applies in all four corners of the world.

## YOUR COMMUNICATION

Enhance the visibility of your brand with printed films. The printing is done in our factories in a range of colors in compliance with your requests: logo and brand name, technical guidance, slogan or any statement.



## PRODUCT CUSTOMIZATION

Thanks to our numerous service centers worldwide, we can deliver our solutions anywhere on the planet. Thanks to our network of service centers, we can deliver ready products as close as possible to our customers. Cutting and rewinding machines allow us to convert our rolls to any required width. Dedicated experts are available at all our locations to support you.

## PACKAGING CUSTOMIZATION

Novacel is keen to ensure that you receive our products in the condition in which they left our site. With this objective in mind, we pay close attention to the packaging of our products. Adapting it to perfectly match the required conditions, we handle every stage in delivery: road, maritime, air transportation or special storage, using the right packaging in compliance with all safety standards. If you have a specific request, contact us and we will look into it with you.





## TECHNICAL SUPPORT

In order to help you enhance the quality of your products, a dedicated team at Novacel will do everything in their power to assist you. Our team of experts is constantly available to respond to your queries and requests and help you define the best solution right up to final implementation, including determination of the adjustment settings for your application machinery.

## RECYCLING SUPPORT

As a fully committed company, we work not only on the product, but also on its entire life cycle, end-of-life included. Over 95% of Novacel's foils are designed to be recyclable. Our current objective is to help our customers recycle their film remnants. We propose solutions in several countries - go to our website [www.novacel-solutions.com/services](http://www.novacel-solutions.com/services) to find the right contact for you.



## CUSTOMER PORTAL

Need to get information outside of working hours? Go online to our new customer portal [www.my.novacel.world](http://www.my.novacel.world) and review all your account activities online with just a few clicks\*: detailed Novacel order history, order status, product info, requests, bills.

\*for direct customers only

**For more information or any request, please contact us:  
[contact@novacel-solutions.com](mailto:contact@novacel-solutions.com)**

# FIND YOUR MATCH

A formal approval process by Novacel experts is imperative before using our products. Our technical data sheets are available on request. Because the applications of NOVACEL films are very wide-ranging and use conditions may vary from one company to another, NOVACEL recommends that you systematically carry out qualification tests on an industrial line before using the product and that you inform Novacel of the results.

## FILMS FOR BUILDING & ARCHITECTURE

### GENERAL USE

Grade	Thickness (µm/mils)	Adhesion	Outdoor resistance	Colors	Specific characteristics
4152	28 µm / 1.1 mils	Medium high	3 months	Clear transparent	For semi-glossy surfaces
3120	28 µm / 1.1 mils	Medium high	3 months	Clear transparent	Oxygen Recycled and Winter film - For semi-glossy surfaces
3186	30 µm / 1.3 mils	Medium high	3 months	Clear transparent	Oxygen Recycled and Winter film - For semi-glossy and lightly matt surfaces
3100	33 µm / 1.3 mils	Medium high	3 months	Clear transparent	Oxygen Recycled and Winter film - For semi-glossy surfaces
9042	33 µm / 1.3 mils	Medium	3 months	Clear transparent	Anti-coil collapse film
9371	35 µm / 1.4 mils	Very high	3 months	Clear transparent	For matt and metalized surfaces
3133	35 µm / 1.4 mils	Very high	3 months	Clear transparent	Oxygen Recycled and Winter film - For matt and metalized surfaces
9383	45 µm / 1.8 mils	High	3 months	Clear transparent	Olympeaks film - For embossed and matt surfaces
4444	50 µm / 2.0 mils	Medium high	3 months	Clear transparent	An innovative, versatile solution for various finishes
9562	90 µm / 3.4 mils	Ultra high	3 months	Black and white	Rubber film for rough and wrinkled surfaces

### ALUMINUM COMPOSITE PANELS

Grade	Thickness (µm/mils)	Adhesion	Outdoor resistance	Colors	Specific characteristics
4800	50 µm / 2 mils	Medium high	6 months	Clear transparent	For smooth, glossy, lightly structured and semi-matt surfaces
4444	50 µm / 2 mils	Medium high	3 months	Clear transparent	An innovative, versatile solution for various finishes
4254	50 µm / 2 mils	Very high	6 months	Clear transparent	For smooth, glossy, lightly structured and semi-matt surfaces
4233	70 µm / 2.8 mils	Medium	6 months	Black and white	For smooth, glossy, lightly structured and semi-matt surfaces
3000	70 µm / 2.8 mils	Medium	6 months	Black and white	Oxygen Vegetal grade - Rubber film for smooth / glossy, lightly structured and semi-matt surfaces

## FILMS FOR APPLIANCES

Grade	Thickness (µm/mils)	Adhesion	Outdoor resistance	Colors	Specific characteristics
4800	50 µm / 2 mils	Medium high	6 months	Clear transparent	For smooth, glossy, lightly structured and semi-matt surfaces - exists in a yellow and blue version
4254	50 µm / 2 mils	Medium high	6 months	Clear transparent	For smooth, glossy, lightly structured and semi-matt surfaces - exists in a yellow and blue version
4444	50 µm / 2 mils	Medium high	3 months	Clear transparent	New, versatile solution for various finishes
4274	70 µm / 2.8 mils	Medium high	6 months	Clear transparent	For smooth, glossy, lightly structured surfaces
3074	70 µm / 2.8 mils	Medium high	6 months	Clear transparent	For smooth, glossy, lightly structured surfaces

## FILMS FOR SIGNAGE AND COMMUNICATION

Grade	Thickness (µm/mils)	Adhesion	Outdoor resistance	Colors	Specific characteristics
4800	50 µm / 2 mils	Medium high	6 months	Clear transparent	For smooth, glossy, lightly structured and semi-matt surfaces
4444	50 µm / 2 mils	Medium high	3 months	Clear transparent	An innovative, versatile solution for various finishes
4254	50 µm / 2 mils	Very high	6 months	Clear transparent	For smooth, glossy, lightly structured and semi-matt surfaces
4233	70 µm / 2.8 mils	Medium	6 months	Black and white	For smooth, glossy, lightly structured and semi-matt surfaces
3000	70 µm / 2.8 mils	Medium	6 months	Black and white	Oxygen Vegetal grade - Rubber film for smooth / glossy, lightly structured and semi-matt surfaces

## FILMS FOR GENERAL INDUSTRY

Grade	Thickness (µm/mils)	Adhesion	Outdoor resistance	Color	Specific characteristics
4155	45 µm / 1.8 mils	High	6 months	Clear transparent	For rough and matt surfaces
9383	45 µm / 1.8 mils	High	3 months	Clear transparent	For rough and matt surfaces
3140	45 µm / 1.8 mils	High	3 months	Clear transparent	Oxygen Recycled grade - For rough and matt surfaces
4444	50 µm / 2 mils	Medium high	3 months	Clear transparent	An innovative, versatile solution for various finishes
9384	80 µm / 3.2 mils	Medium high	12 months	Clear transparent	For very rough and wrinkled surfaces

## TECHNICAL TAPES

Grade	Color	Carrier/backing	Type of adhesive	Total thickness (µm)	PAL/A	Tensile Strength (daN/cm)	Removability
BN6489	Black	MOPP	/	100	300	28MD*	*
BN6490	Blue	MOPP	/	110	250	30MD*	***
BN811	Transparent	PET	Acrylic Solvent	90	400	/	No
BN53	Green	PET	Silicone	80	300	/	**
BN6440 (mono-oriented)	Transparent	PP reinforced	/	130	1000	25 MD*	No
BN6441 (cross weave)	Transparent	PP reinforced	/	130	1000	27 MD*	No

\*MD : Machine Direction

## LAMINATION MACHINES

Lamination	Machine	Standard dimension	Thickness	Film application	Lamination Characteristics	Specificities
Horizontal	TX	Widths: 1,400 mm (55") up to 1,700 mm (67")	4 mm (0.16") up to 80 mm (3.1")	Single or double-sided	Precise film application	- Automatic length detection - Automatic cut
Horizontal	PRO-JET	Widths: 1,400 mm (55") up to 3,300 mm (132")	5 mm (0.2") up to 80 mm (3.1")	Single or double-sided	Suitable for low/medium batch production	- Entry-level applicator - Manual cut
Vertical	VX Smart	Minimum linked to film roll size – Up to 3,000 mm (118")	4 mm (0.16") up to 80 mm (3.2")	Single	Standalone vertical laminator	- WALCO® patent on film positioning and cutting system - Entry-level machine - Reduced footprint (length about 7m)



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