ORAFOL AUSTRALIA

TECH Insights

Sustainable Promotional Print Films

Overview

ORAFOL acknowledge our responsibility to help our communities and to protect the environment we live in.

Environmental sustainability and corporate social responsibility are principles that guide our actions and decision-making, from top management to individual employees. All our employees know that they are empowered to make a difference.

Our efforts in this field are continuously ongoing – not just a sporadic activity. We are committed throughout our organisation to continuously improve our environmental sustainability efforts. We are aware of our responsibility for nature and face the ecological challenges of the future. We strive to minimize the impact of our production on the environment, the consumption of raw materials and energy. This also includes the acquisition, use and production of raw material and energy efficient products as well as the optimization of the corresponding processes. When it comes to environmental responsibility, ORAFOL go beyond just complying with regulations. Protecting the environment for everyone is a part of our business.

Certification

The ORAFOL Group is a global, family-run company specialising in processing and finishing specialist films, retroreflective materials, adhesive tape systems, and high performance polymer-based films for the graphics industry. ORAFOL has over the years made continuous investment in product development and production technology, and today offers a broad range of adhesive films that meets and exceed the industry's highest quality standards. ORAFOL Europe GmbH is certified according to EN ISO 9001 and EN ISO 14001, and all production takes place on the most advanced and reliable production equipment available in the industry today.

Environmental Management

At the ORAFOL GmbH headquarters, our specially-designed environmental management system is certified according to ISO 14001. It features regenerative incinerators which not only reduce emissions from our manufacturing processes; they improve the air quality. That's because its emissions are even cleaner than that of our existing surroundings. Energy efficiency is maximized by returning the recovered heat to the production process and the heating system, creating a closed raw material, energy and resource cycle.

Environmental protection is a particular concern. Therefore, ORAFOL places high value on precautionary actions to hold environmental risks and negative effects on the environment as low as possible. We ensure that all applicable national and international environmental laws, regulations and standards are respected and support the use of modern, efficient and environmentally friendly technologies.

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ORAFOL presents PVC-free solutions

ORAFOL is responding to the increasing global demand for PVC-free solutions for the graphic industry. FESPA Global Print Expo 2022 in Berlin, saw ORAFOL present PVC-free films and laminates as alternatives to the standard range. The innovative and partly new products were specially developed for the high demands in the promotional advertising market segment.

Printed Advertising Graphics

Printed self adhesive advertising presents us all with challenges along with significant opportunities for improvement. This market segment consumes many petroleum based products that could arguably convert to cleaner chemistry options quite readily. As an example, many printed base materials used in the wide format market carry PVC resin combined with petroleum based adhesive technology. This formulation delivers a versatile printable solution, able to withstand the external weathering elements as well as being cost effective. This formulation also provides the printer and the converter with product that can be processed and converted for a great looking finished product. Many of these products, if they are in the form of self adhesive print films carry adhesive and therefore make the installation quite simple. Over time, self adhesive PVC films have served our industry very well.

Clean Chemistry

Converting to cleaner options gives consideration to alternate resins as well as cleaner chemistry. The objectives here are many, including product formulations that can be made from recycled products, or can be recycled at end of life. Chemistry that may be bio degradable, less harmful in its original form and not damaging to the environment in its waste form. Products that can be produced faster, with less energy consumed, with less bi-product or landfill waste and with lower exhaust emissions. All of these, along with safety & cost of finished goods are all important considerations.

ORAFOL's innovative R&D team developed ORAJET® 3172 & 3174 print films, in conjunction with ORAGUARD® 236 laminate.

These digital printing films made of polypropylene (PP) are a PVC-free choice for temporary advertising graphics e.g. in shops or at events. These films carry a matte finish for anti glare properties common for internal advertising requirements. These self adhesive print films are supplied with a removable adhesive as well as a permanent adhesive. They can be used indoors as well as in outdoor areas for short term (up to 2 year) applications. The specific application will determine if a laminate is required to protect the printed graphic. If a laminate is required, ORAGUARD® 236 is our recommendation. This is also a polypropylene (PP) film and available in a matt or gloss finish. All of this family of self adhesive films are manufactured using the latest water based adhesive technology.

What is PP?

PP is short for Polypropylene. PP is made up from carbon and hydrogen and is manufactured without any dangerous emissions. Polypropylene is classified as a thermoplastic, which is determined by the way this plastic responds to heat. Thermoplastics become liquid when they reach their melting point. In the case of PP this is 130°C.

PP is made from the combination of propylene monomers. PP is a very popular thermoplastic commonly used in products such as packaging, consumer products, industrial components and print media for the large format graphics market. PP can be manufactured in different forms from rigid materials, quite stiff with little flexibility, or flexible with some elasticity and flexibility in thin film form.

PP provides many advantages including;

- PP is readily available
- Relatively inexpensive
- Good moisture resistance
- Good impact strength
- Good acid resistance
- Good heat resistance
- 100% recyclable
- Can be manufactured in rigid form or flexible form

PP also carries some disadvantages including;

- Susceptible to UV degradation
- PP must be coated or treated to be print receptive

Like all resin based products PP is a great material when used within its limitations. It has a great blend of qualities that aren't found in other materials.

PP is a tough lightweight plastic carrying excellent heat resistance. Additionally it is considered safe for re-use as it is unlikely to leach chemicals and break down over time.

PP is 100% recyclable and carries plastic symbol 5. Recycled PP is commonly used to make packaging containers, pallets & bins.

ORAJET® 3172 & 3174 digital print films are manufactured from PP

ORAJET® 3172 & 3174 digital print films are an ideal choice for short term advertising.

These PP films present the print converter with a product that will look and feel like the PVC product they have become used to. However, these specially coated PP films are completely PVC-Free. The specialised coating will enable the print converter to print the surface using the same ink systems that they currently use. The print result will be just as vibrant as they are used to producing. Colours will pop, just like they are used to. While solvent based inks can be used we recommend using either UV or Latex inks to achieve the best results with these films. In order to achieve the best possible print result we recommend using the appropriate ICC profile to match printer settings to the print media.

Where possible, depending on the end use application, printed films can be applied without laminate. However, this is site & project specific. Where required ORAJET® 3172 & 3174 can be laminated with ORAGUARD® 236, also manufactured from PP. ORAGUARD® 236 is available in gloss finish or a matt finish. The choice will depend on the customer and the end use criteria.

Applications

Whilst these PP films do offer some flexibility they are best suited to flat applications such as walls, windows, hoardings etc. These PP films are not engineered to manage contours or recesses. These films are ideally suited to applications including;

- Supermarket advertising
- Petrol station advertising
- Point of Sale graphics
- Department store graphics
- Short term window displays

Thickness

ORAJET® 3172 & 3174 face films are 100mic thick. Add the adhesive and the construction is 120mic thick. This is an ideal weight for converters and installers, providing a flexible thin film to carry the short term advertising. These films carry a 135gsm silicone coated moisture resistant liner. The overall construction is rigid enough easy to handle through all conversion processes and flexible enough to make installation very easy.

What about the adhesive?

ORAJET® 3172 & 3174 are manufactured using water based polyacrylate adhesive technology.

ORAJET® 3172 carries a grey blockout removable adhesive, measuring 2N/25mm

ORAJET® 3174 carries a grey blockout permanent adhesive, measuring 16N/25mm

This adhesive technology allows films to be removed from most surfaces within 2 years without leaving residue. However, please be advised that surface substrate, along with surface preparation will ultimately determine clean removability.

What about durability ?

ORAJET® 3172 & 3174 are engineered for short term advertising applications. Typically this would indicate they are best suited to indoor applications for promotional advertising. However, these PP films can withstand some external applications for up 2 years, depending on the environmental aspect they are exposed to. Laminating these films with ORAGUARD® 236 will extend the external durability.

What about shelf life ?

These films carry an ink receptive coating. Whilst PP is very stable over very long periods the coating does have a shelf life of 2 years when stored in correct conditions (20°C temperature & 50% RH) in original packaging.

What printer can I use ?

ORAJET® 3172 & 3174 carry an ink receptive coating, engineered to provide adhesion and clarity with a broad range of digital printing inks. This coating will enhance your printed image and ensure the highest quality colour vibrance is achieved. These films are ideally suited to Eco Sol, Solvent, UV & latex ink systems.

Do these films carry Fire Certification ?

Yes, ORAJET® 3172 & 3174, along with ORAGUARD® 236 all carry Australian FR Certification achieving Group 1, AS 5637.1 – 2015. Copies of this certification is available from www.orafol.com.au or by request to your Account Manager or through Customer Service.

Think about your next project for a short term promotional advertising and consider the attributes and features of these ORAFOL print films.

- Matt Finish
- PVC-Free
- 100% recyclable
- Cost effective
- Tough & durable
- Water resistant
- Printable
- Permanent or Removable adhesive
- Can be used for internal or external applications
- Up to 2 year durability

Consider

ORAFOL invite you to consider and explore these options next time you need to produce internal promotional advertising graphics. The choice is here, the alternatives are now available.

Contact ORAFOL Australia **1300 672 365** or **sales.au@orafol.com.au** and we'll provide you with samples for your own evaluation.

For more information contact your local ORAFOL representative

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