

Keeping the lid on it!

Lids come in all shapes and sizes and are made from many different materials. A lid can be on a shoebox, a biscuit tin or a yogurt pot. For the dairy and food sector particularly, many of them are made using aluminium foil, or combinations of materials which include an alufoil layer. There is a long history of innovation and sustainable development for these products.

But alufoil lidding solutions do not just seal things in, they also keep nasty stuff out, thanks to their barrier properties. In addition they offer puncture resistance to help safe transportation. At the same time they must look good to enhance the impact of the overall pack and the brand.

Of course most consumers only worry about whether or not it is easy to peel off and that it does not tear in the process. Aluminium foil is a natural



material choice to achieve these things, thanks to both its own characteristics and the coating and lacquers used to improve these functions.

Aluminium foil lidding tends to dominate in dairy and for some types of food, such as airline meals and desserts. But a 'lid' also describes the top of a coffee capsule, a tamper evident seal on a personal care item in a tube, or induction seals on juice-based drinks. Even blister pack 'push through' materials are described as lidding foil.

In fact a lot of 'science' goes into what makes the perfect lid for a particular product. Materials devel-

opment is, of course, a paramount concern in terms of the optimal barrier properties, combined with the most sustainable (and lightweight) solutions. Good sealability is a must, and with new material combinations, coatings and lacquers, these can be combined with other important performance characteristics.

Another important lidding feature is the printability or embossing characteristics which are vital to enhance the appeal and quality image of the product. This issue of Infoil will dig below the surface to show some clever ideas and innovations for alufoil lidding applications. ///

Last call for awards entries

Don't miss your last chance to enter the Alufoil Trophy 2019. The closing date for entries is **14 December 2018**. To find out more and enter this prestigious competition visit: www.trophy.alufoil.org

Increased exports and solid domestic demand push deliveries ahead

A solid performance in both domestic and overseas markets in the 6 months to June indicates 2018 could be a good year for European aluminium foil rollers, according to figures released by the European Aluminium Foil Association (EAFA). Total deliveries of 464,000 tonnes in the year to date are 2.3% ahead, indicating increasing demand in all markets.

Thinner gauges, used mainly for flexible packaging and household foils, led the way with a 3.8% increase. Deliveries of thicker gauges, used typically for semi-rigid containers and technical applications, were down 0.5% in the first six months. Exports produced an overall increase of +21% for the first half of 2018, while domestic consumption was steady, at +0.1%. ///

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Alufoil lidding

The lidding landscape

A lid is often the first thing the consumer sees on the shelf when they go to buy their yoghurts, pot noodle, or soup. So it has to reflect the image of the brand and product in a very eye-catching way. In the beginning a lid on those very same products was plain silver or, maybe, white. The only graphics on it might have been the 'sell by' or 'use by date' and, possibly, a company logo.

In most applications, printed or not, lidding is keeping freshness in a pack of snacks, for example, or preserving the aroma and taste of coffee in a capsule. And, of course, foil lids appear on pet foods,

personal care products and cosmetics, or even baked goods in a variety of roles as well as different shapes and sizes. Nor should it be forgotten that a simple foil lid is still used in many forms of catering, particularly in the airline sector. So the landscape for lidding is big, and growing all the time.

Applications vary almost as much as the styles and sizes of containers, or the lids themselves. Thanks to modern sealing lacquers, or techniques such as ultrasonic and induction sealing, alufoil lids can work on glass, metal, cardboard tubes, as foil-to-foil on trays and, of course, on a huge variety of plastic

containers made from almost every material variant available to the food or liquid sectors – from pots to trays – plus an enormous range of plastic bottles and tubes.

But lids must do so much more than show and protect what is inside. Keeping the contents secure by sealing it in the container must be achieved in a safe and sustainable way, using the minimum amount of material and sustainable coatings, solvents and lacquers. Environmentally the aluminium foil lid must play its full part in the value chain and life cycle of the product and be fully recyclable. ///



Looks good enough to eat

Today, modern printing technologies enable colourful and high impact graphics on lids to be a powerful marketing tool and a very strong element of the 'real estate' on a package. Embossing and,



more recently, 3D and digital print techniques have added new dimensions to these possibilities. The image can almost leap off the lid to entice the consumer to try the tasty contents – which is only a peel away.

A good example of clever printing comes from Constantia Flexibles who developed a novel way to make the fruit or logo on a lid stand out, without the need to emboss the image to achieve that effect. Its die-cut lid generates a 3D effect to highlight different print areas. These are integrated in the design to create unique optical and tactile features.



Of course the printing inks used have to be compatible with modern food safety standards. Lids are in intimate contact with the foods they seal and protect, so it is important that no migration of ink occurs. Curing the inks is necessary to ensure they do

not become affected by the often cold, dry, wet or otherwise challenging environments in which they must exist.



An alternative to traditional UV curing has been introduced by Al Pack Group. Electron Beam technology for inks can be used on lacquered aluminium foils, laminated foils and other materials and needs only one pass and no photoinitiator additives, which are known to leave residue odours. ///

Alufoil lidding

Improving production and functionality

Laminating and lacquering of alufoil is a classic way to improve the barrier properties and sealability of lids. There are now many different combinations of plastics and aluminium foil which all add to the functional performance, depending on the application. Different thicknesses and the number of layers in the lamination can all make for a different result and may be necessary not only for the contents but also for the container.

One modern example is the PeelLid+ from Huhtamaki Flexible Packaging. It is an extrusion-coated material. So the unprinted base laminates are free from residual solvents compared to current standard heat seal lacquer. It can be used as a substitute for some thicker alu/plastic laminate materials, according to the company – a very important environmental consideration.

Of course an important aspect of any lid is that it is easy to get off, but tough enough to do its job! Modern coatings and sealing technologies for aluminium foil (which also have to be achievable with the least amount of energy) ensure consumers can get access to the contents of their pack with the minimum amount of force. Aluminium foil lidding also has the advantage of being a strong material, puncture and tear resistant, plus excellent conduc-



Amcor's Alufix® – an easy-to-peel aluminium membrane that requires up to 50% less force to open compared to traditional ring-pull can ends.

tivity. So consumers get the best of all the possibilities from their alufoil lid.

All coatings can affect machinability, while another requirement is optimal sealing at reduced temperatures. Lidding materials can come in roll format or as die-cut, but still need to work well on high-speed production lines which are often aseptic too. Alufoil lids offer excellent characteristics in these areas. ///

Hidden lids

Some aluminium foil lids are not immediately obvious, but are a vital part of the pack, used as a protective 'membrane' or tamper evident feature on, for example, personal care or cosmetics containers and tubes. These induction seals not only keep the

product in prime condition, but also offer consumers a clear indication that it has not been interfered with in the supply chain or retail shelf.

For the snacks sector an aluminium seal inside the cardboard tube or metal can is a popular way to seal in the flavour and 'crispness' of potato chips or peanuts and, additionally, offers a great security seal. This sort of application is also seen frequently on ground coffee products, to keep the granules or ground coffee in jars and cans completely safe and dry as well as locking in the aroma. Because of its excellent barrier properties the alufoil can greatly extend the shelf-life of all these items too.

In a novel twist to this hidden aspect and in the current climate, where plastic straws for drinks are seen as a major cause of waste pollution it is good to see that the alufoil sector is ahead of the market to re-



place them. Constantia Flexibles developed the Comfor Lid, which is a double layer die-cut lid composed of one aluminium and one co-extrusion layer. The consumer peels off the protective aluminium lidding layer revealing the plastic layer still adhered to the cup which incorporates a drinking/pouring opening. ///

Capsule Corner

Of course one of the latest and most popular uses of aluminium foil in lidding is for capsules, which initially contained coffee, but are now used for teas, soft drinks and even beer flavouring. We illustrate a few of the many successful uses for capsules already in the marketplace and expect to see many more in the future. ///



Recycling

Aluminium foil recycling round up!

— Organisations in four European countries recently took us behind the scenes to discover how their campaigns to improve recycling rates for aluminium foil packaging products are progressing. It seems they all have plenty of good news to report!

DAVR (GERMANY): In Germany the collection and recycling of all aluminium packaging and aluminium foil containing packaging started in 1991. Also in that year the aluminium industry founded its own company, German Aluminium Packaging Recycling GmbH (DAVR), to represent its interests in this area.

It has made a significant contribution to increasing the recycling rate of used aluminium packaging, which is now over 87%, thanks to the extensive automation of the sorting systems. More recently DAVR has been involved in trial runs for improving recyclability of used coffee capsules and other small items. The new German 'Verpackungsgesetz', approved in May 2017, sets a recycling target for aluminium of 90% by 2022.



CIAL (ITALY): The separate collection of aluminium packaging in Italy is carried out predominantly with that of plastic or glass. The separate collection of metallised plastics is now increasing everywhere thanks to the best quality levels, but also larger quantities.

Consumer information and awareness campaigns have been organised directly by CIAL or in conjunction with Municipalities to provide specific information about the types of aluminium packaging to be collected. It recently launched a new advertising campaign with the #nonsololattine (not just cans) theme, to illustrate the need to collect other types of aluminium packaging.

Aluminium coffee capsules have become a particular focus, with the launch of a special project for the recovery of Espresso capsules. Dedicated collection



points at all their Italian boutiques, and at an increasing number of municipal collection centres, resulted in 2,000 tons of capsules being recovered since 2011.

ALUPRO (UK): The organisation represents the leading aluminium packaging producers, reproducers, converters, fillers and brand owners in the UK on issues relating to the recycling of aluminium packaging. It promotes the recyclability of aluminium packaging (including foil) to UK consumers, local authorities, waste management companies and Government.

Currently it manages several programmes which it believes are making a vital contribution towards encouraging consumers to recycle more. ALUPRO estimates that over 80% of UK local authorities now collect aluminium foil through kerbside recycling systems.



One programme, MetalMatters, is a partnership programme aimed at local authorities to promote the recyclability of metal packaging to UK household-

ers and to increase capture rates of metals at kerbside. It targets foil trays and household wrapping foil alongside other metal packaging. Since 2012, the programme has operated in 86 local authorities and been delivered to 5.6 million households in the UK. These areas have experienced significant increases in metal capture rates.

ARPAL (SPAIN): At present the focus in Spain is very much on organising awareness workshops for students and teachers. Several of these have taken place at schools across the country during 2018. In Valladolid, workshops held at the Zoo, attracted 1800 children. Other opportunities to educate both educators and children include during summer camps or cultural events in various locations. In addition workshops have taken place in prisons.



A contest during this year, highlighting semi-rigid and flexible aluminium packaging, is aimed at nine hundred 8-12 year olds from 18 schools in the Catalan region. ARPAL also organises an awareness campaign for several hotel groups in the region, as well as at bars and restaurants at Barcelona airport.

Since January 2017 the organisation has worked with Tirme, the environmental technologies park on Mallorca, attracting 8,000 visitors (the majority from schools). The message about recyclability of aluminium is explained and participants receive the club card 'I Recycle Aluminium'.

Several campaigns across social media are well underway. ///

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