





...WITH ALUMINIUM

ALUMINIUM — ITS HISTORY HAS SHAPED OURS

Aluminium. This valuable material lay undiscovered for thousands of years, in rock, in our planet's crust, as a compound. It took the industrialisation of the 19th century to make the metal accessible to everyone. The discovery of aluminium's existence is attributed to Sir Humphry Davy, one of the pioneers of modern electrochemistry. The relatively late discovery of aluminium – in 1807 – is all the more amazing given that it is the most abundant metal in the Earth's crust.

In the course of the 19th century, scientists searched for a way to actually extract the metal from its ore, from bauxite which occurs abundantly worldwide. The Danish physicist and chemist Hans Christian Ørsted was the first to succeed, in 1825. However, the manufacturing costs were so immense that the price of aluminium soon exceeded that of gold. The high-priced metal was mainly used to make pieces of jewellery.

After further progress in the production process, in 1887 the Austrian chemist Carl Josef Bayer developed the technology named after him to produce aluminium oxide, the starting material for aluminium production. Almost at the same time the American Charles Martin Hall and the Frenchman Paul Héroult independently and almost simultaneously took out a patent for

the electrolysis process which is used to produce the metal aluminium from aluminium oxide. Both processes are still the only ones used on an industrial scale today. Thanks to the development of ever-more efficient methods of production, the metal became more and more affordable. It soon began to establish itself in practically every technical field and every corner of our everyday life.

Today, it is impossible to imagine life without aluminium. We come into contact with it constantly in a wide variety of ways. Whether in the transport sector, building and construction, or in electrical engineering, aluminium satisfies the most diverse demands regardless of whether lightness, durability or electrical conductivity is required.

At the beginning of the 20th century, aluminium's wide range of beneficial properties also made the metal attractive for the packaging sector. It is now indispensable there as well. Much is expected of modern packaging: protecting the product and making sure it does not deteriorate, consumer convenience, fabricability, marketability, avoidance of damage along the distribution chain, consumer safety and environmental compatibility. Aluminium is an amazing material and meets these demands completely. It is hygienic, light, flexible, readily shapable, stable, unbreakable,

has good thermal conductivity, is intrinsically valuable as a metal and is completely recyclable.

Producers, traders and consumers have benefited for decades from a continuous series of technical innovations that have succeeded in combining excellent material properties with optimal processing to produce modern high-performance packaging. The development of new alloys to save material, newer and ever-more practical closure systems for greater user-friendliness, and advanced processing technologies, such as printing, shaping and embossing processes to produce attractive brand experiences, have helped ensure that aluminium packaging remains as up-to-date today as it has ever been.

Despite its 'youth', aluminium has already written history as a packaging material. This brochure tells some of the stories behind this rapid success story. After all, ultimately it is not the great sensations that are important to us but more the small, everyday encounters with the all-round talent called aluminium. Come with us to the scenes of our aluminium stories and experience their variety. Meet inspired people and let them inspire you to write your own individual aluminium story.

On this note, we wish you pleasant reading.

HOW YOU PRESERVE GOOD TASTE

...is disclosed by textile designer Katharina Wohlgemuth.

The aluminium container safeguards the flavour and character of the contents.



“I particularly love the full-bodied flavour of coffee from capsules. The impermeable aluminium containers completely preserve the unique nuances of the individual coffee types. The small ‘aroma safe’ stays hermetically sealed until I make a cup of coffee. And then I’m greeted by a complete treasure trove of delights and memories with every sip.”

A hacienda on the slopes of the cordillera in the Coffee Triangle. Columbia. A tropical day is dawning. The cultivated red-haired lady is sitting casually elegant on a rattan sofa. From her pastel-yellow wooden veranda she is looking down on the coffee plantation, which is just emerging lush green from beneath the wispy shroud of the early morning mist. In the midst of lush surroundings, with the aroma of the steaming coffee in her nostrils, Katharina Wohlgemuth, a textile designer from Hamburg, is languidly welcoming in the new day. There is a decorative aluminium tube on the side table. Something special inside is staying dry and enjoying the protection of the metal shell. A cigar. The label gives the game away. It is not a well-known brand but a coveted rarity from a neighbouring area. The connoisseur takes the hand-rolled speciality out of the aluminium tube and breathes in the spicy aroma. The tube has done a good job. She relishes the smell of earth, leather and wood that recounts tales of Columbia. She takes a sip of the mildly nutty tasting highland coffee and then the tales become animated.

It is still early as she embarks on a trip around the area in a willy, as the overland jeeps are called here. There is a hearty welcome for the visitor in the small village shop in the middle of the plantation. The people know each other. The gourmet wants to cook for friends in the evening. She’s happy when she discovers a selection of dried herbs packed in aluminium containers on the shelf. “My experience with buying food in tropical countries has taught me a lesson: only aluminium packaging can guarantee that the contents are protected against the environment on the outside. So I always turn to aluminium.” The shop owner draws the lady’s attention to a new delivery of traditional indigenous materials. Expressively, the colours light up the abstract embroidered patterns on the artfully crafted woven fabrics. The designer is enraptured.

“This is my creative home,” she says, her voice exuding passion. “I’ve been practically everywhere in the world. As a designer I’m always looking for something new. For strong ideas. But I always come back here. The colours and the fragrances are enough to make me completely dizzy,” she explains on the trip back. And sure enough, Mother Nature ignites a firework display for the senses in this corner of the Earth. Orchids glow in an impressive diversity of colours and shapes. Songbirds with colourful feathers chirp in competition. All around there are infinite variations of green, captured in strangely shaped leaves. Then there is the morning sky. The colour gradation from shades of blue and rose pink through to deep orange is picturesque and seems to smoulder on the fringe of the hill’s lush vegetation.

“I try to channel the essence of this exotic world into my work,” she says. “While I’m here, I soak up all the sensations inside me like a sponge. Then when I’m back home in my studio I have to reawaken my memories. For example by enjoying a fresh cup of coffee. Then I feel as if I have been transported straight back here again.” She laughs. “I particularly love the full-bodied flavour of coffee from capsules. The impermeable aluminium containers completely preserve the unique nuances of the individual coffee types. The small ‘aroma safe’ stays hermetically sealed until I make a cup of coffee. And then I’m greeted by a complete treasure trove of delights and memories with every portion.”

Back at the hacienda, her gaze rests on the side of the path. “Cilantro,” she beams. “I’m going to use this herb fresh in my sauce today. But I always take a few herbs back home with me. In an aluminium capsule as a reminder,” she winks and holds the small aluminium spice container aloft. “This ensures that at home they’ll smell like this glorious day in Columbia!”

ALUMINIUM FACTS

A more sustainable lifestyle with aluminium

The outstanding barrier protection of aluminium results in a whole host of knock-on benefits. The longer shelf life at room temperature of foodstuffs packaged in aluminium reduces deterioration or wastage. There is then no risk of losing the resources used to produce the foodstuffs, which are often several times greater than the resources needed to produce the packaging. Energy savings during transport and storage conserve additional resources. Well-packaged foodstuffs are not only protected against deterioration: valuable nutrients are preserved for longer, too. In many cases, aluminium’s barrier properties are an alternative to artificial preservatives. Aluminium packaging thus ensures that foodstuffs are healthier and that they are safe to eat. Aluminium’s high thermal conductivity also means less energy is required in the processing and preparation of food.



“I always take a few herbs back home with me. In an aluminium capsule as a reminder. This ensures that at home they’ll smell like this glorious day in Columbia.”

An aluminium ‘aroma safe’ protects foodstuffs and tobacco products against taste-killers such as extraneous aromas, humidity and light.

HOW YOU COPE WITH THE HEAT AND THE DUST

...is made clear by rally driver Fernando Gonzales.



It doesn't matter when or where you get thirsty. There will be freshness waiting for you in an aluminium can. Always and everywhere.

“When it gets very hot, it’s a truly luxurious moment to hear that hiss of a cool drink being opened.”

Rallying is pure passion. Going right to the limit and a bit further in every race. And the absolute classic rally: the ‘Dakar’ with its cult status. Where’s the thrill? Exciting contrasts and merciless challenges. Raw wilderness meets rational hi-tech. Archaic and futuristic at the same time. And a human being right in the middle of it all. Daring. A modern-day nomad hurtling powerfully forward – always in the direction of the finish.

“When we’re on the road, we run on water and energy drinks,” explains Fernando Gonzales, the pilot of the winning team. “When we’re driving off-road it is important to have reliable packaging for the precious contents. Our experienced crew relies on the classical indestructible form of packaging: the beverage can.”

Swirling desert dust. Jagged-edged scree. Thunderous impacts as the heavy vehicle bounces over the rough terrain. Pilot and co-pilot battle doggedly with the unknown trail. The unexpected can

occur at any time and anywhere along this apparently endless route. So the crew work meticulously on everything they can plan for in advance. With reliable technology and crash-proof materials.

In the camp in the evening, vehicle and driver are got ready for the next day. The heat of the day has given way to severe cold. After all the exertions of the day, the body craves for a hot meal. Hungry, the team queues for food. A delicious smell drifts upwards from the appetisingly filled aluminium trays and the hot vapours disappear into the dark, starlit sky.

“After you have checked the chassis, engine and tyres, you have to take care of the details,” is how the team captain explains the maintenance work on the vehicle. Just then, a young assistant with a stubbly beard wearing a team overall lifts a box into the off-road vehicle. “That’s our emergency drinks ration. We don’t really want to transport the packaging, only what’s inside

“Everything needs to be incredibly unbreakable in a racing car. And what is more rugged than a metal beverage can?”



Be it at home or on the road, hot or cold: aluminium menu trays can satisfy every desire. Easily and conveniently.



it. That’s why we use aluminium stand-up pouches.” Now he checks the cool-box inside the vehicle. The employee piles a couple of glittering coloured metal containers into the box. They fit perfectly.

The sun-tanned pilot takes two beverage cans from the team assistant’s stocks and weighs them in his hand. “Everything needs to be incredibly unbreakable in the car. And what is more rugged than this here?” Without waiting for an answer, he continues: “And a can like this sits perfectly in your hand.” To demonstrate his point, he deftly spins one of the slim aluminium cylinders around its axis with his fingers. “Its like holding a gear stick,” nods the racing driver. With practiced skill he casually opens both metal containers at the same time with the sinewy index fingers of his strong hands. He hands one can to his team colleague. “After we’ve crossed the finishing line, we love to celebrate a successful race with a good can of beer or bubbly. But first of all, here’s to the adventure!”

Some twelve hours later the sun again blazes down from a cloudless desert sky. The extreme athletes have already been navigating through the sandy nowhere land for a good many hours. Far from their destination. Thirst and exhaustion are creeping slowly but surely into their heat-affected bodies. Time to grab a beverage can. A good thing that they can replenish lost energy so conveniently without having to make a refuelling stop. The pilot rolls the smooth, cool metal over his temples that are throbbing from the heat, while the thermo-chromic ink on the can indicates that the temperature is ideal for drinking. Tingling with excitement, he effortlessly opens the can with his left hand, while his right hand keeps the vehicle safely on course. Cold as ice, the liquid washes the dust from his burning throat and leaves it as fresh as the morning dew. It’s that truly luxurious moment! Here in this gigantic sea of dunes there is a feeling of eternity even when one is ploughing through in a restless state of agitated melancholia. But for a short while, this feeling takes a back seat.

ALUMINIUM FACTS

Raise your can – to a familiar all-rounder!

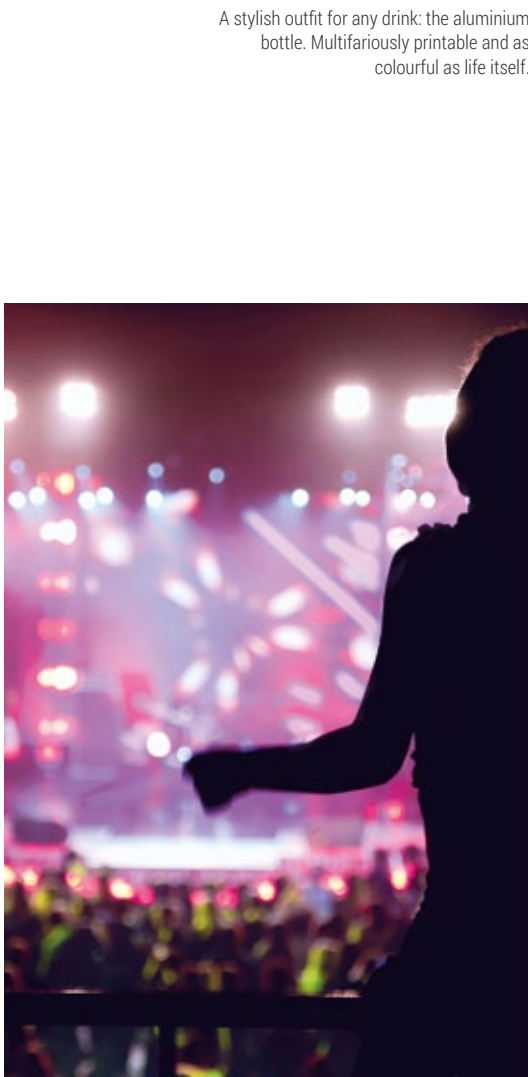
Since it was first introduced at the Krueger Brewery in Richmond, Virginia in 1935, the can has been regarded as the perfect protective packaging for every type of drink. And it no longer comes in the shape of a small chunky suit of armour: it is now a chic hi-tech designer’s item, whether it be a standard, slim or mini can. Numerous developments have continually made the beverage can more attractive and – thanks to innovative aluminium alloys – ever lighter. It can be shaped, printed or embossed in a multitude of different ways, with or without interactive QR codes. There are even beverage cans that can be resealed. Retailers and logistics companies could write volumes about “stacking high with wonderful ease” – that is if they work with beverage cans. Because the extremely lightweight cylindrical can is made for easy stacking. It utilises transport and storage space highly efficiently. The ratio of product to packaging is exemplary. If one loads a truck with beverage cans, one can transport twice the amount of liquid as a truck laden with bottles. This saves lots of fuel and energy.



Big content with little packaging.

HOW YOU KEEP A COOL HEAD WHEN THINGS HEAT UP

...is divulged by DJ and party organiser Marko Heimerzheim.



A stylish outfit for any drink: the aluminium bottle. Multifariously printable and as colourful as life itself.



“I knew that the concept wouldn’t work without an outstanding packaging design. The drink attracts attention on the shelf straight away thanks to its modern minimalist and cool outfit.”



Trendy or classic: aluminium aerosol cans always cut a fine figure.



“The unusual bottles are already popular collector items. Kids associate them with special memories. There are now even fans asking for autographs on their bottles.”

A driving beat. Powerful basses pulsating rhythmically transport the rich sound. It flows into the ears of the guests and from there deep into the centre of their hot bodies. Only a cold drink can bring the temperature back to normal levels. The refreshment out of the stylish aluminium bottle is definitely cool. The new in-drink is on everyone’s lips. No wonder: the unusual bottle design has a magical attraction. Everywhere the neon-coloured characters on the elegant matt-silver aluminium bottle are glistening in the black light. The club is throbbing.

Until very recently, Marko Heimerzheim, the man operating the turntables, was an absolute insider’s tip amongst partygoers. Now he is filling the hippest clubs with his completely unique style. Tonight he has even got his own artists’ dressing room. Unthinkable just a short while ago. “It’s unbelievable how everything has developed so fantastically,” says the charismatic shooting star of the clubbing scene in amazement during a short refreshment break. He takes an unusually shaped aluminium can with photo printing from his bag. Hair spray? No, the eye catcher turns out to be a deodorant which quickly disappears under the DJ’s shirt where – well dosed and hygienic – it provides that refreshing feeling with a distinctive hissing sound. “I love that sound,” he says. The sound artist obviously has a fondness for particularly conspicuous packaging containers made of aluminium, all the more if they make interesting sounds: Perfect.

His rapid rise into the elite group of professional DJs is no coincidence. The 27-year-old studied marketing. For his final thesis he developed an innovative marketing concept for a drinks company. It covered the market launch of a trend drink using a series of parties with live acts. Today’s event is one such party. “I knew that the concept wouldn’t work without an outstanding packaging design,” says the multi-talented young

man. “The drink attracts attention on the shelf straight away thanks to its modern minimalist and cool outfit.” There is only a simple new-age hieroglyph – a QR code – emblazoned on the silver body of the bottle. The brand label. Deep embossed in a luminous metallic colour. If one scans the code with a mobile phone, one lands directly on the website for the popular series of events. There is background information on all the dates, artists, music styles, etc. There is also a prize competition. The winners receive non-cash prizes and free tickets. The aluminium bottle acts as the lottery ticket. There is a small, unforgeable number embossed in the metal base of the bottle. Purchasers can log into the party website and check whether the number on their bottle is a winner. As an additional feature, purchasers can find voucher codes on the bottles for downloading music of the artists performing. Not straight away though. There is a special gimmick here: the code can only be read in black light.

“The unusual bottles are already popular collector items,” reports the creative mind behind the idea. “Kids associate them with happy memories. There are often fans who even ask us to autograph their bottles. And despite the cost of the high-grade packaging and the parties, the company is thrilled with the excellent sales figures.”

The DJ is once again in his element. The raving crowd is celebrating like there is no tomorrow. The fun factor can’t be topped. “The width of three fingers above your belly button is where the vibes are strongest,” claims the DJ. “Here in the solar plexus, the mixture of music and cool drinks is transformed into a pure urge to dance.” He takes a sip of his drink. The body of the bottle reflects the coloured spotlight. The crowd succumbs entirely to the flow of the moment. It is oblivious to what is going on around it. But one thing is for sure: this DJ really can perform magic.

ALUMINIUM FACTS

Trendsetting aluminium: stylish eye-catcher with ‘must-have’ effect

First impressions count. This is particularly true at the point of sale. That’s where a customer gladly grabs a product whose packaging conveys premium quality and aesthetics. As a packaging material, aluminium ensures optimal product protection and is an outstanding eye-catcher. The light metal offers a huge range of design opportunities. Bottles, aerosol and beverage cans with distinctive silhouettes and appearances turn the contents into highly visible and much-liked branded products. Slim-waisted variations of the basic cylindrical shape add an attractive sporting look to the easy-to-hold aluminium can. Customers are impressed by the elegance of a well-pronounced rounded shoulder or a slim bottle neck. Modern printing techniques leave nothing to be desired when it comes to creating unique designs. Whether shiny, matt or semi-matt, embossed print or printed photos, with or without special effects, or in splendid colour, the designs have a magical attraction.

HOW YOU ENJOY CHRISTMAS AND EASTER ON THE SAME DAY

...is something that Philipp König and his best friend
Lea Pfeiler have discovered.



Chocolate simply adores flexible, tailored, aluminium foil outfits. The foil is always as thin as possible but as thick as necessary.

“A chocolate Santa in an aluminium cloak still tastes great in the summer!”

Summer holidays. Tufts of white cloud in the sky. It's just after nine and the thermometer is already touching an impressive 25 degrees in the shade. The tanned 11-year-old Phillipp König races past his mother into the garden. “Wait,” she yells. “I’ve packed something for you here.” The boy comes back and quickly rams a package wrapped in aluminium foil into his orange swimming bag. He swiftly grabs two pots of his favourite cherry yoghurt from the fridge and sticks them in the side pocket. “See you,” he cries and in a flash he has disappeared behind the hedge.

A short time later he is cycling to the open-air swimming pool alongside Lea

Pfeiler, his best friend from next door. They are taking their secret route. The dusty field track, along the edge of the wood. Insects are buzzing. There is the fragrance of flowers and grass in the air. Soon they make their usual stop at the moss-covered tree trunk where it is so good to have a picnic. The boy takes out both yoghurts. They have been shaken up a bit on the bike but the lips of the aluminium foil lid are tightly sealed. Just like their lips are when they do something that no one should know about.

Arriving at the pool, the towels are quickly spread out and then it's off into the water. A signal sounds. The waves are coming. The two friends dive and splash about. The waves come another

three times before they return to their towels and flop down hungry and exhausted. They take out their packed lunches. They pool what they have and share everything. Sandwiches wrapped in aluminium foil, biscuits, fruit. They always do that. “Come on, let’s play a game,” says the boy. Quick as a flash he grabs something and wraps it in aluminium foil. “What is it?” The girl rotates the silver ball in her hand, guesses its weight and holds it up to the sun. “You can’t see inside. The foil blocks out the light.” “You don’t say,” she comments, trying to provoke him, adding “I think it’s a cherry.” “That’s right,” says the boy happily. “You can keep it. And now it’s your turn.”

Seeing the empty aluminium foil the girl suddenly has an idea. For some time there has been something else wrapped in aluminium foil at home that she has been keeping for a special day. Why shouldn’t today be that day? Suddenly, the children are in a great hurry to leave. They quickly rush back home and go to Lea’s bedroom. There is a long-cherished collection of items on a shelf. Without further ado they are packed into the rucksack and then off they go to the old beech tree. Up the rope ladder and into the tree house. On the floor there are a couple of beech-nuts that a squirrel forgot last winter. They sweep them away and then they are ready. “Let’s lay them out,” says the girl. Soon they have a cheerful parade of colourfully clad figures and objects. Shiny aluminium costumes cling closely to the chocolate bodies. Christmas and Easter coming together on the same day! In the middle of summer. A Santa is smiling at an Easter bunny. The boy has a worried expression on his face. “Do you really think we can eat them?” The girl beams. “Of course! Why ever not? They’re wrapped in aluminium. I’m sure we could even eat them this time next year. I’ll show you.” She unwraps the foil from an egg and the egg disappears into her mouth. Now she has a serious look on her face. The boy is aghast. “Is it OK,” he asks worriedly. She eats the egg with a solemn look on her face. Then she bursts out laughing. “Yes, it tastes great! Come on, have one,” she cries. Her friend doesn’t wait to be asked twice. A ladybird here, a Santa there. They are all devoured and the shiny aluminium foil is carefully smoothed out flat, until there are no more creases to be seen. “Oh, I’m already looking forward to Christmas,” sighs the ten-year-old longingly.

“Sometimes my girl friend’s like an aluminium foil lid: there’s no getting through to her.”



Aluminium foil fulfils the high expectations placed on dairy products. It seals tightly and keeps out the light.

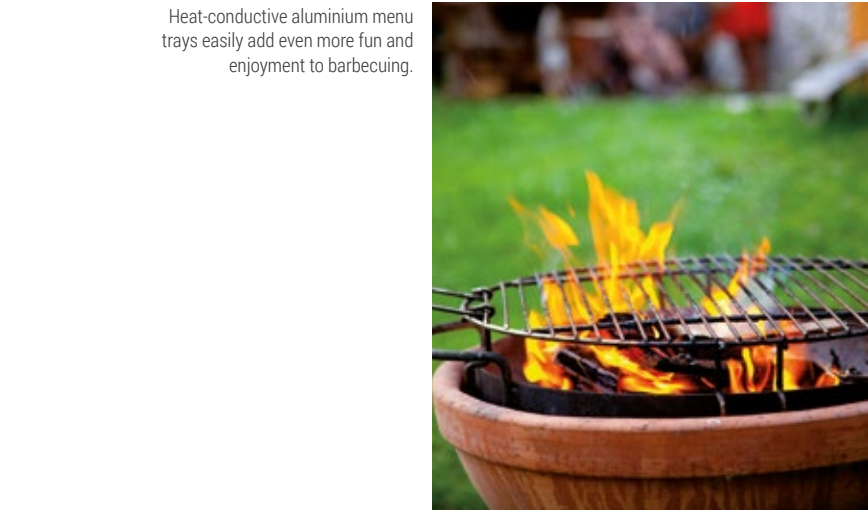
ALUMINIUM FACTS

Light protection for sensitive items

Milk and dairy products are some of the most valuable foodstuffs as well as some of the most sensitive. Not only do they require protection against heat, dust and extraneous odours: protecting them against light is also a top priority. Sunlight as well as diffuse day or artificial light can cause oxidation within a very short time and turn dairy products like quark, yoghurt and milk sour. Impervious and neutral-tasting aluminium pot lids protect products like these against the ingress of rays of light even in a brightly lit refrigerated display case in the supermarket. As with all other forms of aluminium packaging, attention is also given here to using material as sparingly as possible. Aluminium foil offers complete protection despite its thinness.

HOW YOU CAN TOP SUCH A GREAT MOVE

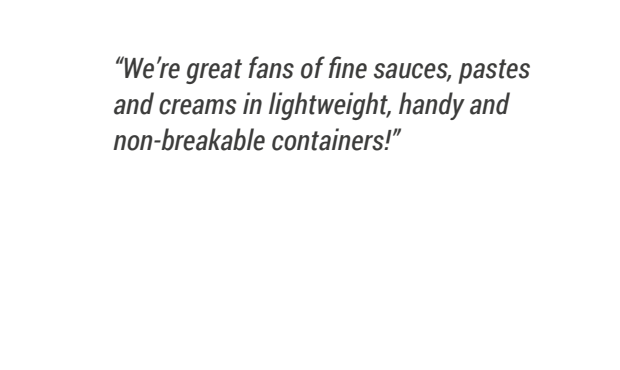
...is explained by football fan Heinz Stachowiak.



Pre-prepared food stays fresh in aluminium foil so wastage in the home can be avoided.



Simply squeeze the tube and enjoy: aluminium tubes are practical for dispensing pasty products.



Simply squeeze the tube and enjoy: aluminium tubes are practical for dispensing pasty products.

“The aluminium packaging which is unusual for my product gains me new customers every day. And they are all delighted with the practical handling and the fantastic way in which the aluminium keeps the contents fresh.”

A terrific start! Our midfield takes control right away. It puts in a great tackle and wins the ball. Our forward line takes over. A quick one-two, our No. 9 weaves through the opposing defence and fires in a great shot in the top left-hand corner. It has ‘goal’ written all over it. But their keeper leaps like a cat – and manages to tip the ball over the bar with his outstretched finger tips. That was close. “Oohs” and “aahs” ring around the sold-out stadium.

Heinz Stachowiak, the older man standing behind the charcoal grill shouts encouragement to his team. “Great! Keep going!” No sooner has he placed the sausages in the hot aluminium BBQ tray than they begin to sizzle and give off that wonderful smell. The ever-popular foil-wrapped jacket potatoes are cooking nicely in the embers. “Use aluminium and every barbecue’s like playing in front of a home crowd,” says the man to his 11-year-old grandson who is helping him.

Through the open window of the gazebo, the two football fans have a clear view of the match on the TV in the spacious garden house. That’s where the rest of the football-mad members of the family and their friends and neighbours are eagerly awaiting a win for their favourite team.

On the pitch, there is yet another great through ball, the cross lands inch perfect in the opposing penalty area and the 11-year-old yells “goal!” And they all cheer loudly. The first goal in the eighth minute! They want more.

The initial tension eases. The home fans now want some food to steady their nerves. Home-made goodies protected by a layer of aluminium-foil are waiting to be eaten. Old and young descend on the tasty simple fare with a hearty appetite.

Fortified in this way, the ardent fans manage to swallow the sudden equaliser just before half-time with an air of self-confidence. They analyse the first half. The host hands over the BBQ tongs to his son and joins in the debate.

What makes this fan unique?

The man is a beekeeper. And for some time his honey has been selling like hot cakes – or perhaps the sliced bread on which it tastes so delicious. The resourceful apiarist loves to quote his grandson: “Look granddad, the bees are wearing our team’s shirt!” That was what started the ball rolling a few years ago, or, to be more precise, gave him the idea of putting his honey in tubes. The out-of-the-ordinary idea of the football-mad beekeeper: he has the honey he collects filled into aluminium tubes. The really smart bit: the bee’s yellow and black striped pattern matches the colours of “his” team. The local product was snapped up just like that, especially by his team’s fans. His customers love to squeeze the natural sweetener out of the bee-coloured aluminium tube.

“The aluminium packaging which is unusual for my product gains me new customers every day. And they are all delighted with the practical handling and the fantastic way in which the aluminium keeps the contents fresh.”

His latest cleverly worked move: a mixture of mustard and honey based on an old family recipe. “We’re great fans of fine sauces, pastes and creams in lightweight, handy and non-breakable containers,” says the wife of the resourceful honey producer with a laugh.

The referee blows his whistle. “Give it what you’ve got lads,” says the man in his mid-sixties as the second half gets under way. “Attack. Put them under pressure.” He also applies pressure and squeezes an even stripe of mustard from the aluminium tube onto the freshly barbecued sausage on his plate. The manager has obviously said the same thing to the team in the dressing room at half-time. Because it doesn’t take long for a highly motivated home team to take the lead again, and add more wonderful goals towards the end.

It’s 4:1 at the final whistle. The fans are ecstatic. There is an outburst of frenzied joy! What a terrific match! The 11-year-old doesn’t know what he enjoyed most: the great win or the vanilla ice-cream topped with granddad’s honey from a tube.

ALUMINIUM FACTS

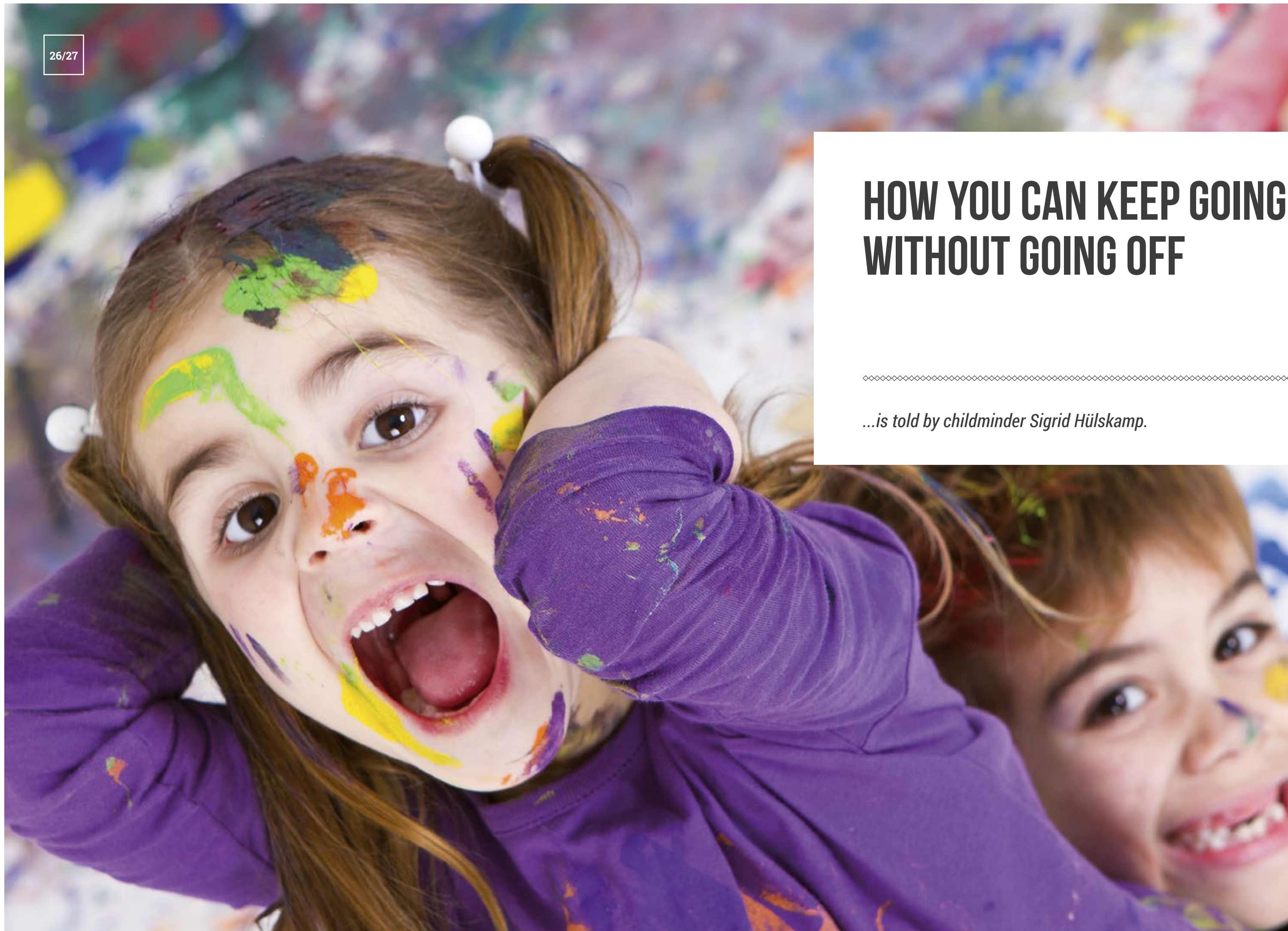
Aluminium: the practical, all-round accompaniment. A must, not only for mustard.

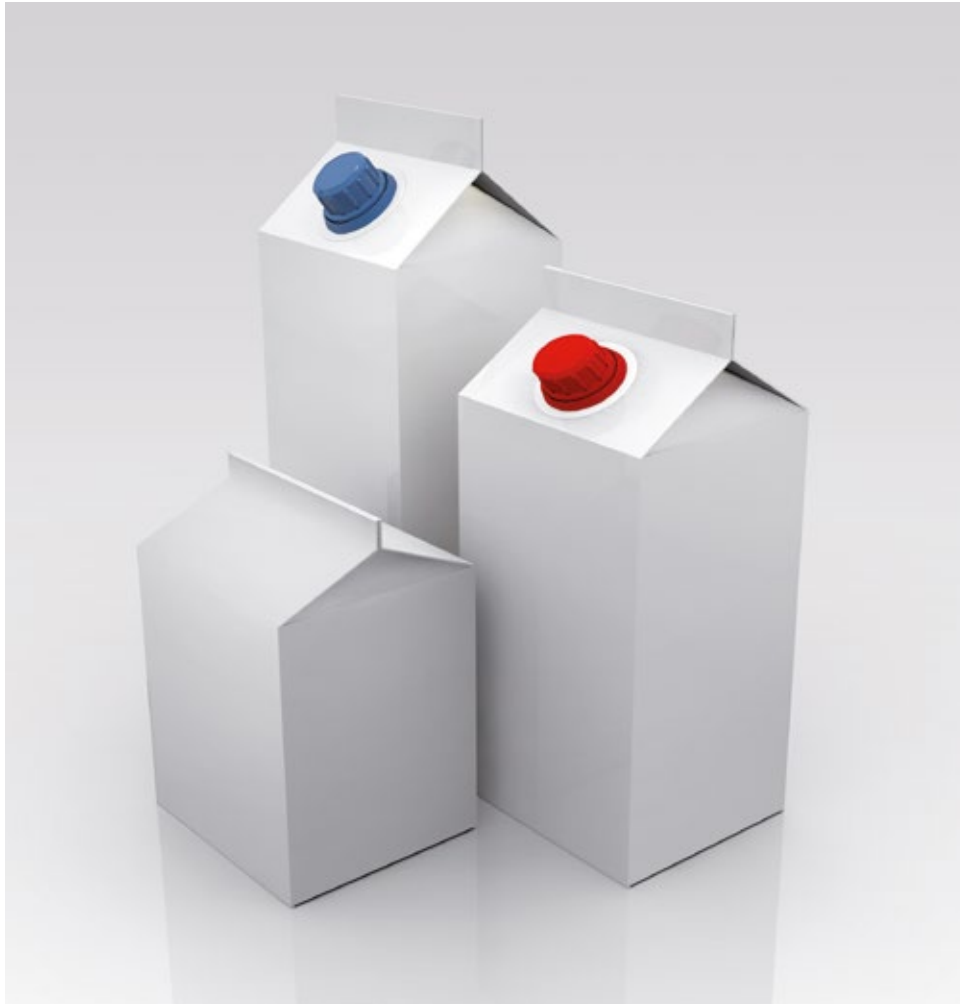
There is nothing better than a practical, very easy way to package and dispense consumer products. Aluminium foil and tubes offer a high degree of comfort. Innovative solutions are continually being developed for use at home or on the go. Ready meals can simply be left in the tray when heating them up in the microwave. Many forms of packaging, like stand-up pouches, are resealable. Complex closure systems that need special tools to open them are a thing of the past: in a trice one can open a notched or pre-perforated pouch, remove the lid from a yoghurt pot or a can of vegetables or even unscrew the closure on a bottle. Aluminium tubes are also available with different screw or snap closures. It is a pleasure to use an aluminium tube to dispense contents simply, precisely and economically. And there are added benefits: the material does not spring back so neither air nor contents are drawn back into the tube. Thus, an aluminium tube can be emptied completely without difficulty.

“Use aluminium and every barbecue’s like playing in front of a home crowd!”

HOW YOU CAN KEEP GOING WITHOUT GOING OFF

...is told by childminder Sigrid Hülskamp.





Aluminium is the perfect partner for other packaging materials. It provides composite carton packaging with an impenetrable barrier that also successfully keeps oxygen away from the contents.

“It’s impressive how long everything can be stored in aluminium. Foodstuffs can be kept in aluminium even without any additional preservatives.”

GDA is a member of the „Save Food“ initiative.



Brisk activity fills the house. The sun shines amiably through the windows, which are painted in a potpourri of colours. A young man wearing trainers is bringing in a box containing cartons of food. “Young man, you don’t have to carry them all at once,” says childminder Sigrid Hülkamp, a wiry old lady with a silver-grey page-boy cut, sounding a note of caution in a well-meaning manner. “I know, but the boxes don’t weigh anything,” he replies casually. A friendly grin on his pierced lips. Full of verve, he starts to stack the assortment of different cartons on the pantry shelves. They are filled with food and drink and thanks to aluminium they will stay fresh. It is the student’s turn to do the shopping for the multi-generation household today. It means that he won’t have to worry about doing the cooking later. Someone else will cook for him as well. The pensioner hands the 22-year-old the last of the cartons. “We like to make light work of things in this

house,” she explains. “We complement each other; each of us helps the others. Not only does this reduce the daily grind enormously: it is also enriching. It is pure quality of life.”

A small girl with blond curls is portioning out the dessert. It’s easy. The apple purée flows out of the food carton and into the dessert dishes almost by itself. Then she eagerly tears open the carton completely so that she can spoon out the rest and in doing so discovers the shiny silvery protective aluminium layer. At the table, a little boy with a cute-looking gap between his front teeth is pouring juice and milk from child-friendly drink cartons into colourful plastic beakers. A red tabby tomcat is purring at his feet. Then it happens. The boy stumbles. Milk runs all over the table and drips onto the floor. The adopted grandma is completely unruffled and wipes the tabletop clean, while the cat licks up its fresh treat from the floor.

“Yes, we make use of everything here,” she laughs heartily. “Even our cat knows that.”

Although she is in the thick of things, the pensioner exudes an unflappable calmness. Laughter lines dance around her wide-awake eyes. She formed this multi-generation household with a small number of like-minded people many years ago. Now there are over 40 of them living here in informal symbiosis. Families with children, young adults who are training or studying and pensioners occupy the 18 units in the restored factory building. The energetic woman needed a great deal of staying power for this project. Where does she get her staying power? She drinks some milk. “One can keep going for longer when one is doing something one enjoys,” she says confidently. Now she’s got a white moustache on her top lip, which delights the children. “Gran, you’ve been drinking out of my beaker,” complains little Marie. “Perhaps I have but there isn’t a name on it, is there?” asks the retired teacher. She takes the top off the rigid aluminium tube of a marker. She neatly marks the pink beaker. Aluminium’s barrier properties have again provided optimal protection and prevented the marker from drying out. Although it has not been used for quite some time the ink is still as moist as on the first day.

The little ‘milkman’ drops the empty laminated paperboards into a yellow bin. “The children know how to sort the rubbish,” explains the pensioner. “We found out together that food cartons contain valuable materials. One of the children wanted to throw a carton into the paper recycling bin. So we cut it open and discovered the secret of what keeps the contents fresh for so long: a thin layer of aluminium. Since then, we have known why the packaging remains so airtight and fresh and how to dispose of it.”

“It’s impressive how long everything can be stored in aluminium. With aluminium packaging, one can confidently forego the use of additional preservatives. That’s something that doesn’t only please us human beings.” She takes a flat aluminium tray with cat food out of a cupboard. Barely has she removed the foil lid from the tray than the perky tomcat sets about devouring his juicy treat. The bipeds are now also sitting up to the table in front of their plates. The carefree meal begins with a cheery nursery rhyme. The small red tiger meows contentedly.

“Aluminium is also strong in a composite – just like we are as a group!”

Rigid aluminium tubes protect moist contents from drying out.



Easy stacking: Thanks to aluminium packaging, storage and stock-keeping become child’s play.

ALUMINIUM FACTS

Team player aluminium foil: the guarantor for a stable partnership

Aluminium is a popular constituent of composite packaging thanks to its excellent barrier properties. A wafer-thin layer of aluminium foil in combination with other packaging materials forms an effective alliance to provide product protection and preserve taste and aroma. Scientific investigations have shown that a 6-micron (six thousandths of a millimetre) layer of aluminium foil provides a reliable barrier against light, humidity and oxygen. It allows drinks to be stored for several months without refrigeration. In a process initially developed for use with UHT milk, foodstuffs can be sterilised directly inside the composite packaging by heating them up in a pressure vessel. The cartons are unbreakable, light, stackable, space-saving and efficient when it comes to volume utilisation – attractive properties for a form of packaging whose use is not restricted to the milk-processing industry. Other foodstuffs, like fruit and vegetables, desserts, soups and ready meals or even pet food, have also long since been packaged in aluminium-laminated paperboard. Manufacturers, the trade and customers appreciate the excellent properties of composite packaging, which is characterised by an extremely favourable product to packaging ratio.

“The secret of staying fresh: the thin aluminium layer.”

HOW YOU MAINTAIN HIGH STANDARDS OF HYGIENE

...is detailed by Nurse Melanie Schubrink.





“For me, being able to press the tablets straight from the pack into a tablet dispenser is clean and easy.”

The small girl lying on the matt-blue therapy table is giggling again. She has just been crying. Melanie Schubrink, the friendly nurse, was able to gently comfort the four-year-old and is now distracting her with finger games. The toddler has scalded her leg. Now she is receiving expert treatment in the hospital out-patient department. The young woman in the blue uniform is pressing the rest of the white ointment out of the rolled-up aluminium tube onto the affected area of skin. Precisely. Now she is opening a flat aluminium pouch using the tear notch. The dressing slides straight out of the silvery pack onto the wound. Free from germs. “You’re brave,” she says praising the blonde girl with the glitzy hair slide.

In the staff lounge, the dedicated nurse, who is currently implementing an innovative project in the large hospital, explains how important it is to rigorously observe each and every hygiene measure. “Hands are breeding grounds for germs and hospital germs are very aggressive,” she explains. “The highest possible degree of cleanliness is unbelievably important for the health of our patients. The intelligent use of extremely hygienic materials like aluminium is a great help.”

“The manufacturer sterilises burn ointment, for example, by heating the tube several times, she says. She goes on to explain that aluminium’s excellent barrier function means there are no undesirable external influences and it prevents important constituents of the formulation from escaping. Pharmaceutical products are guaranteed to stay as clean and effective as the day they were filled. “It’s also great that nothing gets sucked back into the tube after squeezing it,” she enthuses confidently. “This prevents any undesirable ingress of oxygen or micro-organisms.”

On the table, her colleague is preparing medication. With a concentrated look on her face, she picks up the tiny tablets one by one with tweezers from a small rigid aluminium tube. Then she lets them fall into the compartments of a tablet dispenser. Tablet for tablet.

“In the interests of hygiene we avoid touching the medication with our hands wherever possible,” the nurse explains. “Sometimes this seems inconvenient. We’re grateful here for clever inventions,” she says and with a wink hands her colleague a blister pack from the medicine cupboard on the wall. “Simply press the tablets straight from the pack into a tablet dispenser. That’s clean and easy,” laughs the dynamic 26-year-old, and as she does her auburn ponytail bobs up and down.

Over coffee she talks about her idea. How she was soundly shot down by the management of the clinic at first. How she found unexpected allies who prepared a cost-benefit analysis for her. Red-cheeked, she tells of her exciting presentation which finally persuaded the management that her plan was viable.

What was it that bothered this dedicated young woman? “We nursing staff spend hours every day preparing medication. I asked myself if there wasn’t a less time-consuming and more reliable way of doing it. And it really is possible. With a software-controlled automated blister dispenser. This invention is fantastic,” she says excitedly. “The doctor enters the prescribed medication in the computer. The data are transmitted to the automated blister dispenser. The medication for each patient is then packaged centrally. The whole medication-supply process is efficient and economic,” she says, explaining the project. “This reduces the amount of work in the ward tremendously. The whole process is extremely hygienic. It avoids errors. It couldn’t be any more convenient.”

What does she regard as being the greatest added benefit of her idea? “That’s obvious,” she says. “More time for the patients!” She stands up and takes a pack of chewing gum out of her shoulder bag. Blister-packed. Laughing impishly she points the pack towards me and presses a piece of chewing gum through the foil into her hand. “Did you hear that?” she asks. “I love that sound. I call it cracking the packing.”

ALUMINIUM FACTS

Original and counterfeit: with aluminium you don’t gamble with risk

Having confidence in the reliability of a pharmaceutical product is certainly as important as having confidence in the doctor who prescribed it. Does the pack really contain what it says it does? Medication counterfeiting is a growing problem. A counterfeit pharma product might contain no active ingredients, or insufficient or excessive amounts of them, or even completely different ones to the original preparation. This explains why packs of medication also have to offer reliable protection against counterfeiting. Aluminium packaging offers the ideal solution. And modern technology supplies the special effects. Some of the aluminium foil on blister packs already carries elaborate security features like those used on banknotes. A technology that is regarded as being particularly invulnerable has recently been introduced: the manufacturer’s brand identity is embossed as a micro-holograph directly in the aluminium foil. It is impossible to rub it off. This means that one can say with certainty whether a pack is an original. And with aluminium tubes, an intact push-through membrane is evidence that a product cannot have been tampered with.

“It’s good when clever inventions complement one another and lead to ingenious inventions. And the things that are ingenious are those that really help us human beings.”



The purity of aluminium foil contributes to health and hygiene.

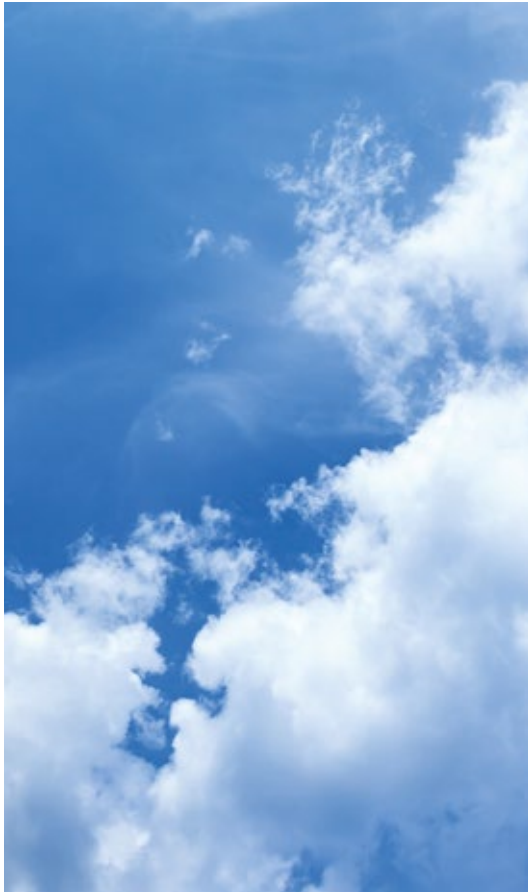
“The highest possible degree of cleanliness is unbelievably important for the health of our patients. The intelligent use of extremely hygienic materials is a great help. When packed in aluminium, pharmaceutical products are guaranteed to stay as clean and effective as the day they were filled.”

The climate outside has no effect on the sensitive active ingredients of the contents inside an aluminium container.



HOW YOU DISCOVER WHAT REINCARNATION MEANS

.....
...is revealed by yoga master Reza Singh.



At the end of a product's life cycle, the aluminium is returned to the material loop where it is again processed into new high-value products; in a resource-efficient and eco-friendly manner.

“I find it simply fascinating that car rims can be produced from aluminium trays, window handles from aluminium beverage cans and engine blocks from aluminium tubes – and without any loss in quality.”

From the moment of conception, all entities are subject to a process of continuous change.” Visitors are greeted by this quote from the Dalai Lama when they enter the reception area of a yoga school. The sweeping letters of the saying in warm, discretely interwoven shades of red adorn the wall behind a wooden bar counter. Here, Reza Singh, the guest teacher from India, and the owner of the institute are fortifying themselves with a tasty smoothie. The furniture is very original, comprising individually designed items of furniture, some made from construction timber. It appeals to the Indian yoga master.

“Change and sustainability are not only important principles for an individual experience at a yoga school,” says the guest from India. “In Germany I am learning more and more about recycling.” He removes a small, burnt-out tea-light from the colourful mosaic

glass candle holder standing in front of him. “I find it simply fascinating that car rims can be produced from this small aluminium container without any loss in quality or that window handles can be made from aluminium beverage cans or engine blocks from aluminium tubes. And sometimes used aluminium packaging is turned back into new packaging,” he adds. The owner gets a new tea-light from the cupboard behind the counter, lights it and lets it drop into the pretty glass candle holder, which now glows softly. The yogi gazes into the flame. “How much energy is needed to recycle aluminium?” he asks.

The yoga instructress smiles. “During aluminium recycling, 95 per cent of the energy that was needed to extract the aluminium in the first place is saved”, explains the well-informed lady. She talks about the foundation of her studio. “Health, the environment and acting responsibly are important for me. So

“With aluminium it is more a case of the material being used than consumed. This is evident from the fact that some 75 per cent of the aluminium produced in the last hundred years is still in use today.”



By choosing aluminium as the packaging material people are opting for sustainability.

from the very start I took experts in sustainability and recycling on board and they advised me on equipment and fittings and on the use of consumable materials,” she tells her Indian guest. “With aluminium it is more a case of the material being used than consumed,” she says. “This is evident from the fact that some 75 per cent of the aluminium produced in the last hundred years is still in use today.”

The studio owner disposes of the aluminium coffee capsule that she has just used, putting it in a yellow sack. “The industry and we consumers must ensure that aluminium is returned to the material loop. This functions very well in Europe, especially in Germany.”

The next yoga session starts. The exercise room in the annex of the old villa is glazed on three sides. In this room it is as bright as if one were standing in the middle of the park-like garden.

The yoga master closes the floor-length curtains to avoid disturbing the yoga pupils’ concentration. Pleasant light filters through the orange material. Like the rays of the sun, mustard-yellow yoga mats encircle the burning candle in the centre of the room. Pranayama. The art of breathing. There is controlled breathing in keeping with the sinuous movements of those exercising und this supplies the stretched muscles with oxygen. “Try to be light,” he says. In doing so he thinks about aluminium. It is strong but at the same time flexible and light. Just like the body of a yogi should feel. The yoga instructor gives instructions to change poses by announcing their names: the cobra, the eagle, the tree, the mountain or the half moon. A continuous metamorphosis. His thoughts turn again to the conversation he has just had about aluminium recycling as he says, “Everything is continuously changing. A loop. Hold your breath and keep the energy flowing.”

ALUMINIUM FACTS

Aluminium is a valuable material resource

Aluminium completely retains its abundance of attractive properties even after it has been used in a product. The energy used to produce the aluminium remains stored in aluminium packaging, which is why packaging can be described as an energy bank. With suitable processing, the metal can be recycled time and again without any loss in quality whatsoever. Because the metal retains its high intrinsic value, at the end of the utilisation phase it is also worthwhile economically to collect, process and melt the aluminium before using it as feedstock for a new life cycle. Aluminium accrues as a secondary raw material during its processing or at the end of its product life, and there is a high worldwide demand for it. The recycling rate of the light metal is very high, particularly in Germany. In the packaging sector it now amounts to 89 per cent, and it is as high as 96 per cent for beverage cans with a deposit.



“The industry and we consumers must ensure that aluminium is returned to the material loop. This functions very well in Europe, especially in Germany.”



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