

## Novelis Foil Europe Customer Newsletter

October 2009

### Dear Customer,

The last 12 months has seen a unique economic situation which has created a complex business climate making life difficult for many companies. Against this backdrop, Novelis remains committed to being a competitive, innovative and sustainable supplier for your business now and into the future.

In this latest edition of our Customer Newsletter you can read about the measures taken by Novelis to ride out the economic crisis. The restructuring of our foil operations in Rugles and the re-alignment of our foilstock supply chain have been a necessary part of our strategy. We have also introduced new metal hedging systems and procedures in order to manage the risk within our company and offer you, our customers, the security of hedging in the knowledge that we are managing our contracts responsibly.

We also take a look back at the metal price and the effect the economic climate has had on the LME and we have taken the opportunity to report back to you on the results of our 2009 Customer Satisfaction Survey.

Despite the economic challenges, we are fully aware of the need to look forward and our Innovation Centre in Luxembourg remains a key element in meeting customer needs now and in the future. Further on you can read about our R&D assets.

EHS (1) has and always will be a priority for Novelis. The articles about recycling and resource efficiency demonstrate our commitment to the environment. We also explain the good hygiene practises implemented in all our plants to comply with the new GMP (2) regulations and give you the assurances you need as a customer.

Finally, to bring you up to date with what is going in our business, we introduce to you the new customer-aligned organisation for Novelis Europe currently being implemented.

We hope you will find this interesting reading and wish for a smoother economic climate as we approach 2010.

With our Best Regards,



**François Coëffic**  
President, Foil & Technical Products



**Willem Loué**  
Director, Foil Sales and Marketing

- (1) Environment, Health & Safety
- (2) Good Manufacturing Practices

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# Novelis Foil Europe Rugles

October 2009

## Rugles: restructuring for enhanced efficiency

Since the official announcement at the end of last year, the Novelis foil site at Rugles, France, has been successfully implementing its restructuring programme, focusing the plant on a streamlined product range, using only the most modern and efficient equipment on the site: the 2 metre wide rolling line and a simplified 1.5 metre wide line.

The goal of this optimisation is to increase the production efficiency, to help the business through the current economic downturn and make it competitive for the long-term: meet the customers' needs and be profitable.



Increasing efficiency also means more robust quality and service and Novelis Rugles remains committed to striving to offer the best to its customers.

The Rugles plant is equipped with 2 continuous casters supplying a significant part of the foilstock used at the site, thus allowing a shortened supply chain with increased reliability.

The combination of advanced equipment and a team that blends years of rolling experience and a strong focus on Continuous Improvement (Kaizen, 5" S", Lean Six Sigma...) allows Rugles' product range to meet the technical requirements of many applications.

The product on offer comprise a range of aluminium foil in widths up to 2000mm and gauges from 6.35 micron up to 200 micron in converter foil, container strip, household foil and automotive finstock.



Evidence of the expertise and capability of Rugles can be found in its impressive package of management certifications: ISO 9001, ISO 14001, OHSAS 18001 and also ISO/TS 16949 (quality management system for automotive applications)

Rugles is located in the heart of Normandy, 150Km West from Paris, halfway to Mont Saint-Michel. The plant has been involved in the foil rolling business for more than 50 years and is the sole foil plant today in France.

# Novelis Foil Europe Foilstock Supply Chain

October 2009

## Re-alignment of Foilstock Supply Chain

The closing of the aluminium sheet mill in Rogerstone, UK in April this year has been one of the actions taken by Novelis world-wide to re-align production and costs with product demand. Foil operations in Europe have been streamlined, focusing on foilstock supply from Norf, the biggest foilstock producer in Europe, and continuous casting units in Dudelange and Rugles. Thus allowing Novelis to benefit from two contrasting sourcing of foilstock which means we can meet the varied requirements of our customer portfolio and ensure a guaranteed supply to our rolling mills.

Since the closure of Rogerstone and the resulting ramp down of foilstock supply, Novelis has remained committed to maintaining high standards of customer service. Throughout the transition period, Rogerstone continued to fulfil its existing orders allowing Novelis to meet customer demands during the transition to the new supply chain system within Europe.

Rogerstone had been a workhorse of the Novelis group of rolling mills in Europe, supplying over 16 million tonnes of aluminium during its 70 years of production. In the early days it supplied aluminium sheet & extrusions used in wing spans for the spitfire, and throughout the sixties, its products were used in cruise ships such as the luxurious Queen Elizabeth 11. However, with mounting financial losses and in need of investment, the plant based in South Wales became vulnerable to the economic downturn and regrettably on March 4th 2009 Novelis announced its closure.

Within the new set-up Novelis European Foil maintains a high level of flexibility within its processes and is committed to meeting customer needs competitively and effectively. With a strong focus on Continuous Improvement using Lean Six Sigma methods, Novelis continues to focus on improving lead-times and developing versatile alloys which respond to the demanding requirements of today's global market.





# Novelis Foil Europe Metal Hedging

October 2009

## Hedging: Novelis takes responsible measures to manage global risk

As the world's leading manufacturer of aluminium rolled products, Novelis also operates as a major trading company. Novelis buys and re-sells more aluminium than any other company in the world.

When a Novelis plant enters a contract to deliver rolled aluminium to a customer, we need to source supplies of aluminium raw material. The price we pay for ingots and upon which we base our selling prices to customers are set by the market — the London Metal Exchange, or LME. Using the LME, Novelis is able to fix a forward selling price, while metal is being processed, this is called hedging.

In 2008, Novelis introduced a new LME trading function to provide services to Novelis plants around the world, using an advanced software package. Using these means, Novelis is able to hedge metal, using real-time quotations and hedging facilities.

In conjunction with these services, Novelis has also introduced a new supplier/customer forward price contract to cover quantities hedged for a fixed period.

This is a “take or pay” agreement, meaning that the customer enters into an agreement with the supplier to take an agreed volume at an agreed time, at an agreed price. If the customer requests a change of the contractual delivery dates and Novelis agrees to

change delivery of any month's contractual tonnage to subsequent or earlier months, then the prevailing contango/backwardation cost or gains from the LME for such postponement or early delivery will be for customer's account. The same applies for all other costs incurred by Novelis related to modifying or cancelling of the customer's originally contracted quantities and contractual month of delivery against this fixed forward price agreement with the customer.

These necessary measures allow Novelis to manage its global risk in an efficient and responsible manner, which means we continue to be able to provide trading services to our customer base, despite an increasingly difficult financial environment.



# Novelis Foil Europe Metal Markets

October 2009

## A turbulent time on the metal markets

The last 18 months has been a curious time for the global economy. This has been reflected by some unexpected movements on the LME, as prices have been vulnerable to the highs and lows of economic and financial news, whilst at the same time susceptible to the usual trends in supply and demand. In Q1, 2008, the aluminium cash price rose above the 3000 US\$ limit and remained around that threshold until August 2008. From then on, with the markets under heavy and sustained pressure, we saw prices tumble from the end of the summer through to

the Christmas period when they reached a plateau at around 1500 US\$. In 2009, the trend has been more stable, with lows in February of around 1270 US\$ to highs in August just above 2000 US\$, despite increasing LME stocks. Nevertheless, throughout this year, there have been some sharp fluctuations with prices moving in both directions by up to 200 US\$ in a matter of days, sometimes affected by negative economic indicators and at other times pumped up by funds and speculators.



*Aluminium LME Cash price in US\$/t - from [www.lme.co.uk](http://www.lme.co.uk)*



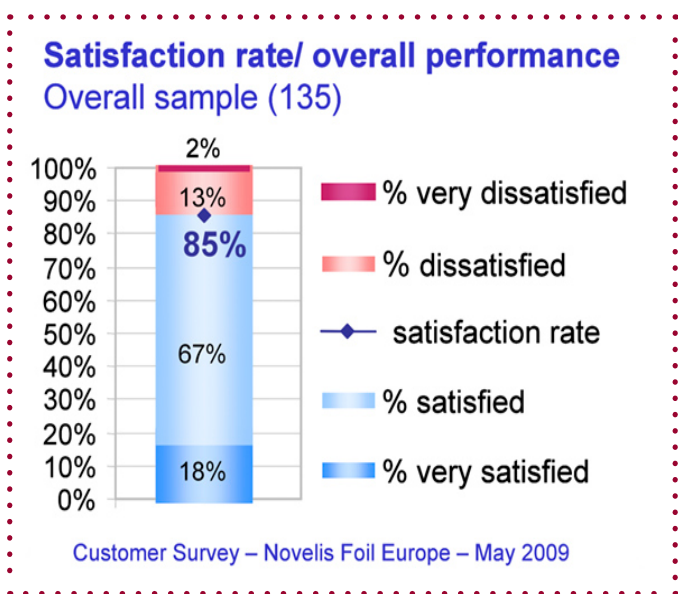
# Novelis Foil Europe 2009 Customer Survey

October 2009

## 2009 Customer Survey: 85% of satisfied customers

The latest edition of our yearly customer satisfaction survey was carried out in May 2009.

135 amongst you responded to our request, and for a great majority, the level of satisfaction was high, quite similar to the two previous surveys in 2008 and 2007.



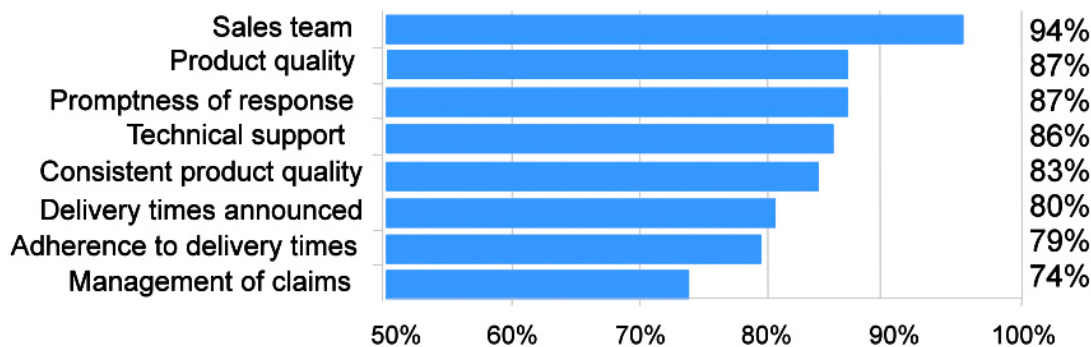
The following is a summary of the results reported to us by Ducker Research Europe, the specialist company we appointed to conduct the survey:

85% of respondents reported they were satisfied with the Overall Performance of Novelis and the same percentage assessed the overall performance of Novelis as better or the same as the average achieved by other aluminium foil suppliers.

All criteria have confirmed a very positive appraisal except for Claim Management for which the satisfaction rate (74%) has significantly decreased.

- Service items obtained some of the highest satisfaction rates: Availability of the Service Team (94%) and Promptness of Response (87%).
- Technical Support was also well appraised with a 86% satisfaction rate.
- The quality of our products was also considered satisfactory by a large majority of respondents: Level of Quality scoring at 87% and Consistency of Quality at 84%
- Although the percentages are at a slightly lower level, the delivery times were also rated as good: Announced Delivery Times achieving 80% and Adherence to Delivery Times 79%.

### Satisfaction rate / criteria overall sample (135)



Customer Survey – Novelis Foil Europe – May 2009

Slight disparities according to market sector:

- The great majority of the respondents in the technical product sectors (cable, pipes, heat exchangers...) were satisfied with the Overall Performance of Novelis (95%). The only item with a lower satisfaction rate was the Management of Claims.
- Respondents in the flexible packaging sector were a little less enthusiastic: Overall Performance of Novelis was scored at 72%, which is nevertheless a significant increase since 2007. The expressed discontent mainly applies to Management of claims and Delivery Times.
- In the semi-rigid container business, Delivery Times was often raised as an issue, although the 81% Overall Satisfaction rate shows a significant improvement compared to the previous years.

Your assessment on a regular basis is a highly valuable complement to the day-to-day feedback provided through your on-going dialogue with the Novelis sales and customer service team. This input helps us to identify areas where improvement is needed: All the results of this periodical survey are carefully analysed and we take each of your recommendations into consideration for corrective actions.

For example, at the end of last year, further to the results of the 2008 survey, we have implemented in all our converter foil sites a targeted action plan aimed

at ensuring a higher and more consistent level of quality. The programme focused on the quality control process and an enhanced technical support in order to be more attentive to the needs of the customers. In early 2009, the improvement was visible. This was confirmed by the results of the 2009 survey which showed an increase of between 15% and 20% for the satisfaction rate relating to product quality by the respondents from the flexible packaging sector.

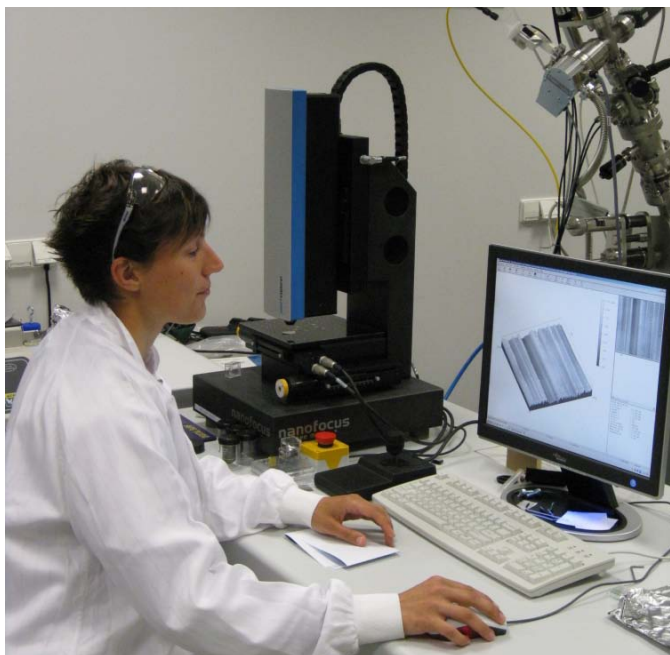
For more information about improvements and actions concerning you, don't hesitate to ask your dedicated sales contact at Novelis. We will repeat the process in the next years and thank you in advance for your involvement.



## Customer-oriented innovation

In today's difficult and ever more competitive market, companies investing in innovation stand a better chance of making the difference for their customers.

Since the creation of the Foil Innovation Centre in Luxembourg a couple of years ago, our innovation team has applied their specialist skills to support development on new products and applications for aluminium foil. Both in packaging and technical foil applications, Novelis' Foil Innovation Centre continues to focus on improving current products and processes as well as the development of highly innovative products and functions.



The Foil Innovation Centre and the Novelis sales force have cooperated closely with customers to focus on their needs and to bring more value to them. Our customer-oriented innovation projects range from exploratory research, e.g. on corrosion protection or increased adhesion, to applied development on improved characteristics, for example new recycling-friendly alloys with good forming properties. The development work is rounded off by extensive analytical support given to customers to solve their issues or to help them improving their aluminium foil specifications.

Novelis' Foil Innovation Centre covers a wide range of applications, from interior decoration to packaging or electronics. For each project, we start from a comprehensive understanding of the market needs and the end-product.



Our objective is to offer you the right product, enhancing your productivity in your industrial operations and/or bringing you a real advantage through product differentiation.

To achieve this, a core team of scientists and technologists is fully dedicated to the research of foil. They boast a range of competences in the fields of metallurgy, surface science, rolling and tribology, corrosion, adhesion and coatings, process optimisation and thin films deposition. Novelis' Foil Innovation Centre is co-located with the National Research Centre of Luxemburg giving Novelis scientists access to a wide range of highly sophisticated analytical facilities. A short description of the equipment available is accessible on our website [www.novelisfoileurope.com](http://www.novelisfoileurope.com).

By innovating together, our aim is to support you to design the right products for a bright future.



# Novelis Foil Europe Aluminium Recycling

October 2009

## Why Recycling Rate is more meaningful than Recycled Content for aluminium products

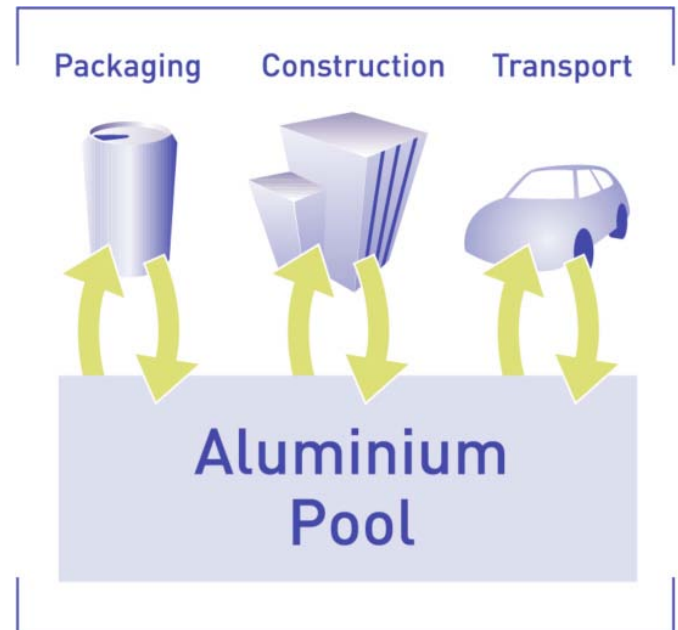
### Aluminium Recycled Content is not a relevant environmental indicator

The aluminium recycled content is not a meaningful indicator to assess the environmental performance of a given aluminium product, for 3 main reasons.

- First, highlighting the recycled content is appropriate only for material such as paper or plastic where there is little economic benefit from recycling compared to primary production. In such cases, the environmental significance of targeting a percentage of recycled content is to stimulate a market for recycled materials that would otherwise been limited, uneconomic or immature. For aluminium material, the situation is completely different as aluminium recycling brings huge energy and cost saving:

*Recycling aluminium saves 95% of the energy in comparison with the production of primary metal*

- Secondly, there are no environmental benefits to direct recycled aluminium towards targeted market applications while it is already more efficiently recycled into other demanding markets. On the contrary, this may create market distortions and environmental inefficiencies. If someone asks for an increased recycled aluminium content of a specific product in order to subjectively enhance its ecological appeal, it may stimulate the market to direct recycled feedstock towards this product and away from products where recycled aluminium is ecologically and economically better applied. For example, this may lead to a lower efficiency of the aluminium material flow with longer distance transportation and the resulting adverse environmental impact.
- Finally, with the continued growth of the aluminium market and the fact that most aluminium products have a fairly long lifetime (buildings, airplanes, automotive, etc.) it is not possible to achieve high recycled content in all new aluminium products, simply because the available quantity of end-of-life aluminium falls considerably short of total demand. More than 70% of all aluminium ever produced is still in use today.



### The end-of life recycling approach is more appropriate

The end-of life recycling approach, the other option to credit the recycling benefits in the context of the life cycle assessment of products, is considered by the aluminium industry as environmentally much more significant and appropriate to aluminium.

In this approach, the environmental benefits of recycling are attributed to the product that provides recycled material, i.e. the more you recycle material from your product at its end-of-life, the more your product is environment friendly.

Today, the average end-of-life recycling rate for aluminium packaging (packaging with aluminium dominant material) in Europe is above 50 % (source: EAA)

Novelis is committed in continuously improving the environmental performances of its products and applications, in particular end-of-life recycling rate.

## Aluminium: 100% recyclable

Aluminium is perfectly and fully recyclable over and over without any loss of quality, meaning that the abilities of recycled aluminium are exactly the same as for primary metal (no further food contact restriction for example). Producing aluminium from recycling requires only 5% of the energy investment needed to produce primary metal.



## Novelis is leading the way with programmes to recycle aluminium packaging

As global leader in aluminium rolling and a key supplier of sheet and foil for packaging applications, Novelis is leading the way with programmes to recycle consumer scrap. Novelis is the world's largest aluminium can recycler, with some 36 billion used beverage cans recycled annually by the company; Novelis operates Europe's largest dedicated used aluminium can recycling plant in Warrington, UK.

Novelis in Europe actively supports the sustainability actions of the European associations. In particular

regarding recycling, the EAA (European Aluminium Association) and its member companies (including Novelis) have established together with their partners at the national level a number of aluminium packaging recycling initiatives throughout Europe. Together we develop specific activities aimed at improving the end-of-life recycling rate and raising the awareness among the public at large that collection and recycling of aluminium packaging makes a lot of sense.



## Foil packs help to save resources

In the context of packaging and sustainability, there are two assumptions which would need to be demystified.

First, the interaction between packaging and the environment is not necessarily adverse. Second, environmental questions should not be restricted to just the packaging waste disposal phase. Actually, when efficiently and appropriately designed, packaging plays a very beneficial role as it helps to minimise the use of resources all along the whole life cycle of both the packaging and the product.

This applies perfectly to aluminium foil packs and in particular flexible packs. Let's see how.

### Saving packaging material

The amount of aluminium used in a foil based package is small, although its protective role is essential. In a standard 1L aseptic beverage carton, only 1.5 g of aluminium (6.3 micron foil) is enough to ensure the perfect protection of milk or juices against light and gas for months. Moreover, continuous foil down-gauging have been achieved thanks to permanent development in the industry. In the past 10 years in most applications, there has been a reduction of 10% to 20% in foil thickness and as a consequence there has been a reduction of 10% to 20% in the amount of aluminium used in a pack.

Saving packaging material resources upstream is essential to prevent from relying only on downstream solutions regarding waste disposal.

### Saving energy along the product life cycle

Aluminium foil packs combine light weight and high preservation properties. This allows high efficiency in transportation, storage and distribution, and therefore helps to save energy and resources across the value chain.

Think about the optimised transportation of foil flexible packaging materials to the food fillers in rolls e.g. for pouches or beverage carton, as compared to heavy and voluminous empty glass bottles for example. And what about the optimised transportation of the filled product achieving a very high volume ratio product/packaging?

### Preventing the spoilage of valuable food

Because they are designed to provide effective protection in an appropriate format, aluminium foil packs help to prevent spoilage and wastage of food, the production of which requires in general much more resources than the production of the packaging itself.

Several life cycle assessments have been conducted by an independent institute on a series of food products packed in foil packaging (1). The results clearly show that the most relevant

factor in the overall environmental impact of the product along its life cycle is by far the production of the food itself. The share of the packaging production is usually low, coming even after life cycle phases like distribution, storing and preparation at home. This is particularly true in the case of butter wrapped in a foil laminate (see graph below). Here, for example, the share of the packaging production in the global warming potential of the product along its life cycle is almost negligible: only 0.3% for a standard 250g butter slab and not more than 0.8% for a single serve portion of 15g.

This is the clear demonstration that valuable food like butter, having required an important amount of resources to be produced, deserves a packaging capable to minimise any risk of product spoilage (due to non-effective protection) or wastage (due to non-appropriate format or convenience). And the foil based wrap perfectly meets this obligation, both for the family size slab and the single format.

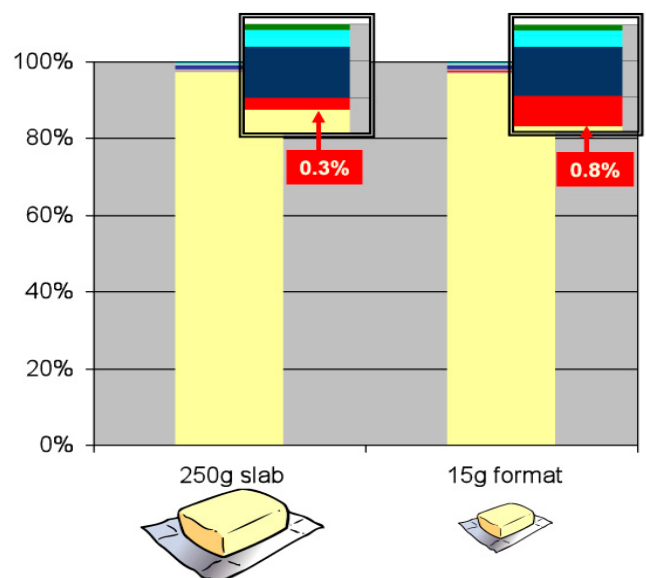
(1) Summaries of these studies covering coffee, butter, chocolate and yoghurt are available at [www.alufoil-sustainability.org](http://www.alufoil-sustainability.org)

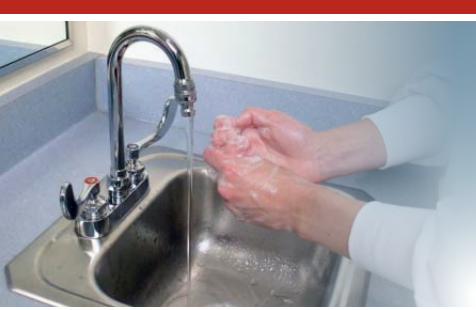
### Life Cycle Analysis of a butter slab:

Global warming potential in CO<sub>2</sub> equivalents by lifecycle phases.

Source ESU (1)

- storage at home
- transportation to household
- distribution and selling
- retail packaging
- butter production





# Novelis Foil Europe Hygiene & GMP

October 2009

## Hygiene: Good Manufacturing Practices

As a manufacturer of packaging materials, Novelis has the responsibility to ensure that its products do not endanger the consumers' health.

The European Commission regulation 2023/2006 that entered into force in August 2008 lays down the rules on good manufacturing practice (GMP) for the materials intended to come into contact with food. This means those aspects of quality management which ensure that materials are consistently produced and controlled and do not cause any risk for human health or unacceptable change in the composition of the food, under their normal or foreseeable conditions of use. GMP's apply to all stages of manufacture and cover many aspects including quality assurance, quality control and documentation.

We can give you our assurances that Novelis foil is fully compliant for packaging applications intended to come into contact with food, meeting all applicable regulations, including the above mentioned EC Regulation 2023/2006 on GMP.

The quality management system we have in place plays a large part in the fulfilment of the required GMP's: all our foil sites (1) are ISO 9001 certified

In order to manage the food safety risk associated with our products, we have also conducted a hazard and risk assessment in our five plants (1) manufacturing plain foil for packaging applications, using the HACCP (2) method.



These measures combine to ensure that Novelis provides a safe and hygienic product which can be used with confidence in all types of packaging.

(1) Bridgnorth (GB), Dudelange (L), Luedenscheid (D), Ohle CF (D), Rugles (F)

(2) Hazard Analysis Critical Control Point



# Novelis Foil Europe New Organisation

October 2009

## New customer-aligned organisation for Novelis Europe

In October 2009, Novelis Europe move from the current business unit structure to one based on customer-aligned value streams supported by more centralised functional teams.

There will be six value streams in Novelis Europe: Can, Litho & Foilstock; Automotive & Specialities, Painted Products, Packaging & Converted Products, and Foil.

François Coëffic will remain at the Head of the Foil value stream including the foil rolling operations in Bridgnorth, Dudelange, Lüdenscheid, Ohle and Rugles. François will also lead the sales and marketing team, as Willem Loué,

currently Sales and Marketing Director Foil, is named Vice President Business Development and Strategy, Novelis Europe.

The European Foil sales team itself remains unchanged and there will be no change in our day to day dealings or relationships with our customers.

The new streamlined organisation is being implemented to better utilise our scale and capabilities with an integrated approach which will ultimately benefit you, our valued customers.



For more information about Novelis Foil Europe, please visit [www.novelisfoileurope.com](http://www.novelisfoileurope.com)

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