

## Aluminium coating companies and the limits of their agility



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**WHITE PAPER**

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The Aluminium Working Group was established in 2008 in response to signals from the market and the growing need for a strong network for aluminium coating companies. Certain environmental and technical challenges recur regularly and are shared by many companies across the sector.

The working group provides a platform where aluminium coating companies can exchange knowledge and experience on sustainability-related topics, including pretreatment, the use of recycled aluminium, current trends in powder coating, colour variations and the improvement of curing oven energy efficiency.

By addressing these topics collectively, companies have the opportunity to explore solutions, learn from one another and tackle the technological and sustainability challenges facing the sector together. For this reason, several aluminium coating companies joined forces within this technical working group.



● The following leading companies shared their expertise and many years of experience in the aluminium coating industry:



- Ludo Appels (CoatR)
- Bruno De Wit (Harol)
- Hilde Discart (AG Coating)
- Mieke Vander Plaetse (Hydro)
- Griet Vandecasteele (Alumeco)

On 9 March, the Belgian financial newspaper De Tijd published an article on the adaptability of the Belgian economy. One statement in particular caught our attention:

*"The success of an economy is increasingly determined by its adaptability and flexibility. ... If we want to safeguard or further strengthen our prosperity, our economy must become significantly more agile and flexible. If we fail to do so, we risk losing more and more ground."*

But does this accurately reflect the reality of our manufacturing industry, and more specifically the many Belgian SMEs that are constantly required to navigate successive crises? These companies are affected by every market shift: on the demand side, where consumers' purchasing power is under pressure; on the supply side, through disruptions in supplier chains; through customers who postpone investments in innovation and sustainability; or through government measures introducing increasingly stringent regulations.

Should we therefore conclude that surface treatment companies — predominantly SMEs and family-owned businesses that play an indispensable role in the finishing and value creation of virtually every industrial process — are not agile enough? Or would that be an oversimplification?

Perhaps a little less agility would actually benefit our surface treatment companies. Today, the challenge lies not in adapting faster, but in continuing to meet the growing expectations of the market in a sustainable way. At least, that is the conclusion of the Aluminium Working Group, which would like to illustrate this through a number of current market trends.

Surface treatment is an essential, yet often invisible, link in many industrial sectors. Without surface treatment, there is no industry. In the case of powder-coated aluminium, this means no aesthetic and colourful façades, windows or fencing systems; no corrosion protection in aggressive environments or under intense UV exposure; and ultimately a significant reduction in the service life of construction products.

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*The general public should better understand the value that a thin coating adds to a product.*

*Its contribution goes far beyond aesthetics. Coatings play a crucial role in corrosion protection and in extending the service life of products.*

# VOM Aluminium Working Group

On 12 March, just a few days after the publication of the article in De Tijd, a delegation of coating companies, brought together by VOM's Aluminium Working Group, visited powder manufacturer Protech-Oxyplast in Mendonk. The purpose of the visit was to gain insight into how agile coating companies are expected to be today in order to meet the demands of their customers, particularly manufacturers of architectural aluminium components.

The range of colours and finishes continues to expand day after day. The market has moved well beyond the standard RAL and NCS colour charts. Powder coatings are increasingly produced to customer-specific and even supplier-specific requirements, often in ever smaller quantities. As a result, large volumes of powder remain unused on the shelves of coating companies, waiting for a new order to arrive — preferably before the powder reaches its expiry date. Delivering certified quality work with “expired” powder is generally not permitted, despite the fact that, to our knowledge, no scientific evidence has yet demonstrated a loss of performance after this date.

This dormant stock generates costs every day. Expenses have already been incurred during production, from raw material processing and blending to logistics, and continue to accumulate through transportation and storage. How can this be economically justified at a time when raw materials such as resins and pigments are scarce and expensive, when energy and labour costs continue to rise, and when policymakers are calling for less chemistry, lower energy consumption and reduced waste? Every stakeholder is expected to contribute to a more sustainable and circular economy, and coating companies support this ambition more than ever.

Recently, the challenge of managing an ever-growing range of colours and finishes has been further amplified by a new market trend. Several major players in the aluminium industry have announced that they will switch to a new standard by specifying Qualicoat Class 2 powders as the default option, without any price implications for the customer.

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**A typically Belgian phenomenon: introducing a new palette of colours day after day. It is time to strive for greater standardisation. Our real strength lies in quality.**





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The advantages of Class 2 powders are well known: on average, they offer a service life that is 1.5 times longer in terms of colour and gloss retention. While certain Class 1 colours may begin to fade or chalk after approximately ten years, Class 2 powders generally maintain their appearance for around 25 years under comparable conditions. This is a development that we support as a clear step towards greater sustainability. However, this transition can only be successful if the entire value chain follows and recognises the added value being delivered — at a slightly higher, yet fair and justified price. And that is precisely where the challenge lies.

An additional difficulty for smaller coating companies is that the choice of powder supplier is often dictated by larger market players. In some cases, subcontract coating companies have very little freedom to select their preferred powder brand, as customers require specific products to be used, regardless of whether these perform better or worse than the products normally applied by the coater. At the same time, smaller coating companies generally do not benefit from the same purchasing conditions as larger organisations. This can create a double challenge: on the one hand, applying Class 2 powders without being able to fully pass on the additional cost to the end customer; and on the other hand, working with prescribed powder brands that are often associated with higher purchase prices.

During the visit to Oxyplast, Tom Janssens, Key Account Manager, and Bernard De Ruelle, R&D Manager, provided a detailed explanation of this sustainable quality improvement. The main difference lies in the use of higher-grade raw materials compared with those used in Class 1 powders. Naturally, these materials belong to a different price category, resulting in a purchase price that is on average €2 to €2.50 per kilogram higher for coating companies. This appears fully justified given the additional service life of approximately 15 years under optimal conditions. This immediately raises the **first question**: will all suppliers implement this transition in a uniform manner, or will it once again become a customer-specific requirement?

Today, subcontract coating companies are taking the lead in the sustainability transition and are therefore willing to support a market-wide shift from Class 1 to Class 2 powders. Such a transition would simplify inventory management and optimise production processes, creating what appears to be a win-win situation. For the coating company, however, absorbing these higher powder costs without a corresponding adjustment in customer pricing would result in a margin reduction of approximately 3 to 3.5%.

In the current climate of economic uncertainty, it remains particularly difficult to implement price increases that would compensate for these additional costs. Customers pay today, not 25 years from now. Too often, the lowest price still wins. This leads to a **second question**: could accelerated sustainability reporting play a more objective role in the selection of subcontractors?

Yet the cost of powder coating on aluminium building components is negligible when compared with the overall cost of a construction project. When the added value of Class 2 powders is taken into account, there should, in principle, be little debate about accepting a modest price increase from the coating company.

The example below illustrates this clearly.

### **Additional cost of Class 2 powders within a total construction project**

Example: a construction project featuring 1,200 m <sup>2</sup> of aluminium façade panels	Calculation	Result
Powder consumption	$1200 \times 0,125 \text{ kg/m}^2$	150 kg of powder
Class 2 powder surcharge	$150 \times 2,5\text{€/kg}$	375€
Façade panels (material and installation)		
Typical cost: €300–600/m <sup>2</sup> , average €450/m <sup>2</sup>	450€/m <sup>2</sup>	
Total façade cost	$1200 \times 450\text{€}$	540.000€
Impact on façade cost		
Additional cost (%)	$375 / 540.000 \times 100$	0,07%
Impact on total project cost		
Façade represents on average 15–25% of the total project cost	20%	
Total project cost	$540.000 / 0,20$	2.700.000€
Total additional cost (%)	$375 / 2.700.000 \times 100$	0,014%

### **The conclusion is clear**

For an additional cost of just 0.014%,  
the service life of a coated aluminium façade can be extended by approximately 15 years.

This naturally raises a **third question**: what more could an end user ask for?

It is somewhat surprising that coating companies are unable, or find it difficult, to pass these additional costs on to their customers. In this case, the well-known principle that “buying cheap often proves more expensive in the long run” does not seem to apply.

At the same time, the impact of the energy crisis and rising fuel prices for oil and gas is readily accepted as a justification for higher coating prices per square metre. It is considered a fact of life, with little discussion. This raises an interesting question: why is it easier to accept that our industry is still far from achieving a significant share of renewable energy than to accept a modest price increase that could extend the service life of architectural applications by 15 years? Perhaps the potential energy savings associated with longer-lasting products are still largely underestimated.

The message from the Aluminium Working Group is clear: the entire value chain must pull in the same direction if we are to achieve meaningful progress towards sustainability. As a well-known Belgian rapper once put it: “You can go as fast as you want, but only together can you change the tide.” More than ever, the Aluminium Working Group believes in the power of collaboration.

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**VOM** association is an active technical association dedicated to surface treatment technologies in Belgium. Today, more than 260 companies are member of the organisation.

VOM brings together subcontractors, specifiers, integrated manufacturers, suppliers of products and equipment, research centres and universities.

Its mission is to promote and disseminate both general and technical knowledge on a wide range of coating and surface treatment processes through networking activities, courses, training programs, company visits, seminars, publications and industry events.

VOM also represents the interests of the sector towards industry stakeholders and public authorities.

All disciplines related to surface treatment are covered, alongside key topics such as environment, safety and quality.

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