Viohalco Holding based in Belgium and Listed in Euronext Stock Exchange
Established in 1937
€4 bn Sales Revenue, 9,000 employees
Plants in the UK, Greece, Bulgaria, Romania; Sales offices in 60 countries
Elval Colour Capabilities

• 2 plants, 5 coating lines, 3 ACP lines, CNC center
• 165 employees
• Ability to produce all coating systems
• Custom Made Shades- finishes
• Member of the European Coil Coating Association (ECCA)
• Member of the European Aluminium Association (EEA)
• ISO 9001-2008, ISO 14001-2004 and OHSAS 18001 accredited
ELVAL COLOUR is
a leading European coated aluminium manufacturer, established in 1977.

- With our full range of products and solutions we aim at enhancing architectural vision
- by creating innovative and creative architectural spaces

More than 98% of Elval Colour sales are exported to a total of 70 countries around the world
Statoil Headquarters, Oslo, Norway
30,000m² etalbond

FAÇADE

Aluminium Composite Panel
LDPE core,
fire classification E (EN 13501-1)

Aluminium Composite Panel
Mineral core, fire classification B,s1,d0 (EN 13501-1), NFPA 285 and ASTM E84

Aluminium Composite Panel
mineral core, fire classification A2,s1,d0 (EN 13501-1), NFPA 285 and ASTM E84

2mm Sold Aluminium Sheet, fire classification A1 (EN 13501-1)
ROOFING

Coated Aluminium Strips
Specialized for Roofing Applications

OROFE FALZIP
AA3005 H41
Double bending standing seam, façade

OROFE PENTE
AA 5754 H46
Super roofs, airports, exhibition centers, standing seam roofing

OROFE TESSERA
AA 3004 H44+
Super roofs, airports, commercial buildings

OROFE TRIA
AA 3105 H46
Simple roofs, polyurethane panels, corrugated, sheet roofing and facades > AA 3105 H42
wall and refrigeration structures

Zheng Zhou Airport, China
400,000m² Orofe Pente

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ELVAL COLOUR
Power to imagine
Vision meets reality with ACP

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- Durability – Sustainability
- Developments - Special Coatings
- Challenges in new façade designs
HOW
DURABLE IS ETALBOND A2
ACP PANEL

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### Stiffness

<table>
<thead>
<tr>
<th>Material</th>
<th>Stiffness [Nm²/m]</th>
<th>Tensile yield strength of aluminium [MPa]</th>
</tr>
</thead>
<tbody>
<tr>
<td>etalbond 4 mm</td>
<td>215.83</td>
<td>120</td>
</tr>
<tr>
<td>Solid Aluminium 3.33 mm</td>
<td>215.83</td>
<td>140</td>
</tr>
</tbody>
</table>
Flatness

Composite panels have excellent flatness due to composite nature
Fire Performance - Main Differentiation Factor

Case Study: 32 floors, 106 m high

- 3mm Solid Aluminium Cladding Insulation Polyurethane

- Hydroxides Slow down Fire Propagation in A2 Cores
- Solid Sheets melt directly
Coating durability & Colour consistency

• ACP is produced with liquid coil coated aluminum coils. High end coating systems like PVDF, FEVE, Lumiflon, etc can provide wide range of colour finishes and gloss levels as well as high durability levels for long period of warranty but on the same time keeping colour shade consistency for the whole production batch no matter the project volume.

• Solid Sheets painted by powder coating or spray coating PVDF can face colour shade inconsistencies due to painting in many batches and thus limiting the colour options that can be considered. Example of colour shade inconsistency as shown in above examples.
TX/TR Structural Coatings

2, 3 or 4 layer

TX Coatings: A specially developed coating that enables aluminium to be used as a substitute for ceramic:
- low gloss level <10%
- Long warranties

TR Coatings: The natural – earthy colour series:
- gloss level of about 20%
- Long warranties
Look closer, this is not a real ceramic surface.
Dual Coatings

A specially developed coating having the effect of colour switching depending on observation angle:

- PVDF system suitable for Façade, roofing, gutters
- Long warranties
- Gloss level 30%-85%
Anodized Imitations

A specially developed coating that enables aluminium to imitate anodized surfaces:

- A PVDF coating system
- Long warranties gloss level 30%-40%
Sustainability of etalbond panel

- Recyclable materials
- Energy Performance improvement
- Durability of the etalbond panel
- Durability of the coating
- Special long lasting coatings
- Reduced waste
Challenges in new façade designs

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North Point Condo
Yishun, Singapore
Stadium in Eindhoven, Netherlands
Fire brigade station in Kazern Geleen Netherlands
Pedestrian bridge in Qatar
etalbond®
Newman college, Netherlands
etalbond®/FR applications
Mauritius Commercial Bank, Mauritius
etalbond®/FR applications
Water Towers, Haninge, Sweden
Orofe® applications
Marina bay casino, Singapore
Orofe® applications
Fuzhou Channel International Convention Center
Orofe® applications
Zhengzhou airport, China
Orofe® applications
Haifa Stadium, Israel
Indicative Case studies, Constructions

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Indicative Case studies/ Constructions:

- Water park in Vladivostok
- Filtration and Treatment Facility building
- Elementary school in Vogelhorst Barneveld Netherlands
- Theater in Amstelveen
PROJECT- REALIZED 1: WATER PARK - VLADIVOSTOK
WATER PARK - VLADIVOSTOK

Roof
Standing seam with ELVAL ENF alum. in combination etalbond A2 panels with vario fixing system on the tray cassette 120/600 installed on curved metal structure
WATER PARK - VLADIVOSTOK
Filtration and Treatment Facility building
Elementary school in Vogelhorst Barneveld Netherlands
Construction:

- Metal primary substructure
- Aluminium secondary substructure
- Insulation
- etalbond® Composite aluminium panels - 2D & 3D shaped cassettes
Theater in Amstelveen

Construction:

- Metallic primary substructure
- Aluminium secondary substructure
- Insulation
- Composite aluminium panels - 3D shaped cassettes
Dynamic deformation
etalbond® Aluminium Composite Panels
exports

More than 60 countries

ELVAL COLOUR

EELMAL COLOUR

Power to imagine