

UMICORE Building Products USA Inc.

VM ZINC® AND LEED-NC 2.2

Umicore Building Products USA Inc. (UBP) is a company incorporated in the USA that sells VM ZINC® products manufactured by Umicore Building Products France which has its headquarters in Bagnolet (Paris) France. Our plants in France are certified ISO 14001. Most panel systems sold by UBP USA Inc. are manufactured in the USA.

Zinc is natural metal that is all around us and is an integral part of nature. VM ZINC® products contribute to achieving LEED points. www.vmzinc-us.com

Material and Resources	Credit 2.1	Construction Waste Management	1 point
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All zinc construction wastes can easily be separated from other metals and sent to any local metal scrap dealer. Zinc in the US is then reused by the galvanisation industry.

Material and Resources	Credit 4.1	Recycled Content	1 point
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Post-consumer content: 17%
Pre-consumer (Post-industrial) content: 0%

Post-consumer content: all VM ZINC® products come from one smelting plant located in Aubay plant, France. The plant uses 17% of recycled zinc for all VM ZINC® products.

Post-industrial content: Umicore BP reclaims all the scrap generated during the manufacturing process. Umicore is one of the world's leading players in the zinc industry with a total production capacity of over 600,000 tonnes. Umicore is the world's number one producer of zinc products for building applications. Umicore is also the world's biggest recycler of zinc, a position that reflects the Group's aim to provide a "closed loop" for zinc products.

Indoor Environment Quality	Credit 4.2	Low Emitting Materials: Paints and Coatings	1 point
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UBP does not apply any coating on standard VM QUARTZ-ZINC® material. Consequently, no VOCs are generated.

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LEED-NC 2-2 For Zinc 2009-02-26

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Additional environmental aspects of VM ZINC® Products

Long Life span

Zinc has an exceptionally long lifespan. While relatively new in North America, zinc has been successfully used in Europe for more than a century. When UBP USA Inc. installation guidelines are followed and based on empirical evidence, zinc roofs can last up to 100 years in rural areas, up to 70 years near the sea, and up to 40 years in heavy industrialized environments. Zinc walls may last more than 100 years.

Low maintenance material

In addition to its long life span, zinc is a low maintenance material. Zinc continues to build a protective layer (patina) over time and will self repair imperfections or scratches.

Energy consumption

Zinc production is friendlier to the environment than other metals. For instance it takes much less energy to refine zinc than aluminium, copper, or stainless steel. For instance, the energy required to produce zinc from ore is 1/4 that of aluminium and 1/2 that of copper and steel.

Zinc is 100 % recyclable

Zinc is also beneficial at the end of its useful life. Scrap of VM ZINC® has a high metal content and is 100% recyclable. New zinc products are created from recycled zinc such as zinc oxides used in paint, rubber production, and pharmaceutical products.

Origin of zinc

Most rocks and many minerals contain zinc in varying degrees. It also exists naturally in air, water and soil. Zinc is most commonly found in the earth's crust. One third of the zinc used by Umicore Building Products comes from North America, another one third from Central and South America, and the remaining one-third from other sources.

Zinc an essential element for life

For Humans to the smallest micro-organism, for plants and animals, zinc is obtained from their environment and used for specific functions in their metabolism.

For humans, zinc plays an essential role in metabolism. For example, zinc is vital for the proper functioning of more than 200 enzymes, for the stabilization of DNA and the expression of genes, and for the transfer of nervous signals. Zinc is a trace element, as important as iron, magnesium or calcium.

In fact, the lack of zinc is a much greater concern than excess. Zinc deficiency can result in several health problems including: skin changes, stunted growth, loss of taste and smell, mental lethargy, loss of appetite, and interference with the functions of the spleen and liver.

"There is considerable evidence that zinc deficiency in humans is a serious worldwide problem..."

-Boston University School of Medicine 1995

"...normal, healthy, non-occupationally exposed individuals are at potentially greater risk from the adverse effects associated with zinc deficiency than from adverse effects associated with normal environmental exposure to zinc."

-U.N. Environment Program Health Criteria for zinc 1996

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