



## Painting to Protect

The right coating can save products and the environment: Three methods that paint a greener picture

**S**torage warehouses are tough settings for rack components. Heat, cold, humidity and other environmental agents can result in corrosion and oxidation of shelving materials. Constant movement of stock in and out of racks can also damage them. To ensure long lasting protection of its products, Interlake Mecalux uses the most advanced methods of paint coating. The result is an attractive product that is resistant to harmful agents and that will withstand normal wear and tear of warehouse operations.

Protecting the environment from the harmful effects of paint pollutants is also a concern for the company. The ISO (International Organization for Standardization), the world's largest developer and publisher of International Standards, awarded Interlake Mecalux the ISO 14001 which provides a framework for a holistic, strategic approach to the organization's environmental policy, plans and actions.

Interlake Mecalux uses cataphoresis, hydro-soluble paint and powder coating to guarantee a high quality paint job in its



*Cataphoresis baths in the Interlake Mecalux Pontiac, IL plant.*

products, which produce smaller amounts of volatile organic compounds (VOCs) than in other coating methods, ensuring a more ecological alternative to traditional painting methods.

**Cataphoresis** is a painting process based on electro-chemical technology. It relies on cathodic painting of metal surfaces immersed in a special preparation bath with the voltage turned on at the same time.

In the bath, consisting of about 75 percent demineralized water, 20 percent constant particles (resins and pigment) and about 5 percent compounds, painted objects are immersed and constant current voltage applied. Mutual attraction between the painted pieces and the electrodes immersed at

the sides of the bath causes a strong and precise coverage of the whole surface of the elements. The created coating is subject first to rinsing then drying. Interlake Mecalux produces its frames in either green or blue using this method of coating.

*Advantages of cataphoresis:*

- Anti-corrosion protection of rolled plates
- Same layer thickness everywhere on the painted element
- Good protection against mechanical damage
- Coverage of hidden areas in objects of unique shapes
- Safe to the environment due to working in a closed system
- Low emission of volatile organic substances (VOCs) containing harmful particles



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- Optimum fire resistance (ignition temperature above 520°F

**2 Powder Coating** Interlake Mecalux first began powder finishing in 2002. Powder coating offers a wide variety of hues, making it easier to custom paint different parts in any specified color with ease.

Powder coating is an advanced method of painting used for a wide range of materials and products. The powder used for the process is a mixture of finely ground particles of pigment and resin. After its application, the surfaces are heated and the particles fuse into a smooth coating. The result is a uniform, durable, high-quality and attractive finish that releases negligible amounts of VOCs into the atmosphere, since it contains no solvents.

*Advantages of Powder coating:*

- Available in a large variety of stock colors, metallics and textures

- Negligible emission of VOCs

- Durable, high-quality finish

- Unused or oversprayed powder can be recovered, so waste is minimal

**3 Hydro-Soluble** Water-based coatings can be used in all segments of industrial series production as well as in machine and equipment construction. Excellent adhesion on steel, non-ferrous metals and synthetic materials offers an outstanding protection against corrosion. The high quality application property offers fast drying and color stability. The lack of solvents also makes this an ecological painting method with low emissions of VOCs. Interlake Mecalux has recently started using red in its products through this method of coating. 