



Coolac®

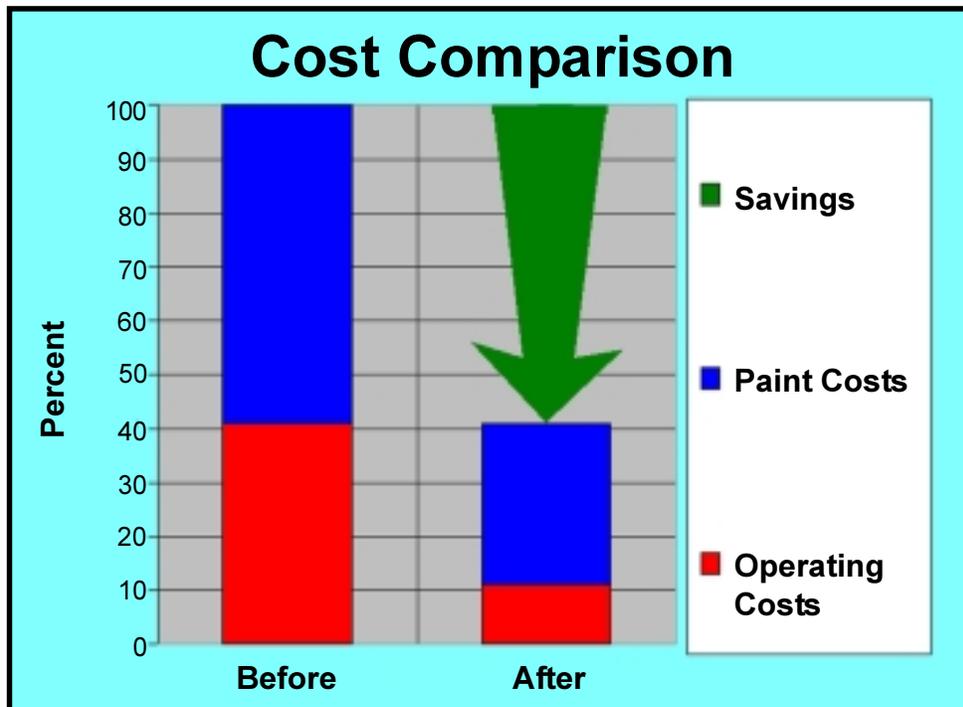
Use **All** of the Paint

Save Money by Recycling Paint Overspray

If you spray paint your product, you know that overspray is expensive and an environmental burden. Beyond the cost of the wasted paint, you have the cost of the filters, the labor to change the filters, and the cost to dispose of the filters. With waterwash booths, you still have the cost of the wasted paint, the water, the chemicals and the wastewater treatment.

In this era of lean manufacturing, these are the non-value-added costs you are probably working hard to eliminate.

We recycle newspapers, cans and bottles, so why not paint? Until recently, the technology was not available to industrial paint applicators. However, since 1997, the firm of Range & Heine GmbH has been developing and installing a product called Coolac® that makes paint recycling a reality. Two hundred and eighty successful installations have proven the viability of this process world-wide. We are pleased to announce that Nutro Corporation is now the exclusive licensee of this patented process in North America and Brazil.



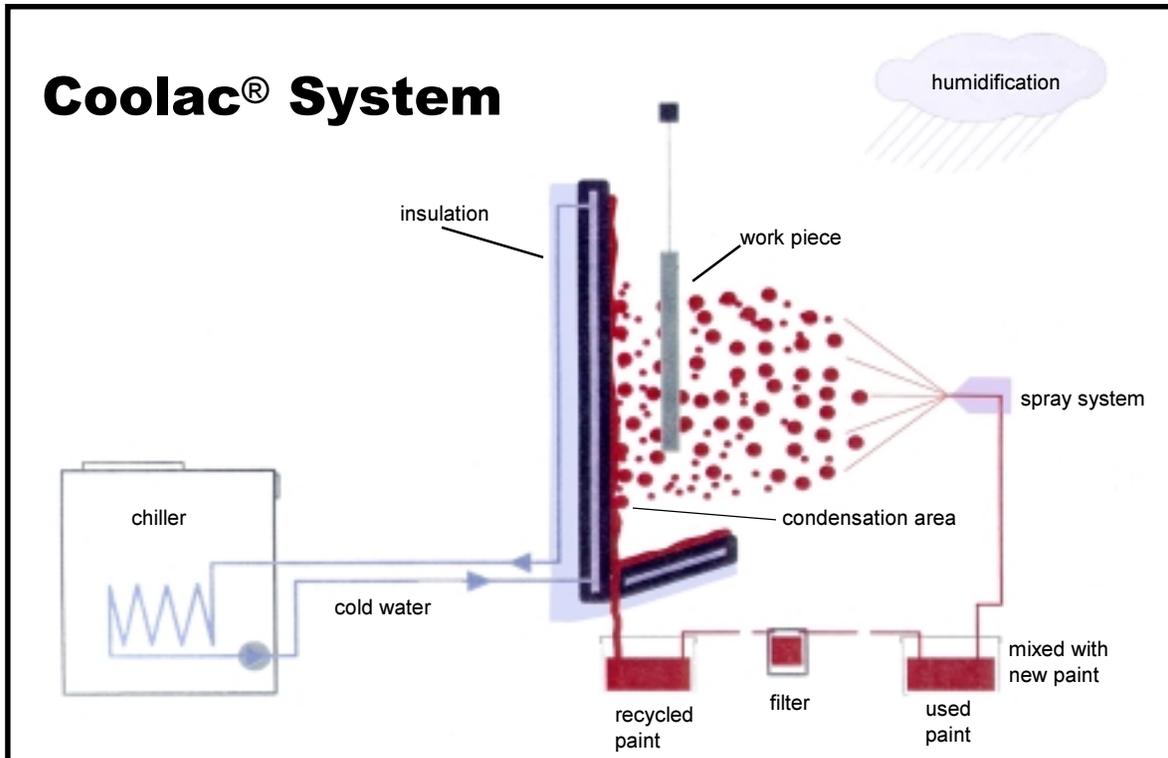
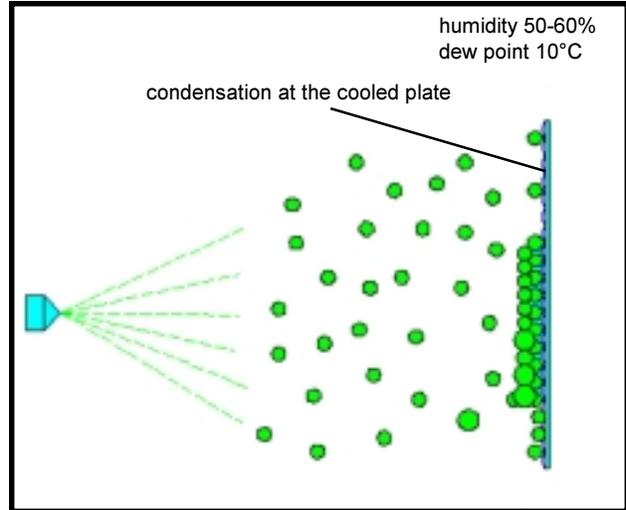
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In this example of a retrofit system, the paint costs were reduced by 30% and the operating costs were reduced by 75%. We would be happy to help you analyze your current painting costs and your anticipated savings.



How it Works

Typical waterborne paints contain 30% to 50% solids and 3% to 15% solvents (VOC's). The balance is water. Evaporation begins with the water, so the first step is to control the spray environment by keeping the relative humidity between 50% and 60%. The next step is to maintain the temperature of all booth surfaces that are exposed to overspray below the dewpoint temperature of the booth air. Water vapor condenses on the surfaces, providing a barrier to the paint. Accumulated overspray runs down to collection points. The accumulated overspray (typically 30%) can often be mixed in with the original paint supply without additional processing. As a rule of thumb, you can capture and recycle 60% of the overspray.



Schematic of the Coolac® System



Applications

The initial installations of Coolac® in Europe were in window manufacturing facilities. A typical operation sprays 15 to 25 gallons of paint in a manual booth with 5 to 10 color changes per day. Retrofits were made to existing dry filter booths and to waterwash booths. Even companies with single shift operations justified the capital expense of a Coolac® retrofit in less than a year. Eighty (80) such systems are already in use, just for window manufacturing.

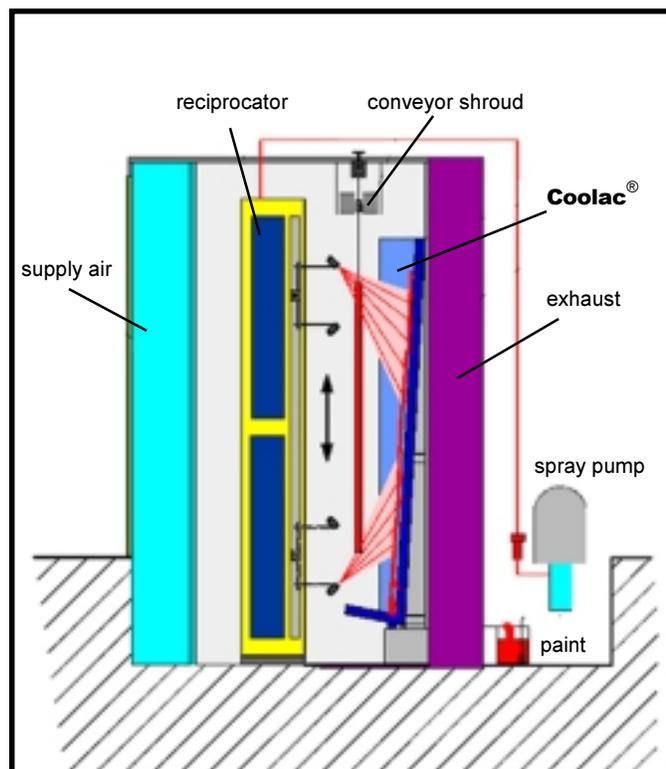


Spraying into Coolac® Wall



Color Change

Higher volume manufacturers were able to justify automatic lines, using two booths and reciprocators for spraying. Operators perform color change in one booth while production continues in the other booth.



Overhead Application with Reciprocators



Many critical surfaces can be protected from overspray accumulation using this method. In addition to booth walls, some innovative applications include conveyor shrouds, belt conveyors, and roller conveyors.



Flat Belt Conveyor with Coolac®

The techniques of controlling the spray environment and surface temperatures were conceived for use with waterborne paints, but can be modified for use with other coatings as well. By cooling the ambient air temperature and the booth surfaces, the pot life of two-component paints can be extended to the point that recycling is feasible.

Heating the booth surfaces can also be useful to lower the viscosity and encourage flow of 100% solids, UV curable coatings.

The Next Step

The cooperation and approval of your paint supplier is critical in confirming the suitability of your paint for recycling. Akzo, BASF, Lilly, Metal Coatings International, Siegam, PPG, and Wörwag have already endorsed the Coolac® process and recycling of one or more of their paints.

If your current paint supplier is not aware of this process, we will be happy to work with them to test your paint. Nutro has a portable test unit that we can either run in our lab with your paint or install in your production booth. Reclaimed overspray can then be collected and sent back to the manufacturer for analysis.

A Nutro sales representative is anxious to help you when you are ready to save some money.



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