

## PROFILE

**NAME:** Polysciences

**LOCATION:** Warrington, Pa.

**FOUNDED:** 1961

**WEBSITE:** [www.polysciences.com/](http://www.polysciences.com/)

## CHALLENGE

Upgrade a difficult and disconnected label management and printing system that required manual entry, monitoring and intervention.

## SOLUTION

A combination of Epson ColorWorks® on-demand color label printers and BarTender® by Seagull Scientific labeling software, orchestrated by Integrated Productivity Systems (IPSi), to deliver simple and streamlined label management and provide accurate, consistent and durable GHS labels.

# Catalyzing Innovation

## Integrating an intelligent and intuitive label design, management and printing system for global chemical manufacturer

Although chemical manufacturers have been required to incorporate color icons on labels for several years now, many have learned that legacy monochrome printers are no longer suitable for a simple, streamlined and automated approach to consistent and error-free GHS (Globally Harmonized System of Classification and Labeling of Chemicals) labeling today.

[Polysciences](http://www.polysciences.com/), a global manufacturer of specialty chemical materials for industrial, consumer, academic research, and biotechnology applications for over 60 years, is familiar with the demanding GHS labeling requirements of the chemical industry. Quality is formulated into everything that the business does, including its packaging processes.

The business prints 1,000 to 3,000 product labels per day and needed a comprehensive, compliant labeling solution to ensure the thousands of labels being printed every day were accurate, consistent, durable, and quality labels.

### The catalyst

The stakes are high in the chemical industry. If there are non-compliant labels produced, manufacturers risk the potential of being fined. Legally compliant GHS labeling requires a precise number of unique red icons per each formulation. Polysciences was using a “two ribbon” thermal transfer printing system that printed red and black colors separately, in one pass. The former label printer required precise setup and registration and there were frequent issues with misalignment of red and black text, broken characters and illegible small fonts.

“To make sure our labels were compliant we used Access databases and entered everything manually. It was terribly time consuming,” said LeeAnn Everitt, director of business technology, Polysciences.



“We realized that our system was not going to be sustainable. Because our backend was comprised of solutions that could not completely integrate, manual intervention was required and the system was difficult to maintain,” said Everitt. “We took a step back to evaluate the state of our labeling operations and were immediately drawn to create a vision of what we needed it to look like.”

Kim Doherty, label production manager at Polysciences, and her team reached out for a helping hand after recognizing that they were spending entirely too much time compensating for the inefficiencies of their label data management and printing system.

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- LEEANN EVERITT, DIRECTOR OF BUSINESS TECHNOLOGY, POLYSCIENCES

[Rick Schilling](#), president of [Integrated Productivity Systems \(IPSi\)](#), specializes in fixing customers' inefficient business processes and simplifying complex and disparate systems by leveraging the best technology available. He and his team had exactly the tools and expertise needed to solve Polysciences' backend shortcomings.

With a backend makeover designed to eliminate disconnected Microsoft Access databases and the associated runaround, Polysciences revamped its label management system, with which the ColorWorks label printers directly integrate. The new integrated system was designed specifically to bring all the critical components together to streamline and simplify labeling operations.

Following the backend revamp, the inefficient, existing thermal label printers were the next focus.

## Testing it out

Durable labels are critical in the chemical industry. The labels must withstand harsh conditions including freezing temperatures and chemical exposure. Before switching to the Epson ColorWorks C6000-Series printers, Doherty and her team evaluated the printer and put the Epson labels to the ultimate durability test by exposing them to chemicals and more than two months in a CRYO freezer. "Nothing we did compromised the quality of the print on the label," noted Doherty.

Prior to onboarding the ColorWorks C6500A printers, the Polysciences team used two thermal transfer printers which were difficult for them to operate and repair, and also tended to waste labels during setup. "I reviewed the ColorWorks in detail and needed to make the case to switch because we had made an investment when choosing the thermal transfer printers," said Everitt. "It was not a difficult sell, though, because the benefits were insane."

Doherty mentioned that with short-run label batches as small as one label, she and her team usually wasted five blank labels as they were calibrating the thermal transfer printer and trying to align the pre-print labels properly. If the slightest detail was off on that label, they needed to reprint, again wasting the majority of another set of blank labels. It could take Kim and her team 10 to 15 minutes to print two bottle labels, which should take just seconds to do so.

"The waste was tremendous – in terms of materials, consumables and time spent. It is a blessing to now have a printer that does not require ribbon changes or manual adjustments of print heads by way of a screwdriver, said Doherty. "Digital is just easier all around. When it comes to making an adjustment, now it's just a simple push of a button on a screen and we no longer need to involve the IT team or MacGyver it with a screwdriver."



"In the time it took us to print one single label with the thermal transfer printers, we can now print labels, fill product, apply labels, and close out the associated paperwork," said Everitt.

We expect that we will save between 350 and 400 man-hours over the course of a year by using the ColorWorks over the thermal transfer printers, due to the automation and ease of use," said Doherty.

## A compound solution

Polysciences' ERP (enterprise resource planning) label data management and printing system is a compound of BarTender enterprise label software for label management, SAP Business One with BatchMaster software for manufacturing processes, Lisam ExESS software for Environmental Health and Safety (EH&S) compliance, and Epson ColorWorks on-demand color label printers for GHS compliant, full-color label printing.

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“Our ERP, Safety Data Sheet (SDS) and label printing software and hardware are now completely integrated so any updates we make to the system are reflected in the entire system, through to the printed labels,” said Everitt. “We no longer have to make the same change multiple times at every step. Changes are automatically recognized and implemented, so our data remains consistent throughout.”

“Rick and his teams’ extensive expertise in improving manufacturing business processes with label data management and printing solutions led us to our improved system and workflow,” said Everitt.

“It’s really quite simple – people enjoy not having to deal with issues when it comes to workflow and technology,” said Schilling. “The potential of a system that works in the businesses’ favor to make it easier for people to do their job should not be understated.”

## All the right elements

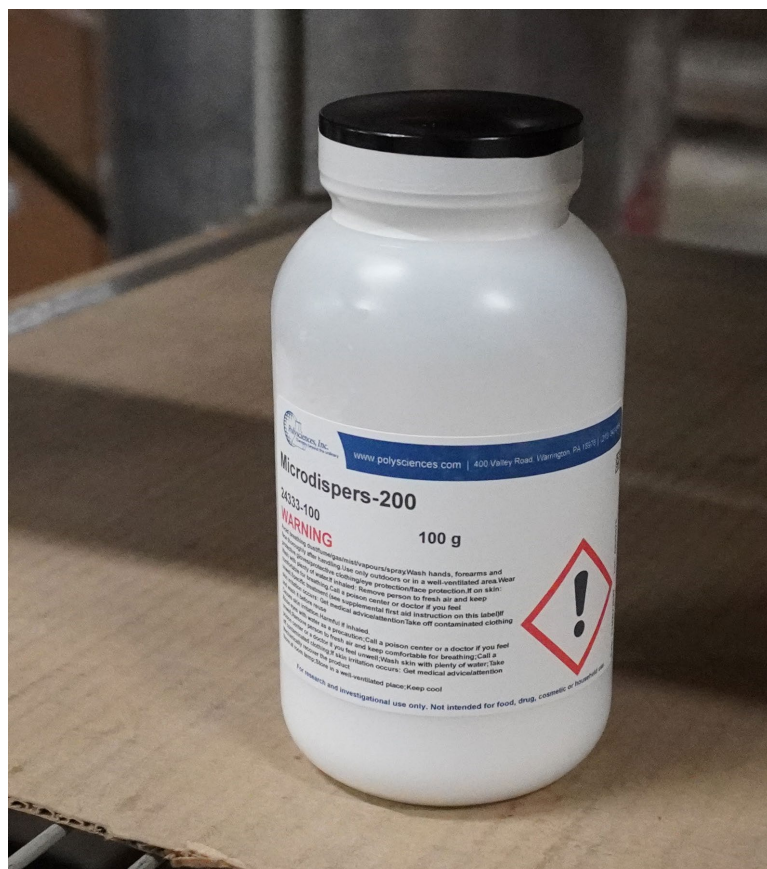
Polysciences has over 4,000 SKUs, all of which require very small 3- or 4-point fonts and color icons included on labels. And, for its contract packaging operations, labels must have precise color matching and branding information.

With the ColorWorks label printers and BarTender software, Polysciences cut its label inventory from 10 sizes to just four and now only requires six or seven BarTender Intelligent label templates.

“The impact has been felt across the departments,” said Everitt. “For example, the IT team isn’t having to make frequent visits to troubleshoot the printers anymore.”

Everitt noted that Polysciences’ finished goods are more consistent than they have ever been, with precise print quality and crisp, small fonts. “We now have a standardized business look and feel across products.”

She continues, “It’s critical that our system supports us today and is set up for the future. We’ve heard chatter about potential requirements to include California Prop 65 information in yellow. Our old solution was not designed to handle, simply and cost-effectively, meeting this requirement, though our system now has us set up to easily handle future regulations of the like.”



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- KIM DOHERTY, LABEL PRODUCTION MANAGER,  
POLYSCIENCES

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