



COMPLY WITH REGULATIONS, CONTAIN RISING COSTS

ENTERPRISE LABELING FOR THE CHEMICAL INDUSTRY



THE CHEMICAL INDUSTRY IS VOLATILE, FAST-PACED AND BECOMING MORE GLOBAL BY THE DAY

Few industries have a wider impact on the way that industrial and consumer products are created, and on how we all live, than the chemical industry. And few industries are more complex and challenging. What are the current challenges facing the chemical industry?

REGULATORY/ENVIRONMENTAL REQUIREMENTS

Because of the role that chemicals play in every aspect of modern life—and because they pose hazards as well as provide benefits—the chemical industry is governed by myriad regulations covering environmental, safety, and health concerns. Regulation—GHS, REACH, OSHA—is a fact of chemical industry life, and it's incumbent on chemical companies to not just comply, but do whatever is necessary to reduce risk.

GLOBALIZATION

Regulations are becoming even more of a fact of life as the industry continues to expand globally. In addition to adding to the array of regulations the chemical industry faces, globalization results in trade flows that require it to maintain more inventory in more destinations, where new entrants into the manufacture of industrial and consumer products are located.

TRACEABILITY/PRODUCT RECALLS

Throughout the chemical supply chain, companies need to track shipments from many different suppliers. When each player in the supply chain takes its own approach to labeling, traceability and the ability to quickly respond to product recalls can become problematic. Relabeling efforts can cause confusion that may have dire consequences, especially when it comes to hazardous materials. Many chemicals have limited life-spans, so timing can be critical. Counterfeiting has long been a challenge for the chemical industry. Low-quality counterfeits hurt consumer confidence, and can, in fact, be dangerous.

CUSTOMER SATISFACTION

With competition among chemical suppliers at such an intense level, suppliers need to ensure that their customers are well taken care of. That means responding to their specific labeling requirements. These may be varied: logo placement, language variations, location-specific information, country regulations, labeling that conforms to a customer's existing systems and more. What doesn't vary is the growing demand that these requirements be met consistently and in a timely fashion.

MERGER & ACQUISITION ACTIVITY

Mergers and acquisitions in the chemical industry have intensified as of late, with one industry observer characterizing M&A activity in 2016 as a "frenzy." That frenzied pace has witnessed a number of blockbuster transactions involving big and small players alike, including Dow, Dupont, Bayer, and AzkoNobel. Because this intense pace is expected to continue for the foreseeable future, companies must be prepared to respond quickly to market changes.

SUPPLY CHAIN COMPLEXITY

The chemical industry has a complex supply chain. For starters, the industry itself is composed of a number of small, sub-industries. These include bulk, specialty, and polymers. Complexity is further defined by the use of tollers in the manufacturing process. With a range of suppliers, manufacturers, and third party logistics companies involved, keeping track of assets and keeping up with regulations is intense.

COST PRESSURES

Whether they're new entrants or long-time producers, companies throughout the chemical industry supply chain are placing pressure on their suppliers to keep costs down. With so many of their products considered commodities, and margins already tight, these pressures can be especially painful. Competition within the chemical industry is fierce, and companies struggle to differentiate their offerings—while still keeping costs in line. Chemical companies are looking for operational efficiencies as never before.

VOLATILITY

Although the chemical industry is vast and ubiquitous, it's so inextricably intertwined with the oil industry that it's highly volatile: subject to shocks whenever oil prices fluctuate, and when there's unrest in oil-producing nations like Iraq and Libya. It's not just the chemical industry's reliance on petroleum for so many of its products that makes it so volatile. The industry is highly susceptible to downturns in the downstream industries it supports. When the construction industry in China softens, when consumer spending is down in the US, the chemical industry suffers as well.

Between regulatory requirements, with their heightened demands for accuracy and auditability; the pressures of globalization; and the growing need for greater flexibility, nimbleness, and cost-awareness, chemical companies are looking for ways to improve their operations. Forward thinking companies are taking a close look at the role that labeling plays.

LABELING MUST BE STRATEGIC, LIKE EVERYTHING ELSE

Why labeling matters? A strategic approach to labeling is particularly important to the chemical industry for a number of reasons...

Regulatory compliance is an ongoing challenge. Many countries around the world have adopted the Globally Harmonized System (GHS) standards, including the US with the OSHA Hazard Communication Standards (HCS) and the EU countries via their Classification, Labeling, and Packaging (CLP) regulation. Failure to properly label products that contain hazardous chemicals by including a correct product identifier, signal words, pictograms, hazard and



GLOBAL CHEMICAL LEADER STANDARDIZES— AND SIMPLIFIES—LABELING IN SAP ENVIRONMENT

Over 200 production sites in 40+ countries

OBJECTIVES

- Choose an SAP certified integrated partner for its worldwide ERP rollout
- Reduce backlog requests for label development and changes
- Address in-country labeling challenges and use existing legacy databases until the SAP rollout is complete
- Eliminate need for replication of databases
- Select a single provider for all worldwide services and support

BENEFITS

- Centralize control of labeling via connection to SAP at corporate headquarters
- Create customer specific labels and deploy in production the same day with secure, user-friendly GUI
- Streamline operations, improve accuracy by pulling data from SAP as well as an older ERP system during transition
- Ensure 24x7 labeling uptime with support from Loftware global services team

precautionary statements, and company information can result in fines, halted shipments, and recalls. Even if they have not aligned with GHS, countries and regions have their own regulations. Today's global supply chain extends across boundaries.

Operational efficiency is paramount because there is so much commoditization, driving continuous pressure to keep costs low at every level of the supply chain. Mergers and acquisitions are also a major factor in the drive for efficiency, since this is generally a goal and outcome of such transactions. This translates into a compound challenge, as merged companies need to keep their current business running while at the same time bringing entities with disparate processes and systems into alignment. Whatever the driver, global companies are adopting strategies to achieve even higher levels of efficiency. Automated labeling reduces manual processing efforts, while at the same time improving reliability, minimizing the many costs associated with mislabeling.

Managing risk is not just associated with inefficiencies. Few industries pose as many risks as chemicals. When key information—molecular weight, formula, storage temperature, lot data—is missing or inaccurate, or when required translations aren't incorporated, the result may be significant fines and fees. Formatting problems, such as the wrong font size, and information errors like an erroneous expiration date, have resulted in recalls and shipment send-backs. And mislabeling has led to serious injury and even death, as well as property damage.

Product tracking and tracing across the supply chain is critical. Yet when each department or partner in the supply chain takes its own approach to labeling, traceability and the ability to quickly respond to product recalls can become downright impossible. Relabeling efforts can cause confusion that may have dire consequences. Counterfeiting is also a longstanding problem of the industry. Given the damage that a low-quality counterfeit can do to a brand's reputation, there is increasing demand for greater "brand protection."

Scalability has become an important driver as process innovation breakthroughs have sped up production throughout the chemical supply chain. Labeling processes and systems that fail to scale can result in bottlenecks that create unwanted inventory build-up and failure to ship fast enough to meet demand.

Overall, labeling that's inaccurate may result in shipments stalled at customs or refused by customers, penalties incurred from governments or customers, lack of traceability, and damage to a company's reputation and its bottom line, and the inability to expand as rapidly as required to keep up with production and demand. The right labeling solution can help companies throughout the chemical industry supply chain take on these challenges, making labeling, more than ever before, a mission-critical, strategic process—no longer a nice-to-have, but a must-have.

What is enterprise labeling? By treating labeling as a strategic process—and by implementing a standardized, enterprise labeling solution—chemical companies are able to make shipments more traceable, achieve consistent branding, reduce regulatory costs, eliminate data redundancy, and improve overall labeling efficiencies. The right



LARGEST MANUFACTURER OF SPECIALITY LUBRICANTS STAYS AHEAD OF GHS LABELING REGULATIONS

50 manufacturing and marketing companies worldwide

OBJECTIVES

- Implement a global labeling solution deployed with SAP to manage labeling internally without requiring full time consulting assistance
- Meet new GHS regulatory standards and evolving customer and regulatory requirements to avoid returns and fines
- Standardize labeling to reduce templates, seamlessly support changes, reduce maintenance and empower business users
- Extend use of barcoding to reclassify materials for compliance

BENEFITS

- Drive label printing automatically across multiple sites with certified integration into SAP
- Rapidly enable all GHS label changes and reduce cycle time with built-in business rules
- Empower internal team to manage label designs and updates without requiring coding by expensive consultants
- Eliminate human error and mislabeling with an automated label process

enterprise labeling solution lets companies throughout the chemical industry supply chain turn labeling into a high-value, strategic element of the overall manufacturing and distribution process.

Enterprise labeling is an approach that integrates labeling with existing business processes to standardize and automate labeling. This dynamic and data-driven approach allows businesses to more nimbly react to evolving customer, regional and regulatory requirements, and empowers business users to quickly and efficiently design, maintain, and share barcode labels. It also ensures consistency across a global supply chain, enabling companies to meet performance and scalability requirements with the power and flexibility to support complex, global and high-volume labeling requirements.

TAKING A STRATEGIC APPROACH WITH ENTERPRISE LABELING

Loftware Enterprise Labeling sets the standard for strategic labeling, providing a new level of visibility and control for chemical companies that delivers these benefits:

“SOURCE OF TRUTH” LABELING IMPROVES ACCURACY, REDUCES COSTS

Chemical companies have invested heavily in ERP and other systems for managing their business and complying with regulations. Loftware sources label data directly from approved sources of truth, i.e., from key data repositories, ERP systems, and other applications. Through tight integration with systems like SAP and Oracle, you can automate and centralize labeling, and also reduce and often eliminate complex data replication and synchronization costs. This results in improved accuracy, fewer compliance issues, and decreased costs.

INTEGRATED LABEL PROCESSES PROMOTE QUALITY AND EFFICIENCY

When labeling is integrated with enterprise business processes, efficiency and quality are improved. These improvements have particular resonance when mergers and acquisitions take place, as labeling is often the first “face to the customer” that reflects the new organization’s logos, branding, and identity. With Loftware, chemical companies can perform their critical manufacturing, packaging, and distribution tasks without having to access separate labeling systems or worry about keeping labeling synchronized with process or operational data, eliminating one of the many M&A hurdles that organizations face. Loftware’s integrated labeling process lets you trigger labeling from within ERP, CRM and other applications as needed, reducing risk and complexity.

ADVANCED DESIGN HELPS MEET MOUNTING REQUIREMENTS

The labeling requirements in the chemical industry are many and complex. Companies must simultaneously handle unique regulatory, language, location, and branding demands that come from a variety of stakeholders. Labels require color and pictograms, and must also fit a wide range of shapes and sizes, from large drums to small vials. Easy-to-use



SUPPLIER OF PAINTS AND COATINGS SCALES GLOBALLY WITH INTEGRATED ORACLE LABELING SOLUTION

139 manufacturing facilities in 66 countries worldwide

OBJECTIVES

- Implement a single enterprise wide labeling solution to be incorporated with worldwide Oracle roll out
- Replace existing “home grown” labeling system with solution that can be easily supported and scale globally
- Meet language, customer and regional requirements in order to support global roll out
- Enable compliance with GHS standards to reduce occurrence of fines, returns and delays

BENEFITS

- Trigger label printing automatically from Oracle with centrally deployed solution
- Reduce maintenance costs and enable rapid label changes with centralized design capabilities
- Empower business users to meet language and customer requirements more quickly with Lofware’s Business Rules Engine
- Comply with industry regulations with confidence by pulling data directly from Oracle—a source of truth

design tools with a WYSIWIG interface facilitate creating new labels as needed. And Loftware's approach to design and composition makes it that much easier for business users, not IT, to update templates as needed.

BUILT-IN BUSINESS LOGIC ENABLES RAPID RESPONSE TO CHANGING DEMANDS

Loftware enables companies to rapidly respond to changing regional and international regulatory requirements for supply chain labeling, as well as to evolving demands from partners and customers. By leveraging a built-in business rules engine, companies can create rules and logic that empowers business users to make formatting changes quickly, in a controlled manner, without having to wait for updates to your enterprise applications.

SCALE LABELING AS NEEDED

As companies expand into new markets or grow in their existing territories, they need to be able to drive a higher volume of labels. And as process innovations speed up production, labeling needs to keep up as well. Supporting the native drivers of more than a thousand different print devices (rather than relying on Windows-based drivers), Loftware's Enterprise Labeling solutions connect directly with printers for high-speed processing that won't bog down the network. This allows customers to produce thousands, even millions, of labels faster than ever before. And because label templates are shared across the organization and changes can be made dynamically, you dramatically reduce the number of templates you need to manage—even as the business grows.

EXTEND LABELING TO SUPPLY CHAIN PARTNERS

Full traceability requires that the entire supply chain network share a systematic approach to labeling. Loftware Enterprise Labeling provides secure, remote access to label templates, so that suppliers, tollers, 3PLs, and others can simply run off the labels as needed with the right data and information to route product more quickly. By gaining new visibility into when materials are labeled and shipped, and eliminating the need to relabel goods upon receipt, companies can save thousands, even millions, of dollars on labor, material, and inventory costs.

ENTERPRISE LABELING: AN ESSENTIAL CHEMICAL PROPERTY

In today's complex and challenging supply chain environments, companies are increasingly taking a more strategic approach to labeling. With Enterprise Labeling from Loftware, they're able to put a labeling strategy into action, and with it, they're able to reduce inefficiencies and costs, respond faster to customer and regulatory requirements, and improve the overall bottom line.

See how Loftware can help you drive similar benefits across your extended chemical supply chain by visiting www.loftware.com, and keep up with the latest industry news by subscribing to our [Blog](#).



Loftware, Inc. (www.loftware.com) is the global market leader in Enterprise Labeling Solutions with more than 5,000 customers in over 100 countries. Offering the industry's most comprehensive labeling solution, Loftware's enterprise software integrates SAP®, Oracle® and other enterprise applications to produce mission-critical barcode labels, documents, and RFID Smart tags across the supply chain. Loftware's design, native print, and built-in business rules functionality drives topline revenue, increases customer satisfaction, and maximizes supply chain efficiency for customers. With over 25 years of industry leadership, Loftware's Enterprise Labeling Solutions and best practices enable leading companies to meet their customer-specific and regulatory requirements with unprecedented speed and agility.



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