

Ask the EHSQ Expert

5 Keys to Best-in-Class Chemical Management.



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Introduction.

Chemical management is a priority for so many organizations – for good reason. Managing chemicals safely and efficiently is a critical component to protecting workers, maintaining compliance, and preventing brand reputation damage.

Yet, running an effective chemical management program remains a challenge for many organizations due to the degree of complexity involved – from knowing which substances are on-site across global locations, to proper chemical handling and disposal – all while keeping up with changing regulatory requirements.

Whether you're just getting started with chemical management or are looking to take your current program to the next level – we're here to help.



IN CONVERSATION WITH



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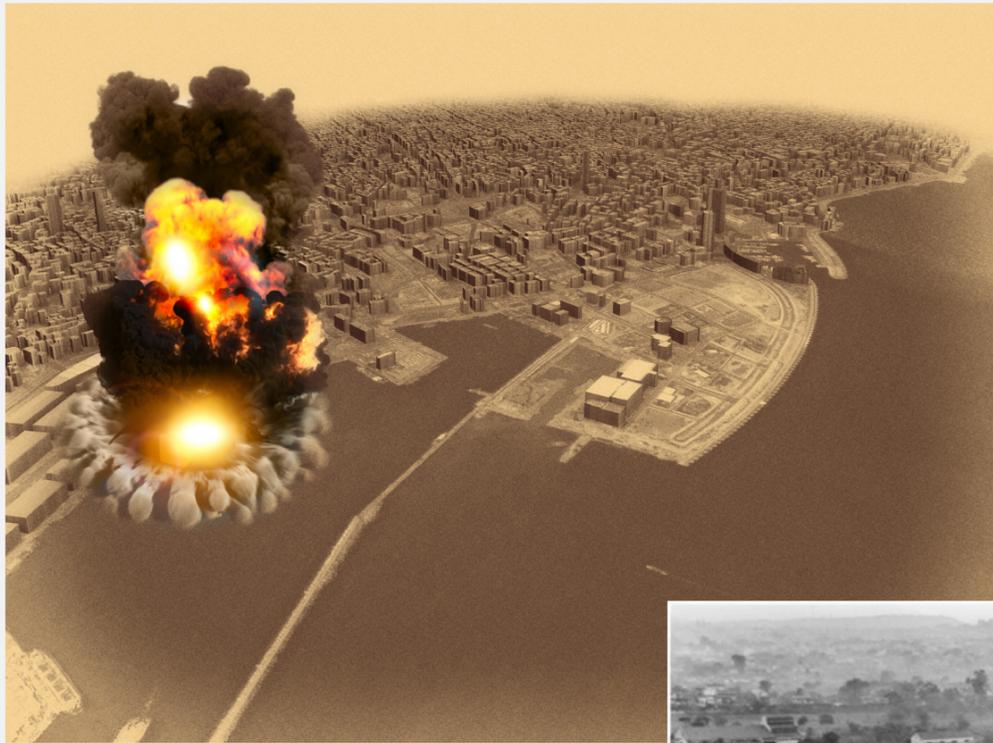
Verisk 3E

EHSQ experts Christine McCarty, Product Marketing Manager at Cority, and Alan L. Johnson, Director of Portfolio Management and Strategic Alliances at Verisk 3E, got together to answer five of the most frequently asked questions we get about running a best-in-class chemical management program.

QUESTION 1:

What are Some
Effective Strategies for
Mitigating Chemical
Risk?





Beirut Explosion, 2020



Bhopal Disaster, 1984 (Source: bhopal.org)



Hurricane Harvey, 2018

Christine: When it comes to managing chemicals, it's no surprise that risk mitigation is typically at the forefront of an Environmental, Health, Safety, and Quality (EHSQ) professional's mind. Consider the following examples that underscore the significant impacts that chemicals continue to have on people and the environment across the globe:

- **Bhopal Disaster** – a release of methyl isocyanate gas that killed several thousand people and injured approximately half a million more in 1984 (this led to the writing and passage of The Emergency Planning and Community Right-to-Know Act (EPCRA) in the United States)
- **Hurricane Harvey** – 365 tons of hazardous chemicals were released into the air, land, and water in 2018
- **Beirut Explosion** – an explosion caused by ammonium nitrate that killed hundreds and left 300,000 people homeless in 2020

Because of incidents like these, reducing risk around chemical management is going to continue to be a top priority. With chemical management programs, companies face common risks ranging from environmental releases to lawsuits.

When it comes to mitigating chemical risks, the key is really to plan, plan, plan (this can't be stated enough) and then follow through with a robust process. Research regulatory requirements and make sure you know which ones apply to your facilities. Make sure you conduct hazard analyses to identify health and physical risks and understand where chemicals potentially pose a risk to your employees, the community, and the environment.

CHEMICAL MANAGEMENT PROGRAMS

Common Risks



Employee health & safety incidents



Environmental releases



Damage to corporate brand and reputation



Agency fines/penalties for non-compliance



Lawsuits



It's critical that you know what's on-site, manage inventories properly, and keep track of regulatory reporting deadlines. **EHSQ software solutions can be invaluable tools in this respect as they help to keep everyone on top of deadlines with calendaring and automatic electronic notifications and reminders.**

A great way to eliminate risk is with a strong process for managing change, specifically around material approvals. If you know you are going to need to bring new materials onsite or make a change to a material you are using, make sure you have robust management of change processes in place. Verify that you have the right stakeholders involved, that you are considering the change from various angles, and that the appropriate approval processes are being followed.

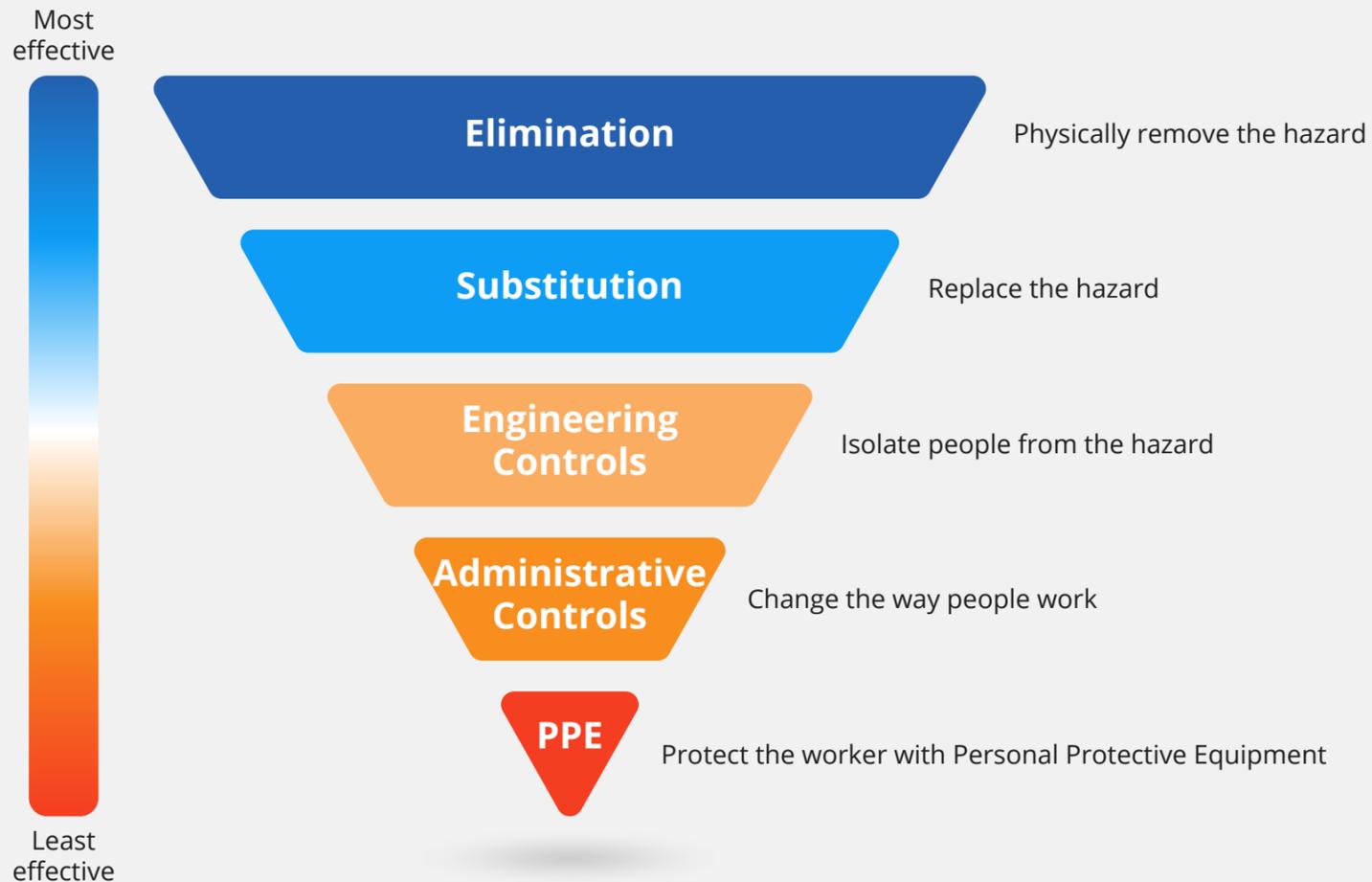
While you're reducing risk, you still want to make sure you are being as efficient as possible, of course, and not slowing down any critical business processes, so ideally you have a system in place that enables you to conduct multiple levels of approvals simultaneously.

Alan: I couldn't agree more with you, Christine. Chemical risk mitigation is absolutely critical and something that all global companies producing or selling products must keep top of mind. But, compounding the difficulty in prevention, detection, and response to risk is the rapidly growing body of chemical ingredients and substitutes produced all over the world. Plus, the ongoing regulatory changes and additions create an environment where the need to have good quality data and controls on both chemical ingredients and finished products is paramount.

Companies who fail to have a defined process in place for risk mitigation can introduce exposures, releases, or even theft. To guard against these ill fates, your organization must ensure it has a process by which it can Assess, Mitigate, Monitor, and Improve on the risk factors driving dangerous outcomes.

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Hierarchy of Controls



To properly reduce risk, companies must have accurate knowledge and data on the locations, hazards, and quantities of chemicals so they can create robust control mechanisms to protect worker, location, and community safety.

Some of the most frequently used controls are:

- Elimination
- Substitution
- Engineering Controls
- Administrative Controls
- Personal Protective Equipment (PPE)

Having a trusted source of chemical property and safety data is key to mitigating and managing risk. Combining this in a centralized, easy to understand reporting structure will set your company up for success.

QUESTION 2:

Getting the Right Data for all My Stakeholders is a Challenge. How Do I Ensure I'm Capturing and Sharing the Right Data – and that Stakeholders Trust that Data?



Capturing and having access to the correct chemical location, hazard, quantity, and safety data is more important than ever. Companies that fail to do this well risk dangerous outcomes...

Alan: Capturing and having access to the correct chemical location, hazard, quantity, and safety data is more important than ever. Companies that fail to do this well risk dangerous outcomes like worker safety incidents or environmental or community exposures or releases like the examples Christine outlined earlier.

Much can be said about the benefits of having a single source of truth across your organization for hazardous substance management. In part, having access to a centralized, trusted source of data enables better reporting accuracy and resolution in times of need. Additionally, applying the same classification between ingredients or finished products helps reduce risk for several key groups across your EHS departments (e.g. Industrial Hygiene, Safety, etc.)

While there are some geographical and jurisdictional variations to the way in which substances are classified, governed, and handled, it is helpful for global companies working across multiple geographies to have consistency in

internal data to ensure an apples-to-apples comparison.

Having a trusted provider that can obtain, aggregate, normalize, and quality control supplier data like Safety Data Sheets (SDSs) provides a safety net for your organization and can make monitoring and control mechanisms much more consistent. If your stakeholders can't easily access data or don't feel comfortable with it, there will be a fundamental breakdown in trust which can lead to even greater organizational problems and risk.

The best thing your organization can do is look to where silos of data exist, create a unified approach to aggregation, and find a partner who can help you keep the data accurate so that trust is reestablished.

Christine: Getting everyone in your organization on the same page and really trusting your data are common challenges we often hear. For organizations that are using a variety of methodologies and systems to collect data, it can be difficult for different groups to trust data they are seeing.





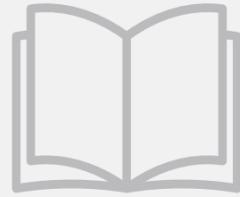
Software solutions can play a critical role in building trust and serving as that single source of truth. When your stakeholders see that data consistently aligns with expectations, that can go a long way toward getting everyone to trust that the data being captured is accurate.

Leveraging a single source of truth for your chemical and EHSQ data can help you create and share consistent data sets that your stakeholders trust.

QUESTION 3:

How Can I Improve
Worker Safety?





RECOMMENDED READING

For more info on building a strong safety culture, check out the following resources:



**Ask the EHSQ Expert: 7
Frequently Asked Questions
About Safety Culture,
Answered**



**Improving Safety Culture:
Where to Focus Your Attention
for Maximum Impact**

Christine: If you look at OSHA's 2018-2019 [list of the most commonly cited violations](#), hazard communication, respiratory protection, and eye and face protection all showed up in the top 10. So, what can we as EHSQ professionals do to improve worker safety at our organizations?

Create a strong safety culture. Be a proactive advocate so employees have knowledge of the chemical risk management processes and procedures at your company *before they need them.*

We know that many EHSQ professionals are onsite at the facilities they are responsible for only a few times a year. If you have infrequent onsite accessibility, take the opportunity to do a temperature check on the safety knowledge at that site while you are there. Strike up a conversation with some of the onsite employees.

Ask them what they would do if they were to notice anything strange and how would they get guidance to know what procedures to follow.

And let's not forget about our Occupational Health Nurses and Doctors. They are critical stakeholders here. They need to be aware of the harms not only to the employees they are treating, but also the potential harms to themselves. You want to make sure that the circle of harm doesn't expand out further than necessary.

SAFETY KNOWLEDGE CHECKLIST

Ask On-Site Employees:

- If they smelled something strange, what would they do?
- Do they know the right places to go to get more information, whether that's a software system or a binder?
- If something spilled, what procedures would they follow?
- Do they know who to go to for guidance if they need it?

Your employees need to know: proper chemical handling procedures, what PPE they should be wearing for handling various chemicals or materials, and how to make sure their PPE fits properly.

Overall, training is critical here for ensuring safe chemical management. Your employees need to know:

- Proper chemical handling procedures
- What personal protective equipment (PPE) they should be wearing for handling various chemicals or materials
- How to make sure their PPE fits properly

Alan: Keeping workers safe is the lifeblood for any organization dealing with hazardous substances. Worker exposures are the single biggest risk to an organization's longevity and staying power in the market. Companies who have a terrible safety track record are feeling more and more social pressure to change their ways and consumers are simply no longer buying their products. Social consciousness of safe products and worker environments is here to stay, and companies need to make sure they are doing everything they can to mitigate worker safety risk.

A good place to start is making sure you have effective controls in place to mitigate worker safety risk. One of the core control processes helping to keep workers safe is having a robust chemical approval process that provides transparency to operators, managers, and the enterprise. Good chemical approval processes are configured to understand the hazard of products being received at a location, the reactivity of the product, and the appropriate handling and storage precautions needed. Organizations that keep workers safe have levels of approval so that many teams have eyes on shipments and can create checks and balances within the organization.

Another key to mitigating worker safety risk is to have accurate inventory data at the ingredient level. If your workers don't know that something is in inventory or that it should not be situated near another volatile product, then the risk of exposure or catastrophe increase.



It's essential that your employees have the proper training and PPE plans in place to mitigate any unknowns.

Like Christine mentioned, it's essential that your employees have the proper training and PPE plans in place to mitigate any unknowns. As the saying goes, knowledge is power and in the case of keeping workers safe – this couldn't be truer. Organizations that strive for zero incidents place an immense focus on training capabilities and getting operators and managers together on critical subjects, whether it be training on the use of PPE or how to handle certain products. The consistency by which an organization continues to train employees, no matter how long they've been there, goes a long way in ensuring employees will continue to maintain a high situational awareness and decrease the chances for safety violations.

QUESTION 4:

How Can I Ensure I'm Using Data Effectively and Getting the Most Value Out of My Chemical Data?



Alan: Chemical data is only useful when it's accurate. Companies often take a hands-off approach and do not pay enough attention to how they are receiving ingredient or product information from suppliers and whether that supply is accurate. Good chemical data management entails having a trusted means to obtain, aggregate, normalize, and quality control data so that it can be useful to your organization. Good controls around the data unlock a treasure trove of value across different parts of the organization. From Facility Shipping/Receiving, to Research and Development to Manufacturing, Sales, and Distribution, all parts of the organization should have central access to chemical data to enable their job function.

Embedding a central source of chemical data into your core business processes allows for your organization to make quicker and more accurate decisions around:

- Handling of products
- Formulation of products
- Manufacturing of products
- Geographical selling and shipping of products

Core Environmental, Health, Safety and Quality teams benefit directly when chemical data is streamlined and there is only one source of truth. It is imperative for worker, facility, and community safety that Industrial Hygienists, Safety Officers, and Managers are on the same page with the same information. This reduces the risk of poor decisions, advice, or accidents that will dramatically elevate the possibility of harm. Enabling everyone with access to the same data makes communication more fluid and provides a common vernacular that everyone can speak, while reducing confusion and increasing safety for your workers and your business.

CHEMICAL DATA MANAGEMENT

Factors Informing Decisions



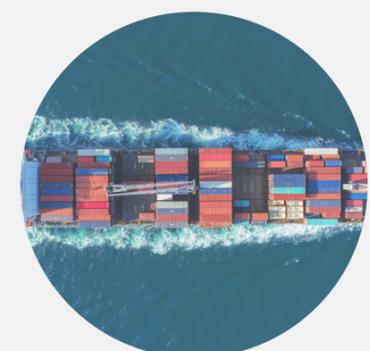
Handling of Products



Formulation of Products



Manufacturing of Products



Geographical Selling & Shipping of Products



Christine: Alan is spot on – instead of taking a siloed approach to chemical management, take a step back and think of all the impacts chemicals have across all your environmental, health, safety, and quality programs.

There are of course employee health considerations to keep in mind. You may have Industrial Hygienists on staff who need chemical information. The chemicals you have onsite can have impacts throughout environmental programs through spills and emissions, and you need to properly dispose of chemicals through your solid and hazardous waste management programs. All these touchpoints create opportunities for you to use your chemical data in meaningful ways that allow you to derive additional value. A unified platform can take data from your Safety Data Sheets (SDSs) and apply it throughout your EHSQ programs.

Let's consider the various touchpoints chemical data has in most companies' environmental programs. Your chemical data is probably used for a variety of purposes including in your Spills program, your Toxic Release Inventory (TRI)

reporting, your Air Emissions Inventory, and of course in your solid and hazardous waste programs as you ensure proper chemical disposal.

When it comes to Industrial Hygiene, Occupational Exposure Limits (OELs) are listed within most SDSs – this is critical information for your Industrial Hygienists to have to make sure workers are not being overexposed to chemicals, and if they are, that appropriate extra measures such as additional PPE are followed. This information is critical to make sure worker health is protected and regulatory compliance obligations are met.

If these processes are all siloed, then your organization is potentially duplicating efforts to keep this information up to date in several places.

When it comes to Industrial Hygiene, Occupational Exposure Limits are listed within most SDSs – this is critical information for your Industrial Hygienists to have to make sure workers are not being overexposed.



And again, because chemicals can impact so many areas of your EHSQ programs, from water to waste to industrial hygiene, having access to chemical data can be a critical component of your various risk assessments. To effectively identify risks, you need to know which chemicals are onsite at different facilities and which workers are at risk depending on job function.

QUESTION 5:

I've Been Told by Management that We Don't Have Time or Funds to Implement a Technology Program to Streamline Our Chemical Management. How Do I Get Buy-in from Senior Leadership to Move the Organization Forward?





Alan: Safety is something that every company should invest in. Keeping workers, communities, and the environment safe is a responsibility of any dutiful organization dealing with hazardous substances. The world is watching those who do good closer than ever, while investors and customers are increasingly utilizing this criterion.

Investing in an Environmental, Health, and Safety technology program to streamline chemical safety is one of the best choices your company can make.

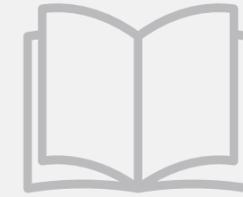
From a cost point of view, standardizing to one chemical data source on one platform helps your organization reduce its total cost of safety. Not only does your company benefit from the cost consolidation of applications, but also the cost consolidation of training. Plus, risk reduction occurs as all employees know which system to turn to in times of need or emergency.

From a revenue perspective, safer workers are more productive and able to help move product to market quicker. Having that single source of truth helps your organization

streamline communication between traditionally siloed parts of the business, like Research and Development, Compliance, Manufacturing, and Sales. Breaking down these barriers also makes your organization more efficient in the production of goods sold. Additionally, companies who have lower barriers between functional areas are shown to be more innovative and creative. Removing constant worry about safety or roadblocks from other departments fosters a culture of innovation and helps create a faster innovation funnel.

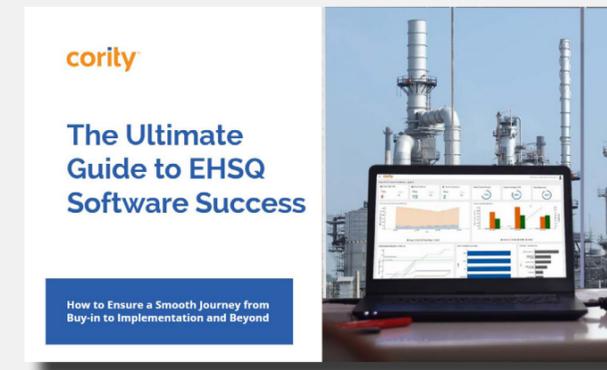
Christine: Getting buy-in and project funding from management is an issue we hear all the time from the EHSQ professionals we speak to. To help address this, we created [The Ultimate Guide to EHSQ Software Success](#), which walks through how to secure buy-in across the different levels of your organization (plus other best practices to consider when embarking on technology projects).

When it comes to the C-suite you need to be able to show the value to your company in real dollars. You want to be able to justify the cost of your chemical management



RECOMMENDED READING

For more info on how to get buy-in and secure project funding, check out the following resource:



The Ultimate Guide to EHSQ Software Success

When you are building out your business case, you'll want to be clear on your assumptions and have an understanding of the outcomes of several scenarios to anticipate any questions that could arise.

software. It's common to look at cost savings from the lens of reducing or eliminating fines. Looking at worker safety is another common way to quantify ROI. If you look at incidents and time lost, you can find concrete numbers to help justify costs.

When you are building out your business case, you'll want to be clear on your assumptions and have an understanding of the outcomes of several scenarios to anticipate any questions that could arise. For example, if you factor for a 50% reduction in fines, but your leadership team anticipates only a 15% reduction in fines, make sure you know whether your software investment would still provide enough value for your company.

Finally, look for value creation initiatives. Most EHSQ software platforms can provide you with robust analytics and when you understand your data, it can help you find operational cost efficiencies. When it comes to chemical management, one specific opportunity would be for your purchasing department to buy chemicals in bulk and distribute them to

secondary containers. Once you know the exact quantities of chemicals you are bringing onsite at various facilities, these kinds of opportunities can be much easier to spot. The specific cost savings opportunities will vary by organization, but we've found that most of our customers have come up with innovative ways to reduce risk and create value across the organization with their data.



Final Thoughts.

Considering today's ever-evolving regulatory landscape and the need to keep your employees and the environment safe, your organization must run a best-in-class chemical program that spans approvals, inventories and SDS management, and provides a single source of truth for all your critical chemical and EHSQ data across the enterprise.



Meet Verisk 3E.

Verisk 3E, formerly 3E Company, delivers intelligent compliance solutions that empower companies to reduce risk, drive continuous improvement, and create new growth opportunities. For more than 30 years, Verisk 3E has provided clients with the expertise, content, live 24-7-365 environmental health and safety (EHS) support, and award winning solutions required to increase chemical and workplace safety, improve product safety and stewardship, strengthen supply chain stewardship, and optimize research and development decision support.

We are deeply committed to serving our more than 5,000 customers worldwide, including nine of the world's top ten chemical manufacturers, eight of the world's top ten retailers, and seven of the world's top ten pharmaceutical companies. Global locations include our corporate headquarters in Carlsbad, California, along with offices in Beijing, China; Bethesda, Maryland; Canton, Ohio; Copenhagen, Denmark; Frankfurt, Germany; Markdorf, Germany; Montreal, Quebec; Siegen, Germany; Sofia, Bulgaria; and Tokyo, Japan. Verisk 3E is a Verisk (Nasdaq:VRSK) business.

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Meet Cority.

Proven, award-winning software, recognized by independent industry analysts for covering every aspect of EHSQ. Our unified true SaaS platform is designed, deployed, and supported by experts who have literally walked in your shoes. Cority has an unmatched record of deployment and adoption success, plus the highest client satisfaction in the industry. For over 35 years we've been trusted by leading organizations to advance their success and provide measurably better EHSQ outcomes.

Cority for Chemical Management

Cority's comprehensive chemical management solution helps you manage the entire chemical lifecycle, from approving chemicals being brought onsite to chemical inventory management and storing safety data sheets and related documents. With Cority, you can limit the risk of unsafe chemicals to protect your products and employees, maintain compliance and support your organization's sustainability initiatives, and ensure your workforce has access to the hazard and chemical information needed to stay safe.

Let's start the conversation, today.

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