

### Increase safety, improve compliance and streamline hazard communication authoring processes

Companies are obligated to provide employees and downstream customers with unlimited access to critical safety information via Safety Data Sheets (SDSs) and other hazard communication documentation. Creating and maintaining comprehensive, updated SDSs that conform to complex and changing regulations in multiple jurisdictions worldwide is a challenging and resource-intensive task. Authoring Services from 3E Company can help.

3E's global, multi-lingual staff of highly qualified authors can create, analyze and manage globally compliant SDSs and product label content conforming to the regulatory and language requirements of more than 60 countries. With Authoring Services, 3E can serve as an extension of your Environmental Health & Safety (EH&S) team, enabling you to comply with workplace safety and employee right-to-know regulations while freeing up your internal resources, decreasing risk and strengthening product and facility stewardship.

### What 3E Authoring Services Can Do For Your Organization

#### DELIVER SOLUTIONS TAILORED TO YOUR REQUIREMENTS

We offer flexible, affordable options:

##### Outsourced Authoring Services

Do you need to produce high quality, multi-lingual safety communication documents that conform to regulations in multiple jurisdictions? 3E is here to help. Our global team of authoring experts can provide end-to-end authoring services. We will identify your requirements, leverage the latest global regulatory content, create compliant documents in multiple languages and make them available across your organization. We are the trusted source of fully outsourced authoring for many of the world's largest multinational chemical manufacturers.

##### Co-Authoring Services

With Co-Authoring Services, 3E authors can write and produce SDS documentation on your own platform. We will access your authoring system remotely and securely and use your company's source for regulatory data. Conversely, 3E's Ariel® regulatory content, considered the industry's gold standard because of its breadth of coverage and quality, can also be integrated easily. Our authors will follow your corporate authoring guidelines and a collaboratively developed formal review and approval process that results in a highly efficient and cost effective solution.

##### Authoring on Request

If you require SDS authoring for 20 products or less, you may be eligible for a standard service option that provides compliant documents via an easy-to-use automated online process.

##### Authoring Platform

We offer a powerful SDS authoring, management and distribution solution. Our MSDgen® platform is designed for companies with in-house EH&S staff who need to effectively manage the complexities of authoring and issuing reliable hazard communication documentation.

#### IMPROVE SAFETY AND COMPLIANCE WITH 3E AUTHORIZING SERVICES

- Produce high quality, globally compliant documents using 3E's unique combination of services, SDS tools and regulatory content
- Meet ingredient and hazard classification disclosure requirements in all markets worldwide
- Provide SDSs in all languages required including those with double-byte characters
- Free up internal EH&S resources to focus on core business and strategic goals
- Support your in-house staff during fluctuations in workload
- Achieve cost efficiencies by shifting fixed costs into variable expenses according to business needs
- Leverage the most current and comprehensive global regulatory content
- Access toxicological and eco-toxicological evaluations and determinations, including hazard classifications, labeling, workplace exposure limit settings and exposure scenarios
- Provide accurate domestic and international transportation determinations including air, land and water

## UTILIZE 3E'S INDUSTRY-LEADING REGULATORY CONTENT

At the core of all 3E products and services is our premier global regulatory content – aggregated, refined and maintained by our world renowned compliance specialists using documented best practice methodology and through direct relationships with regulatory bodies across the globe. This stands in stark contrast to other vendors who may buy the bulk of their content from a third party, and then simply repackaging and resell the information.

3E has the content, the underlying technology and the expertise to author the hazard communication documents your organization needs to protect employees and ensure compliance.

More than 300 multinational organizations, including 70% of the world's top 50 chemical manufacturers, rely on our up-to-date, accurate, multi-lingual content every day. The breadth of countries covered and depth of regulatory and legislative information provided offer unprecedented support for identifying, monitoring and complying with ever-changing EH&S and industry requirements.

## LET 3E SERVE AS AN EXTENSION OF YOUR EH&S DEPARTMENT

3E's highly qualified, multi-lingual team has authored SDSs and label documents for global manufacturers throughout Europe, Asia Pacific and the Americas. We have proven experience authoring on a variety of platforms including 3E's own MSDgen, SAP® EHS Management, ProSteward®, Wercs® and others.

3E's global, multi-lingual regulatory experts can act as an extension of your team to author and maintain comprehensive, updated SDSs and labels that conform to complex and changing regulations in multiple jurisdictions worldwide.

<p><b>Coating</b></p> <p><b>Hazard statement</b> Flammable liquid and vapor. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May damage fertility or the unborn child.</p> <p><b>Precautionary statement</b></p> <p><b>Prevention</b> Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Grounded container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.</p> <p><b>Response</b> If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.</p> <p><b>Storage</b> Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.</p> <p><b>Disposal</b> Dispose of contents/container in accordance with local/regional/national/international regulations.</p>	 <p><b>Danger</b></p> <p><b>Supplemental information</b> This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.</p>
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Our authors draw from experience gained in a variety of disciplines including environmental health, sciences and engineering; natural resources; toxicology; product safety and stewardship; chemical engineering; business process engineering; dangerous goods logistics; hazardous materials management; emergency response; chemistry; law and others. They possess an array of industry expertise including chemical, process, consumer product and pharmaceutical manufacturing; food and beverage; waste management; emergency response; environmental consulting; healthcare; retail; supply chain and more.

## ENSURE COMPLIANCE

3E's Authoring Services can enable you to comply with local, national, regional and global hazard communication requirements including the Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) and Globally Harmonized System of Classification and Labeling of Chemicals (GHS). You will be supported by the world's leading provider of intelligent compliance solutions.

## MAINTAIN CONFIDENTIALITY

All proprietary information shared with 3E for the purposes of authoring SDSs will remain confidential. The final 3E-authored SDS is also the property of the customer and will be made available to end user customers, or kept confidential, in conformance with your policy.

## SOLVE HAZARD COMMUNICATION CHALLENGES WITH ENHANCED AUTHORIZING SERVICES

### Label Generator

Are you able to quickly and easily print GHS compliant transport, hazard and precautionary labels for all intended markets? With Label Generator, 3E Authoring Services customers can generate labels for substances, mixtures and finished goods in seconds using a highly intuitive online interface.

Using Label Generator anyone in your organization – from shipping personnel to shop floor operators, R&D departments, toll blenders, distributors and affiliates – can quickly and easily print accurate, up-to-date and compliant labels in any location around the globe.

To ensure employees worldwide can comply with hazard communication requirements, the solution leverages current label content and compliant, consistently updated templates. Content that appears on each label varies by label type and region and includes GHS hazard classifications, GHS symbols, GHS precautionary statements, handling instructions, transport information and manufacturer information. Label Generator also allows shipment specific information such as lot number, manufacturing date, expiration date, etc. to be added to the label prior to printing.

Label Generator supports the generation of labels in a variety of sizes and formats including dozens of formats for country and regional regulatory compliance such as country-specific adaptations of GHS. We offer more than 45 country templates. Each is available in the language required by the regulation.

The solution features a user-friendly online interface that supports a variety of devices including tablets and touch displays. With minimal training, users can

easily create and print workplace safety labels on demand in Portable Document Format (PDF) using standard internet browsers. Security features allow you to set permissions and enable access to labels based on user roles. With Label Generator you can also print custom formats to meet unique business and industry requirements.

### Extended Safety Data Sheet Authoring for Mixtures and Substances

Under EU REACH guidelines, companies supplying 10 tons or more per year of a hazardous substance within the EU must provide Exposure Scenarios as an integrated component of their SDSs. Exposure Scenarios must include risk assessments for every use to ensure the substance is properly controlled at all times. The extended document, known as an eSDS, must cover all identified uses of a substance throughout its lifecycle.

eSDSs can be difficult and time consuming to author. Companies struggle with providing information downstream, and formulators using substances in their mixtures have difficulty incorporating information from suppliers. 3E's Exposure Scenario authoring services can ease your burden by creating accurate and reliable Exposure Scenarios for both pure substance products and individual components in a mixture, and incorporating this information into safe use information for mixtures.

At 3E we leverage deep regulatory, toxicological and chemical expertise along with extensive experience authoring eSDSs to ensure readability, comprehensiveness, consistency and compliance with EU REACH and any additional applicable national regulations.

### eSDS Authoring for Substances

We can enable customers using registered hazardous substances to comply with EU REACH by authoring comprehensive eSDSs that contain Exposure Scenarios, conform with relevant national regulations, ensure consistency with the Chemical Safety Report (CSR), and provide information to downstream users including formulators.

### eSDS Authoring for Mixtures

We can enable mixture formulators using registered hazardous substances to comply with EU REACH by authoring comprehensive eSDSs for mixtures that incorporate information received from their suppliers.

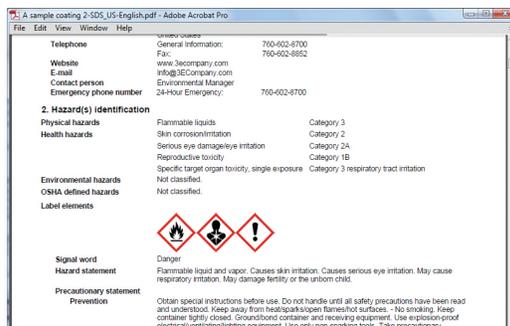
We can help to identify applicable approaches, selecting one of many established and finalized industry specific safe use mixture determination methodologies. In cases where these are not applicable we can apply the Lead Component Identification (LCID) methodology. 3E experts can also help to choose the most appropriate format for communicating this information to downstream users.

We support pre-defined formats such as industry-specific Safe Use of Mixtures Information (SUMI) templates with the option to incorporate within the main body of the SDS. We also support the ability to annex relevant Exposure Scenarios for ingredients within the mixture.

### Exposure Scenario Phrase Libraries

We can help companies meet the EU REACH requirement for eSDSs containing Exposure Scenarios in all national languages. 3E has developed a complete, ready-to-use Exposure Scenario Phrase Library containing phrases translated into all European Economic Area (EEA) languages and vetted for quality.

3E translated the industry standard ECom harmonized phrase catalogue into 28 languages using certified translators to ensure a level of quality and accuracy previously unavailable in the market. The 3E Exposure Scenario Phrase Library is available by subscription to MSDgen users as well as new and existing 3E Authoring Services clients.



3E has the content, the underlying technology and the expertise to author the hazard communication documents your organization needs to protect employees and ensure compliance.

### SDS Monitoring and Regulatory Change Notification

Countries continually update SDS and label requirements to reflect evolving GHS obligations and new chemical hazard information. SDSs and labels can quickly become outdated and noncompliant unless a systematic review and update process is in place. 3E can monitor all regulatory changes affecting the documents we have authored for you and advise when updates are required.

Our team of compliance specialists constantly tracks regulatory developments worldwide. With our SDS Monitoring and Regulatory Change Notification service, 3E can prepare a Regulatory Impact Analysis report which identifies each SDS and label requiring an update as well as the change that has occurred. The Regulatory Impact Analysis report is delivered every six months and covers all documents 3E has authored at the time the report is created.

### Base Chemical Classification Library

The Base Chemical Classification Library features a collection of continually updated regulatory classifications for an expansive list of chemical

substances that can be easily imported into hazard communication authoring systems. You can use this content to classify substances and mixtures according to their health, environmental and physical hazards in compliance with GHS standards.

3E's team of toxicologists and regulatory specialists has done the research for each substance, delivering ready-made content that increases accuracy and saves time for your team. For each chemical substance in the library a distinct set of GHS classifications is provided for the regulatory authorities that have adopted the standard. The library also offers an up-to-date and extensively researched set of physical, chemical and toxicological data to substantiate and support the classifications.

The Base Chemical Library is regularly updated to include classifications for new authorities as well as any required changes for existing authority classifications. The content can be imported into MSDgen and SAP EHS, as well as other commercial SDS authoring systems.

#### SDS Authoring Training

3E offers hands-on SDS authoring training conducted by our authoring experts. Beyond regulations and competent authorities, SDS authoring is a discipline that requires specific skills and advanced resource management abilities. Learn how to access reliable data, write compliant SDSs, generate accurate GHS classifications, utilize best practices and more on the platform of your choice.

Sessions are taught by regulatory compliance specialists with deep industry and authoring expertise as well as training experience. Small class sizes and low student-teacher ratios enable personalized instruction and hands-on learning, including practical exercises and tests for each topic. Training can be hosted on-site at your facilities, at a predetermined location, at a 3E office or online.

#### Emergency Response Support 24-7-365

3E can provide emergency response support by placing our 24-7-365 toll free telephone number on

the SDS. Authoring customers can use this number to serve as the initial emergency response contact for personnel handling the product.

#### Vendor SDS Management

Manufacturers often need critical information from their vendors' SDSs and raw materials for inputs into their own compliance documents. We offer flexible options for managing this data including 3E Online, our award-winning SDS and chemical inventory management solution, as well as streamlined integration with any corporate system, including many commercially available platforms and ERP systems such as SAP EHS Management.

#### Vendor SDS Distribution

3E's SDS Authoring Services can be extended to include SDS distribution services, empowering downstream end user customers to access SDSs a variety of ways:

- **Hosting:** Enable access via a website maintained and hosted by 3E.
- **Push:** Distribute SDSs to customers via regularly scheduled deliveries by email, fax or postal mailing.
- **eLink:** Offer access to hosted documents via a link provided by 3E to the manufacturer or distributor's website.

#### Regulatory Consulting Services

3E's highly competent team of regulatory analysts, chemists, toxicologists, EH&S specialists and other compliance experts can work closely with you to identify and analyze your organization's specific compliance obligations. We can provide actionable regulatory guidance and architect practical, effective solutions to even your most complex product and facility stewardship and regulatory compliance challenges.

In topics such as Toxic Substances Control Act (TSCA), REACH, Food Contact and Dangerous Goods Classifications 3E has particularly high levels of expertise and is ready to spearhead and support your compliance efforts.

### CHOOSE 3E COMPANY

3E Company, a Verisk Analytics business, is a global provider of data and information services which enable companies to improve compliance with EH&S regulations and supply chain obligations through the entire lifecycle of chemicals and products. Whether you are a manufacturer, distributor or corporate user of chemical products, 3E can tailor a program specific to the compliance information and management needs of your organization. For more than 25 years we have led the industry in obtaining and managing content, offering unique insights and solutions that enable customers to reduce cost and risk while improving processes across the enterprise and throughout the supply chain. Global locations include our corporate headquarters in Carlsbad, California along with offices in Bethesda, Maryland; Canton, Ohio; Copenhagen, Denmark; Kingsport, Tennessee; Montreal, Quebec and Tokyo, Japan.

#### Want to learn more?

Contact 3E at [info@3ecompany.com](mailto:info@3ecompany.com) or +1 760.602.8700 / +1 800.360.3220.