Poster Presenters – 2026 SCHC Poster Session

Title: Timeline of Explosives Hazard Communication: From Nitroglycerin Crises to GHS Standardization (1860s-2020s)

Presenter: Gwyndolyn Rogers - Nelbro

Abstract: Effective hazard communication for explosives has evolved dramatically from rudimentary text warnings on wooden crates to today's standardized GHS pictograms, Safety Data Sheets (SDS), and precautionary statements. This poster presents a comprehensive visual timeline tracing 160 years of progress in communicating explosive hazards, driven by catastrophic incidents, industry self-regulation, and regulatory harmonization.

Key milestones include the 1866 nitroglycerin transport explosions that prompted the first U.S. federal restrictions on dangerous goods; the 1907 formation of the Bureau of Explosives and subsequent ICC/DOT placarding requirements; the U.S. Bureau of Mines' permissible explosives program for safer mining; the 1913 founding of the Institute of Makers of Explosives (IME); OSHA's landmark 1983 Hazard Communication Standard introducing the "Right-to-Know"; and the 2012/2024 GHS alignments that introduced the exploding bomb pictogram, 16-section SDS format, and updated criteria for desensitized explosives and self-reactives.

This poster features a chronological display with milestone icons, before-and-after label comparisons, mining-specific examples, and fatality reduction trends. Additional information highlights practical lessons for specialty chemicals and blasting operations.

This historical perspective underscores how improved hazard communication has reduced workplace incidents and offers actionable insights for contemporary training, labeling, and emergency response programs in high-hazard industries.

Title: Microplastics Regulation: Navigating Emerging Hazard Communication Obligations for the Chemicals Industry

Presenters: Veronica Marrero, Rennee Karlik, Nabila Al Hasan -- TotalSDS

Abstract: Microplastics – synthetic polymer particles smaller than 5 millimeters – have rapidly transitioned from an environmental concern into a formal regulatory priority with direct, actionable consequences for the chemicals industry. The European Union's REACH Restriction (Annex XVII, Entry 78), which took effect in October 2023 and reached its first major compliance deadline in October 2025, now requires suppliers of synthetic polymer microparticles (SPMs) to update Safety Data Sheets (SDS), communicate polymer identity and quantity, and provide end-use and disposal instructions to downstream users. Annual emission reporting to the European Chemicals Agency (ECHA) commenced in May 2026. Meanwhile, in North America, regulatory momentum is accelerating: California's Department of Toxic Substances Control has proposed adding microplastics to its Candidate Chemicals List, and a patchwork of state-level legislative activity continues to expand across the country.

This poster examines what these developments mean in practice for Hazard Communication professionals. We explore the specific SDS and labeling updates now required under EU REACH, how the definition of "synthetic polymer microparticle" maps (or fails to map) to existing chemical classification frameworks, and the compliance gaps that emerge when microplastics are present as incidental components in chemical formulations. We also compare EU obligations against the fragmented U.S. regulatory landscape to help practitioners assess their current exposure.

Attendees will leave with a practical understanding of current and near-term hazard communication requirements, the key ambiguities that remain unresolved in regulatory guidance, and a framework for assessing whether their products or supply chains may trigger SDS update or reporting obligations.

Title: Beyond Noise: Ototoxicity and Hazard Communication Gap

Presenter: Ujwala Wani – NexTier Completion Solutions

Abstract: Ototoxicity, a hearing loss caused by certain chemicals, is an occupational health concern. While regulatory frameworks under the GHS classify neurotoxicants and systemic hazards, they do not adequately address the chemicals that cause hearing loss, either independently or synergistically with workplace noise. This creates a hazard communication gap for ototoxic chemicals, which can cause irreversible inner ear damage.

This poster evaluates known chemical ototoxicants through a dual-framework approach to assess compatibility. It examines the NIOSH Occupational Exposure Banding (OEB) process and the GHS STOT-RE classification criteria, individually or integrated, and whether they can effectively bridge the hazard communication gap for ototoxicants that lack data.

First, the toxicological data points will be compared, including No Observed Adverse Effect Levels (NOAELs) and Lowest Observed Adverse Effect Levels (LOAELs) to specific damage to the auditory system, such as cochlear hair cell loss, against the guidance values outlined in GHS STOT-RE. Then, the same data sets will be analyzed with NIOSH OEB Tier 1 and Tier 2 protocols to determine whether hearing loss can reliably drive the selection of a protective health-based exposure band. Finally, we will assess whether combining the above criteria can close the hazard communication gap.

The pros and cons of using GHS STOT-RE and OEB to assess ototoxicants will be discussed, along with the potential benefits of this integrated approach for SDS authoring.

Title: The Heartbeat of Compliance - Why the EU Rules Chemical Regulation

Presenters: Francesca Fasano, Chiara Chiarello, Antonio Conto -- ChemSafe

Abstract: In the complex landscape of European chemical legislation, the Safety Data Sheet (SDS) transcends mere bureaucratic routine; it serves as the "heartbeat" of regulatory compliance. This document acts as the essential conduit for circulating critical data throughout the EU market, ensuring seamless integration between horizontal frameworks like REACH and CLP and various vertical regulations. Furthermore, the SDS stands out for its "cascading impact" across the entire regulatory landscape. By integrating the requirements of various European regulations into a single document (from biocides and detergents to cosmetic raw materials, explosive precursors, and ozone-depleting substances) it ensures that any significant internal change, such as a reclassification in Section 3, automatically ripples through the entire regulatory chain. Consequently, this technical document becomes an indispensable source for informed and safe decision-making at all levels, supporting experts in product safety assessments and guiding downstream users in workplace risk management. Currently, one of the sector's primary challenges lies in the delicate balance between protecting Confidential Business Information (CBI) and meeting full-transparency obligations. To overcome this hurdle and ensure genuine traceability, transitioning toward structured, digitized SDS datasets is now the only viable path forward. Viewed this way, a rigorous and accurate SDS transforms into a fundamental strategic asset: it not only builds trust throughout the supply chain but also shields businesses from potential market blocks in an increasingly integrated and interconnected legal environment

Title: Japan ISHL in Motion: Are You Keeping Up?

Presenters: Beth Raper, Alexis Wilhelm – UL Solutions

Abstract: Japan's Industrial Safety and Health Law (ISHL) is a comprehensive chemical regulation that continues to undergo significant annual revisions. Recent updates have expanded requirements for Safety Data Sheets (SDSs), labels, chemical disclosure, occupational exposure limits (OELs), and trade secret protections. As the number of regulated substances continues to grow, companies face increasing challenges in maintaining compliance and ensuring accurate hazard communication.

This poster provides an overview of key ISHL developments, including updates to alternative chemical name requirements and the expanding obligations for chemical suppliers. The poster will focus on evolving ISHL requirements impact SDS authoring, labeling decisions, and disclosure strategies. Also, highlighting common compliance challenges and offer considerations for maintaining accurate safety documentation in Japan's rapidly changing regulatory environment.

Title: OSHA HAZCOM 2024 SDS Library Update

Presenter: Rachel Hansen - Hawkins

Abstract: The OSHA HAZCOM 2024 deadlines are rapidly approaching for us all. Hawkins, Inc has been diligently working on updating our 11,000+ SDSs library to be compliant with the new regulations. Our poster would lay out our process to identify the products as substance vs mixture and SDSs developed both internally or provided by our vendors to assign priorities. It will also discuss the preliminary work performed to assist updating the Hawkins-developed SDSs quickly and consistently. There will be multiple strategies laid out on how we update vendor SDSs and communicate to our vendors that regulations have occurred. The poster will discuss strategies and solutions to problems we have found along the way.

Title: Short Form, Long Impact: A Playbook to Prop-65 Compliance

Presenters: Ewa Lotkowska, Jillian DiCesare – Henkel Corporation

Abstract: California Proposition 65 (Prop 65) has long required businesses to provide warnings before exposing consumers to chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm. For many years, companies relied on the short-form safe harbor warning, which allowed the use of generic warning language without identifying specific chemicals. In response to concerns regarding the effectiveness and transparency of these warnings, the California Office of Environmental Health Hazard Assessment (OEHHA) amended the short-form warning regulations under Title 27, California Code of Regulations, Article 6, Clear and Reasonable Warnings. The revised requirements, which become mandatory for products manufactured on or after January 1, 2028, represent one of the most significant changes to Prop 65 labeling in recent years.

Our goal is to present and examine the evolving regulatory landscape surrounding Prop 65 short-form warnings and highlight implications for manufacturers, distributors, and retailers selling products into California. The amended regulations require businesses to identify at least one listed chemical associated with each applicable hazard endpoint on short-form labels, creating a shift from generic warnings to more informative, chemical-specific consumer disclosures. In addition, online and catalog warnings must align with on-product labeling, and specific formatting requirements, including signal words and font size standards, must be met.

The transition presents substantial compliance challenges. Companies must evaluate product portfolios, identify Prop 65-listed substances, assess applicable hazard endpoints, collect supplier and formulation data, determine exemption eligibility, and update product artwork and consumer-facing communications. Failure to comply may result in significant enforcement risks, including civil penalties, private litigation, costly settlements, product reformulation efforts, and supply chain disruptions.

To support successful implementation, this presentation will outline phases to compliance leading up to the January 1, 2028 deadline. By providing an overview of the regulatory changes, associated business impacts, and practical implementation strategies, our presentation aims to help organizations proactively prepare for compliance while minimizing legal, operational, and commercial risks associated with California Proposition 65 warning requirements.

Title: Turning Data into Decisions: A Workflow for GHS Classification and SDS Development

Presenter: Emily Bergman – Henkel Corporation

Abstract: Developing SDSs often requires the collection, review, and interpretation of information from a variety of sources, including eco- and human toxicological studies and physicochemical property information. Converting data into consistent, well-documented hazard classifications and SDS content requires a structured and transparent review process and effective data management.

This poster will present a workflow-based methodology for evaluating and documenting data used to support SDS development. The approach will follow several key stages: upload, sort, assess, collate, approve, and output generation. Best practices for data collection, evaluation, synthesis, and documentation are integrated within a structured data management system to support consistent, traceable, and scientifically defensible hazard classification determinations.

The workflow emphasizes traceability to source data, documentation of classification rationale, and transparent recording of review outcomes. Data, studies, and supporting documentation are maintained within a centralized repository, creating a structured knowledge base that can be updated as new information becomes available. The resulting output supports hazard classifications and SDS content while preserving the scientific rationale and decision-making process to facilitate future updates as new data become available.

Using practical examples, this poster will demonstrate how a defined review methodology and data and documentation system can improve consistency, facilitate future reassessments, and provide a clear record of decision-making for hazard communication activities.

Title: When the SDS Can't See PFAS: The Fluoropolymer Blind Spot in Hazard Communication

Presenter: Sheeba Kapoor -- Avient

Abstract: A polyolefin masterbatch containing a PTFE-based fluoropolymer processing aid can carry a fully GHS-compliant Safety Data Sheet that is completely silent on its PFAS status. GHS classifies substances by what they do: toxicity, flammability, reactivity. PFAS regulations, including EPA TSCA Section 8(a)(7), the EU proposed PFAS restriction, and several U.S. state disclosure laws, classify substances by what they are: molecular structure, regardless of hazard. Fluoropolymers such as PTFE meet no GHS hazard class, yet satisfy PFAS structural definitions, creating a blind spot no compliant SDS is built to flag.

This poster compares SDS content for a fluoropolymer processing aid across four jurisdictions: the US, Canada, Mexico, and the EU. All four SDSs are fully compliant, and none disclose PFAS status, so screening tools built on SDS content return a false negative even where state PFAS reporting obligations apply.

The poster closes with three paths available today: voluntary Section 15 disclosure, supplier declarations beyond the SDS, and regulatory mechanisms such as the EU SCIP database.