



# Connecting Hazard Data with Digital Product Passports (DPPs) for Enhanced Chemical Safety and Sustainability

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Scan to explore an example of DPP built from information collected and transferred throughout the value chain

## 1 Digital Product Passports (DPPs): Essential Solution for Keeping Pace with Global Regulations and Advancing Sustainability in the Chemical Industry

The adoption of Digital Product Passports (DPPs) is increasingly driven by a combination of global regulatory requirements and market demands. While significant changes in Europe, such as the European Green Deal and the Sustainable Products Initiative, are at the forefront, their influence extends across the globe. As supply chains become more interconnected, companies worldwide, including those in the U.S., must comply with these standards to maintain access to critical markets. The broader push for sustainability, as reflected in global initiatives like the UN's Sustainable Development Goal 12 (SDG 12), reinforces the need for DPPs. They offer a proactive solution to meet diverse regulatory demands for information collection and reporting, transparency and sustainability.

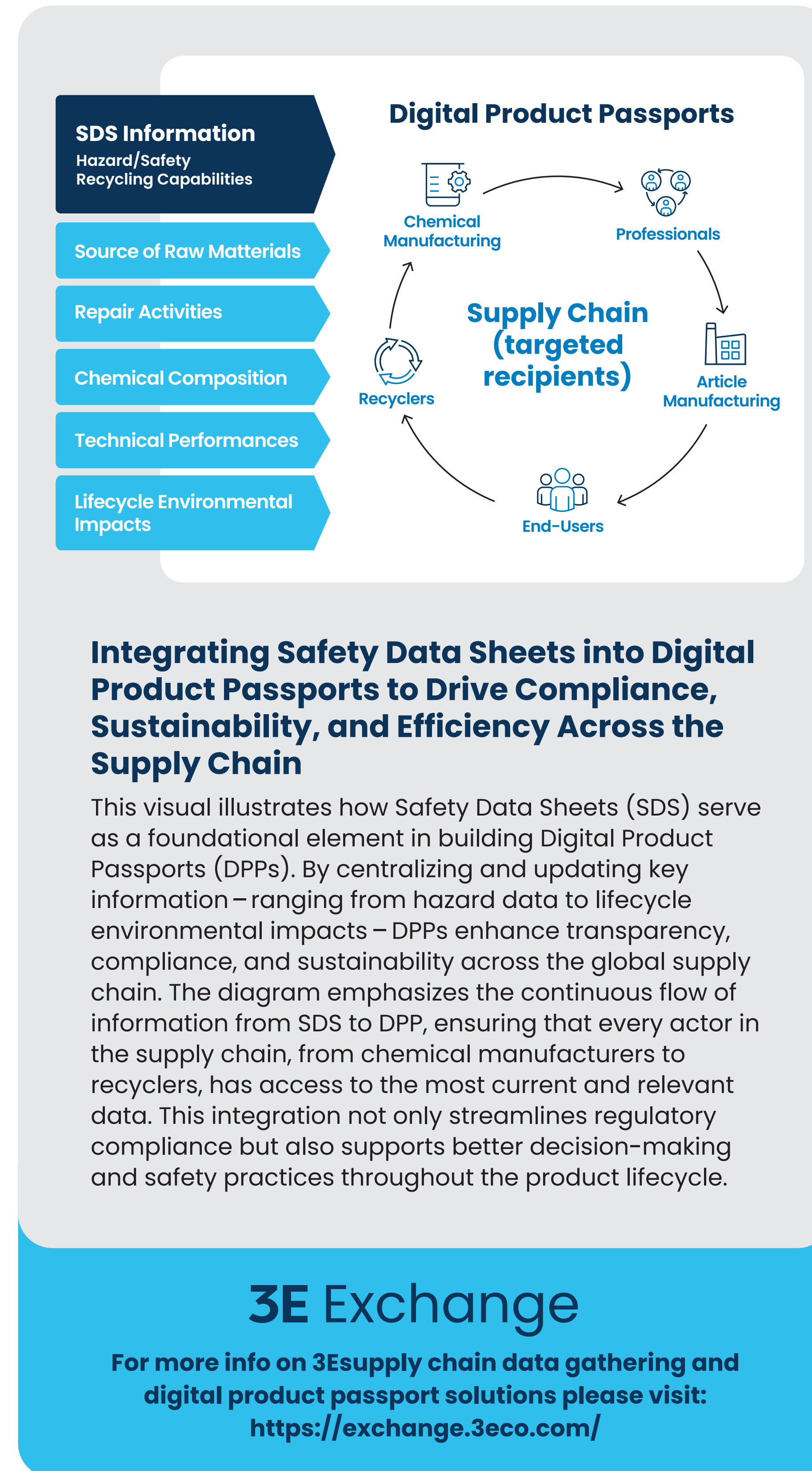
## 2 Why chemical companies should be interested in DPPs?

Chemical companies should invest in Digital Product Passports (DPPs) to streamline regulatory compliance while enhancing worker safety. By ensuring that hazard information is always up-to-date and easily accessible, DPPs reduce the risk of outdated Safety Data Sheets (SDS) and improve supply chain communication. They also support better data management for health and safety, keeping workers informed about the latest safety practices. This not only mitigates risks but also positions companies as leaders in sustainability and responsibility.

**Additional strategic advantage** – While DPP regulations are more common in Europe, early U.S. adopters can gain a competitive edge. By leveraging DPPs to better organize data and gain valuable experience in DPP and supply chain communication, companies can share insights with regulators during public consultations, helping to align upcoming regulations with industry needs.

## 3 Key Benefits of Digital Product Passports (DPPs) for the Chemical Industry

- **Streamlined Regulatory Compliance:** Ensures hazard information is always up-to-date, reducing the risk of outdated SDS and non-compliance.
- **Enhanced Worker Safety:** Provides better data management, keeping workers informed about the latest safety practices and regulations.
- **Improved Supply Chain Communication:** Simplifies and enhances transparency, making data transfer more efficient across global supply chains.
- **Sustainability Leadership:** Positions companies as leaders in sustainability and corporate responsibility, meeting global market demands.



## 4 Benefits of building Digital Product Passports (DPPs) from Safety Data Sheets (SDS)

- **Seamless Updates:** Transforming SDS into DPPs ensures that critical hazard and safety information is dynamically updated in real-time across the entire value chain, maintaining accuracy and relevance.
- **Multi-Industry Support:** No matter whether your raw materials are going into batteries or textiles, your Digital Product Passport can help you comply with the related requirements
- **Protected Information:** DPPs allow companies to control access to sensitive data, safeguarding proprietary information while ensuring that essential details are shared with the right stakeholders.
- **Ongoing Compliance:** By integrating SDS data into DPPs, companies can continuously align with evolving regulatory requirements, ensuring compliance throughout the product's entire lifecycle.

## 5 Transforming SDS into Digital Product Passports Leveraging Data Scraping and AI

Recent advancements in AI and data scraping can be leveraged to transform Safety Data Sheets (SDS) into Digital Product Passports (DPPs) at scale. 3E extracted and digitized data from existing SDSs, creating 1 million DPPs in just one year. This technology streamlines compliance, simplifies reporting, and ensures that accurate, up-to-date information is available across the supply chain, enhancing transparency and regulatory adherence.

## 6 Dynamic Definition of Substances of Concern

Among other critical information, a Digital Product Passport (DPP) contains details on substances present in products, which may change over time. For example, Article 2(27) of the European Ecodesign for Sustainable Products Regulation (Regulation (EU) 2024/1781) defines "Substances of Concern" to be reported in DPPs. The definition's reliance on other regulations makes it dynamic and subject to evolution over time. This highlights the need for robust, supply chain-integrated digital solutions to manage DPPs effectively.

A substance is considered to be of concern if:

1. **Is classified as a Substance of Very High Concern (SVHC):** Meets the criteria laid down in Article 57 of Regulation (EC) No 1907/2006, which includes substances that are carcinogenic, mutagenic, toxic for reproduction, persistent, bioaccumulative, toxic, or of equivalent concern.
2. **Falls into specific hazardous categories:** Classified under Part 3 of Annex VI to Regulation (EC) No 1272/2008, including categories such as carcinogenicity, mutagenicity, reproductive toxicity, and others like PBTs, vPvBs, PMTs, etc.
3. **Negatively impacts recycling:** Hinders the re-use and recycling of materials in the products in which it is present, as determined by future product-specific implementing acts.