



**BASF**

## SAP® SOFTWARE HELPS CHEMICALS INDUSTRY LEADER STAY AHEAD ON COMPLIANCE

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**Dr. Andreas Gypser,**  
Manager of EH&S Systems, BASF SE

### QUICK FACTS

#### Company

- Name: BASF SE
- Location: Ludwigshafen, Germany
- Industry: Chemicals
- Products and services: Inorganics, catalysts, petrochemicals, intermediates, performance products, care chemicals, plastics, agrochemicals, and oil and gas
- Revenue: €57.95 billion
- Employees: 95,000
- Web site: [www.basf.com](http://www.basf.com)

#### Challenges and Opportunities

- Provide data management support to comply with registration, evaluation, and authorization of chemicals (REACH) legislation
- Enable efficient and timely compliance management

#### Objectives

- Support enterprise-wide processes for substance registration
- Analyze annual substance handling volumes
- Establish a platform for compliance with upcoming legal initiatives on substance volume tracking

#### SAP® Solution and Services

Substance volume tracking functionality within the SAP® Environment, Health & Safety application

#### Implementation Highlights

- Piloted solution at world's largest chemical complex, located in Ludwigshafen
- Rolled out software to about 50 European locations
- Worked closely with internal BASF implementation team to resolve performance issues

#### Why SAP

- Strong existing relationship
- Integration with the SAP ERP and SAP GRC Global Trade Services applications

#### Benefits

- Implementation of effective compliance management tools
- Cost and time savings due to automated substance volume tracking
- Increased competitive advantage, thanks to early compliance readiness
- Ability to comply with future regulations for tracking substance volume

#### Existing Environment

SAP ERP

#### Third-Party Integration

- Hardware: HP
- Operating system: UNIX
- Database: Oracle



When the European Union initiated its Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) regulations, BASF SE understood early on that the implications would be significant. “Tracking and reporting substance movements in the detail required represented a huge and complex challenge,” remarks Dr Andreas Gypser, manager of EH&S systems at BASF. “However, failure to do so would result in loss of business, financial penalties, and damage our reputation.”

To ensure it has the necessary structures in place to comply with the legislation, the Ludwigshafen, Germany-based chemicals giant prepared in good time. By collaborating with SAP on the development of new substance volume tracking functionality within the SAP® Environment, Health & Safety (SAP EH&S) application, the company harnessed its existing SAP IT infrastructure to ensure timely and efficient compliance management.

### **Safeguarding a Healthy Environment**

With 95,000 employees and annual revenues of €57.95 billion, BASF is the largest chemical company in the world. Based in Europe, it also has growing markets in the United States, South America, and Asia, and its extensive portfolio ranges from chemicals, plastics, performance products, and agricultural products to crude oil and natural gas.

Firmly committed to safeguarding the environment, BASF has spearheaded industry compliance with the REACH regulation that took effect from 2007.

The legislation aims to improve the tracking of chemical substances within the European Union to ensure that substance volumes are kept within authorized limits.

“REACH will allow the authorities to monitor the impact of specific substances on public health and the environment. In this way, authorities can take steps to minimize any potential risks,” explains Gypser. “In addition, they want to encourage the replacement of dangerous substances with more environmentally or health-friendly alternatives. The REACH legislation will increase the level of knowledge and improve control.”

### **Complex Task**

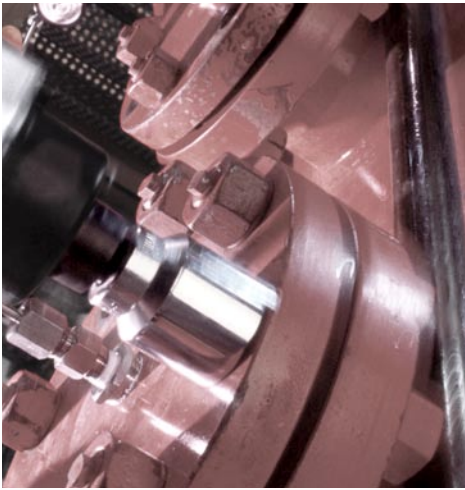
Complying with REACH regulations will present chemical companies with a significant challenge. Covering over 30,000 substances, the legislation requires registration and detailed reporting of volumes produced within – or imported into – the European Union. Companies must not only be able to identify which substances they use, but also know how much of each they handle annually.

To add to the complexity, organizations must submit reports by legal entity. And as BASF has over 50 separate legal entities in Europe, this is no mean task. “You’re dealing with many thousands of data sets,” confirms Gypser.

One of the key tasks was to break down information on a substance level. “Our existing SAP ERP application already stores information about the materials we use,” says Gypser. “However, each material can be made up of numerous substances. We needed to be able to identify these and track quantities used across our activities.”

### **Winning Team**

As early as 2004, BASF initiated a project to find a solution that would enable effective compliance with the legislation – while providing the benefits of an automated approach. “Due to the complexity of our operations and the number of substances involved, compiling reports using manual processes just wasn’t viable,” stresses Gypser. “It would require a huge number of costly staff-hours on an ongoing basis.



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We'd also run the risk of reporting errors and inaccuracies.”

With its business processes already supported by SAP software, BASF approached SAP for help. “SAP was the logical choice as we wanted a solution that would integrate with our existing logistics processes,” explains Gypser.

SAP and development partner TechniData AG worked closely with a cross-functional BASF team to answer the brief – creating new functionality within SAP EH&S.

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Dr. Andreas Gypser, Manager of EH&S Systems, BASF SE

### Integrated Approach

The new functionality will help BASF to achieve REACH compliance in three key ways. Firstly, it supports a standardized approach to the initial registration process across all European subsidiaries, providing project management capabilities to define registration projects and

activities in a uniform way. Secondly, having identified substances for registration, the software then links to existing materials management functionality within the SAP ERP application to evaluate and track the total volume of each substance.

Finally, the solution integrates with existing logistics processes to enable automated actions to be carried out when maximum volume thresholds have been reached. Just before BASF reaches an annual handling volume limit for a particular substance, the solution can send an automatic alert to managers so that they can decide on the best course of action. Either they can seek authorization from the authorities for a higher volume limit, or they can avoid further handling of the substance by triggering preconfigured “blocks” within the company’s logistics processes – preventing the issue of purchase orders, for example.

“We needed to make a link between the world of substances and the world of logistics,” says Gypser. “That was the challenge, and that is what SAP delivered.”

### Timely Preparation

All chemical companies must complete the initial registration stage by the end of November 2008. However, to ensure it meets this deadline, BASF began to implement the software in June 2006. “Quite frankly, most companies would admit that data often isn’t as clean as

it should be,” explains Gypser. “We wanted to implement the solution as early as possible so that we could iron out any issues – guaranteeing timely registration of all substances.”

BASF decided to pilot the new functionality for tracking substance volume at its Ludwigshafen headquarters – the world’s largest chemical complex. “If we could implement the solution successfully at such a large site, we felt that the rollout would be easy,” remarks Gypser.

With its own IT organization and a large internal team of EH&S experts, BASF was able to take on the implementation work itself. The pilot was completed in March 2007, and the software is now used in approximately 50 locations across Europe. “Although the pilot project took eight months, the rollout to a second platform took only two months – and work at a third platform was completed in just one month. You can really see a learning curve,” comments Gypser.

### Close Collaboration

Although the implementation work was completed by an internal team, ongoing collaboration with SAP and its development partner TechniData played an important role in the success of the project. When BASF experienced some performance issues at the large Ludwigshafen site, the teams worked together to find a solution, eventually speeding up reporting by a factor of 10.

“There was a high level of cooperation and the relationship worked well,” says Gypser. “We finished the project on time and have no complaints.”

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### Industry Leadership

By implementing the new functionality for tracking substance volume within SAP EH&S, BASF has minimized the risk of noncompliance – something that Gypser feels is critical for the company’s ongoing success and reputation as an industry leader. “Noncompliance could result in heavy fines and would damage our business – both within the European Union and globally. For this reason, it was a key priority to put in place a best-in-class solution,” he confirms.

Gypser also believes that the ability to manage tracking processes automatically is a source of considerable competitive advantage. The solution already integrates with the SAP ERP application, and work is underway to enable integration with the SAP GRC Global

Trade Services application. “Thanks to the solution provided by SAP and TechniData, we are able to track substance volume seamlessly across our processes. And that saves BASF significant time and money,” he says.

### Future-Oriented Solution

“We are living in a global society and although REACH legislation is Europe based, it still has a global impact,” comments Gypser.

As well as enabling REACH compliance, BASF also has plans to use the new functionality for tracking substance volume to help it comply with other global EH&S legislation such as the U.S. Toxic Substances Control Act (TOSCA) and the Canadian Environmental Protection Act (CEPA). “The software can be configured to monitor volume levels according to numerous different criteria,” explains Gypser. “At the moment, our focus is on REACH – but it’s good to know that we can roll out the solution to meet other compliance management challenges in the future.”

He concludes: “As a forward-looking company, BASF is already asking questions about the impact of EH&S legislation – not just on our European activities, but also globally. With help from SAP, we can stay ahead of the competition through effective and efficient compliance management.”

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