

Translation of:

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Accident insurers' support in implementing REACH for occupational safety and health

Abstract

Occupational accident insurers have developed a series of valuable aids that can facilitate the implementation of REACH in occupational safety and health. Those who register substances are provided support if they wish to recommend application-related risk management measures in terms that are as specific as possible to their customers, but above all to downstream users who – even after REACH is enacted – will continue to bear full responsibility for the safety and health of their employees as their employer in accordance with the occupational health and safety laws. These downstream users will be confronted with additional information on the basis of REACH. The aids provided include databases with substance and product data along with suggested measures for risk management, descriptions of exposure and assistance in testing substitute substances – the very issues that companies will have to deal with in conjunction with the implementation of REACH in occupational safety and health.

1 Introduction

Regulation (EC) No. 1907/2006 for the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) has been in force since 1st June 2007. It places chemicals law in the European Union (EU) on a totally new basis and is designed to establish a high level of protection for human health and the environment. One of the goals of REACH is to improve the flow of information throughout the supply and user chain and thus also make better information available to the occupational users of chemicals for the protection of the health of their employees.

The accident insurers are not in any way responsible for the official implementation of REACH; this is the task of the national institutions of the State, which in Germany are the Länder administrations. However, REACH has a number of points of contact with occupational safety and health (OSH), e.g. descriptions of exposure and the derived no-effect level (DNEL). This means that the accident insurers are available for consultations on OSH issues [1]. For inquiries on all issues concerning the implementation of REACH, the national helpdesk at the Federal Institute for Occupational Safety and Health (Bundesanstalt für Arbeitsschutz und Arbeitsmedizin, BAuA) in Dortmund is responsible (www.reach-helpdesk.de).

The legal foundation for the advisory role of the accident insurers in Germany is the Social Code VII (SGB VII): *"The accident insurers must take all suitable action to prevent occupational accidents, occupational diseases and work-related health risks and ensure that effective first aid is provided"* (SGB VII, Art. 14). This task makes it absolutely essential that firms are advised and supported – directly and indirectly – in the implementation of REACH.

The REACH regulation applies independently of the OSH regulations of the EU and its member states, yet it is intended to *"ensure a high level of protection of human health and the environment"* (REACH Preamble, Section 1). The protection of the health of employees is explicitly mentioned in numerous specific provisions of the REACH regulation.

In particular, the chemical safety report and safety data sheet contain specific information relating to employee protection, e.g. occupational exposure limits, exposure estimates and recommendations for protective measures.

Throughout the information chain governed by the REACH regulation, from the producers of primary substances through to the chemical end-user, e.g. the tradesman's firm, the accident insurers can make a contribution with their knowledge of hazardous substances. These contributions are presented systematically in the following.

2 General help on the subject of "REACH and OSH"

Firms are faced first with the question of whether they are at all affected by REACH and where their obligations, if any, lie. Basically, any firm that uses chemical substances or products is affected "more or less" by REACH. Only a minority of companies, the manufacturers and importers of chemical substances and preparations (products), have to concern themselves with the entire REACH regulation. The vast majority should be essentially beneficiaries of REACH – thanks to better information on chemicals, the risks arising from them and suitable protective measures. But even "users only" of chemicals are subject to certain obligations.



Leaflet "REACH und Arbeitsschutz"

To give small and medium-size enterprises (SMEs) initial guidance, the BGIA, the BG Institute for Occupational Safety and Health of the German Social Accident Insurance, has issued the leaflet "REACH und Arbeitsschutz" [REACH and OSH] (Figure) [2], which can be requested free on the Internet.

For more detailed questions, the BGIA has compiled information on REACH at the web address www.dguv.de/bgia/reach. Along with a brief general description, this compilation contains pages on certain subjects and key terms, e.g. transitional periods, exceptions, authorizations, pre-registration, technical dossier, chemical safety report, safety data sheet, classification and labelling inventory, useful links, etc. In all cases, the facts are presented as briefly and comprehensibly as possible.

For more detailed issues transcending the bounds of OSH, links are given to information provided by other relevant bodies. Further links refer to glossaries on REACH, as this regulation contains very specialized new terms. There are also links to other helpdesks and official pages on REACH, such as the European Chemicals Agency (ECHA) in Helsinki and, of course, to the original wording of the REACH regulation.

This collection of information focuses on support from the accident insurers that was developed not necessary specifically for REACH, but which may be of use in this connection.

3 Data on chemical substances

3.1 GESTIS

The GESTIS substance database [3 to 5] is a valid and up-to-date source of basic and regulatory data on the roughly 8,000 most important substances contained in occupationally used chemical products (**Table**). This database is of interest to registrants and users of chemicals in connection with REACH. It presents, for instance, the current scientific state of knowledge on health risks from substances and the current legal classifications. For substances without legal classifications, there are selected manufacturer classifications. Although they do not contain any toxicological data in the narrow sense, the chapter "Effects on humans" presents an occupational medical assessment derived from the current literature. It is a relevant source for information on proven protective and risk management measures, which are laid down in technical codes and in recommendations of the accident insurers. The GESTIS substance database can thus be regarded as a reference data source. However, registrants resorting to this database are not therefore exempted from conducting their own product- and process-specific exposure assessment. The databases "GESTIS International Limit Values" [6] and "GESTIS Scientific Explanations" [7] on classifications and limit values contain further information that may be of special interest to substance registrants.

Table:

Possible use of data from GESTIS, GISBAU and GisChem by registrants and users of chemical substances and products in connection with REACH

	GESTIS	GISBAU, GisChem
Substances	x	x
Mixtures		x
Types of application	Brief	Detailed
German regulatory data	x	x
International regulatory data	x	
Health risks	Detailed	Brief
Descriptions of exposure		x
Risk management measures	x	x (sector-specific)

The information system for safety data sheets (ISi) [8; 9], operated by the BGIA in cooperation with the Association of the Chemical Industry (Verband der Chemischen Industrie, VCI) since the mid-Nineties, is accorded a special task under REACH, since the REACH agency only makes certain registration data publicly available but not, however, the extended safety data sheets.

3.2 GISBAU and GisChem, hazardous substance information systems for specific sectors

GisChem (www.gischem.de) and GISBAU (www.gisbau.de) concentrate on chemical products, usually on mixtures of substances, and information relating to branches of industry, product groups and product application and provide valuable support, e.g. in the specific realization and assessment of the effectiveness of protective measures (see table). For instance, GISBAU contains very specific recommendations on Personal Protective Equipment (PPE) such as suitable chemical protection gloves in specific application conditions. The information in GisChem and GISBAU is also based on knowledge of application-related exposure and can be useful both to the substance registrant in the drafting of safety reports on chemicals and in the drafting of safety data sheets on products. These information systems supply the user who requires information in connection with a risk assessment with details not found on the safety data sheet. If, for example, the safety data sheet demands local air extraction for compliance with a limit value, more specific information can be found in GisChem on the effectiveness of local exhaust systems.

4 Descriptions of exposure and the effectiveness of protective measures

The chemicals regulation REACH demands that the substance manufacturer or importer defines risk management measures for each application of his substance. Essential for the definition of risk management measures is knowledge of exposure at the workplace. Discussions on REACH show that there is uncertainty about how to obtain such exposure data. In Germany, descriptions of exposure have been written for many sectors of industry, substances and activities, e.g. in the form of BG/BGIA recommendations [10], which describe precisely the level of exposure at the workplace during the use of certain products. The descriptions of exposure issued by the accident insurers in connection with the EU Existing Chemicals Regulation can also be referred to as an information source (see BGAA Report 1/99 [11]).

Descriptions of exposure present the exposure to substances during certain activities in a branch of industry and the necessary protective measures. These are one of the models described in Appendix I, 5.2.5 of the REACH regulation: *"Where adequately measured representative exposure data are available, special consideration shall be given to them when conducting the exposure assessment. Appropriate models can be used for the estimation of exposure levels. Relevant monitoring data from substances with analogous use and exposure patterns or analogous properties can also be considered."* Real measured exposure data represent the most reliable means of satisfying this requirement.

The accident insurers gather measured data on a large scale (over 100,000 measurement results per year), particularly in connection with the accident insurers' measurement system for risk assessment (BGMG), and document them in the MEGA database of the BGIA. Many of these data can be evaluated for exposure descriptions, and this has already been carried out in connection with REACH in RIP-3.2.2. "REACH in the printing industry" ¹. For the use of measured data, reference is also made to an article by *Rühl and Kleine* ².

5 Substitution of substances

REACH aims to encourage the substitution of hazardous with less hazardous chemicals, and particularly at the registration stage for "substances of very high concern" (including those that are carcinogenic, mutagenic and toxic to reproduction) with the aid of obligatory substitution tests and possibly authorization restrictions. Packages of products containing substances of very high concern for which an authorization has been granted are labelled as such; users must report product use to the agency (Article 66 of REACH). The German Hazardous Substances Ordinance demands that employers always conduct a substitution test for activities with hazardous substances. As a result of REACH, the additional reporting obligation will intensify the demand for support with substitution tests. The accident insurers have been supporting tests for substitute substances for a long time with a variety of tools intended to ease the burden on the affected firms. The "column model" [12] is a means of comparing different substances. Labelling systems like the GISCODE [13], various product codes and product lists (e.g. detergents and cleaners for offset printing [14]), compiled by accident insurers with manufacturer associations, are easy-to-use methods for comparing chemical products for certain fields of application. The GISCODES and product codes include:

- GISCODE for floor-laying materials
- GISCODE for epoxy resin coatings
- GISCODE for surface treatment agents for parquet and other wooden floors
- GISCODE for cold-applied bituminous products for the waterproofing of buildings
- Product code for concrete additives
- GISCODE for products containing cement

¹ *Büscher, H.-A.*: Die Europäische Chemikalienverordnung REACH in der Druckindustrie – REACH Implementation Project RIP 3.2-2 Screen printing. Gefahrstoffe – Reinhalt. Luft 68 (2008) No. 4, p. 121-128.

² *Rühl, R.; Kleine, H.*: Expositionsbeschreibungen für REACH-Stoffsicherheitsbericht. Gefahrstoffe – Reinhalt. Luft 68 (2008) No. 4, p. 129-133.

- Product code for paints and coatings
- Product code for cleaning and care agents
- Product code for wood preservatives
- Product code for concrete release agents
- GISCODE for methyl methacrylate coating systems
- GISCODE for polyurethane systems in the construction industry
- GISCODE for corrosion-protection products.

This philosophy of the application-related approach in substitution is also adopted in principle by REACH. This means that the tools cited are also ideal aids to the implementation of REACH by downstream users.

The implementation of REACH in OSH represents an excellent opportunity to publicize these strategies for substitute substance tests throughout the territory covered by REACH, i.e. the single EU market.

6 Literature and links

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