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WORKING WITH CMR SUBSTANCES – THE TIP OF THE ICEBERG?

German statutory accident insurance (dguv) currently lists 21 occupational diseases that are linked to cancer. The number of recognised cases has risen from 2,241 in 2010 to 6,531 in 2016. The actual dguv report (occupational disease 1317) provides recommendations and informations for conducting risk assessments. By Michael Dennerlein, Umco.

Report 1317 provides companies with valuable insights into the conducting of risk assessments. The inclusion of "painter's disease" in the report once again demonstrates that it can sometimes take decades before a link is established between cause and effect where CMR substances are involved. In practice, the problem is often a lack of or inadequate documentation of impacts in workplaces that no longer exist and cannot be reconstructed. For this reason, registers and data gathered from comparable workplaces of affected persons and companies constitute important documents for assisting with the verification process.

Report 1317 lists industries in which exposure to neurotoxic solvents is possible (giving rise to, e.g., "painter's disease"). It records activities and the hazardous substances associated with them, such as:

- Use (spraying, brushing) of paints and coatings: ethanol, n-heptane, toluene, xylene, hydrocarbon mixtures
- Use (lamination, puttying) of reactive resins: styrene
- Use (spraying, brushing, puttying) of adhesives: ethanol, n-heptane, n-hexane, toluene, xylene, hydrocarbon mixtures

BASIS OF ASSESSMENTS

Apart from surveys of occupational activity, plant procedures and the workplace situation, occupational exposure is assessed by determining the duration and level of exposure to the working substances or hazardous substances as accurately as possible. Anyone involved with hazardous substance management or who is responsible for workplace risk assessment therefore needs to be able to recognise CMR substances. Furthermore, the person responsible for the process involving the hazardous substance must also know the labels of the relevant substances.

CMR SUBSTANCES

CMR is an umbrella term for three types of substance which are classified according to the following characteristic modes of action:

- Carcinogenic: a substance or a mixture of substances which can cause cancer or increase the incidence of cancer
- Mutagenic: mainly a substance which can trigger mutations in human reproductive cells that may be passed on to children
- Reprotoxic: a substance that impairs sexual function and fertility in men and women and development in children.

LABELLING

Before establishing whether or not legal requirements apply in a given case, it is essential to be able to identify CMR substances from the labels. Every stakeholder engaged in purchasing, storing, using or disposing of a hazardous substance must know the meaning of the GHS

Table 1: Classification and labelling – Summary.

Category	1A 1B	2
CMR	Signal word: Danger	Signal word: Warning
Carcinogenic	H350: May cause cancer. H350i: May cause cancer by inhalation	H351: Suspected of causing cancer
Mutagenic	H340: May cause genetic defects.	H341: Suspected of causing genetic defects.
Reprotoxic	H360: May damage fertility or the unborn child. H360F: May damage fertility. H360D: May damage the unborn child.	H361f: Suspected of damaging fertility. H361d: Suspected of damaging the unborn child.

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symbols. The accompanying table shows the symbols, signal words and H-phrases that apply to CMR substances.

LEGAL BASIS

In Germany, the key legal document governing the handling of hazardous substances is the Ordinance on Hazardous Substances (GefStoffV). In addition, where activities involve CMR substances, special protective measures must also be adopted.
Obligations of the company:

- Conduct workplace measurements or employ other suitable methods to determine the scope of exposure
- Where there is no known limit value, adopt a suitable, risk-based package of measures – the principle of minimisation must be observed.
- Ensure either that extracted air is not returned to the working area or that it is properly cleaned.
- Quickly identify increased exposure resulting from an unforeseeable incident/accident
- Segregate possible hazardous areas (e.g. with warning and safety signs).

Furthermore, on request, the competent supervisory authority (Occupational Health and Safety Authority, Factory Inspectorate) must additionally be informed of the following, where activities involve CMR substances belonging to categories 1A or 1B:

- The outcome of the substitution
- Information on the activities carried out and industrial processes employed and the reasons for using these hazardous substances
- The quantity of hazardous substances manufactured or used
- The type of protective equipment to be used
- Nature and extent of exposure
- Substitutions performed

To ease the workload within the company, it is recommended that the number of applications or documents which reference each other be kept to a minimum. For example, it may well be that the hazardous substance register shows that a hazard assessment has already been carried out. Moreover, if the activities and hazardous substances are listed in the corresponding Technical Rules for Hazardous Substances (TRGS), the risk assessment may prove to be simpler. A particular challenge arises when the legal obligations of "TRGS 410 – Exposure Register" are triggered by a hazard posed by CMR substances in categories 1A or 1B. This is because the introduction of the General Data Protection Regulation (GDPR) has once again turned the spotlight on the linking of operational and personal data. One particular provision is the obligation to retain data for 40 years, along with all updates, after the end of any exposure. This obligation remains in force if the employment relationship is terminated. In that event, an excerpt from the register must be handed over to the employee. The Technical Rules also apply to temporary workers or contractors who come into contact with CMR substances. The company doctor and any person responsible for occupational health and safety must have access to the register too.

SUMMARY

The Occupational Disease 1317 report issued by the German Statutory Accident Insurance for Occupational Diseases exemplifies how medical findings pass into legislation. The statutory requirements relating to CMR substances are wide-ranging and extensive. The necessary time outlay and level of specialist knowledge needed should not be underestimated. Each company must determine for itself whether or not the legal requirements apply to it. This article is merely intended to provide a rough overview of the laws, ordinances and technical rules to be observed.

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