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Technical Rules for Hazardous Substances	Working instruction and information for workers	TRGS 555
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The Technical Rules for Hazardous Substances (TRGS) reflect the state of technology, occupational safety and health and occupational hygiene as well as other scientific knowledge relating to the requirements concerning the placing on the market of and activities with hazardous substances. The

Committee on Hazardous Substances (AGS)

establishes the rules and adapts them to the current state of development accordingly.

The TRGS rules are announced by the Federal Ministry of Labour and Social Affairs (BMAS) in the Joint Ministerial Gazette (GMBI).

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Annex: Diagram: "From the safety data sheet to the working instruction"

1 Scope

(1) This TRGS applies to information for workers who work with hazardous substances according to Section 14 of the Hazardous Substances Ordinance (GefStoffV).

(2) The TRGS does not apply, because of

1. the working conditions
2. the small substance quantity used and

3. the low exposure in terms of level and duration, if the risk assessment according to Section 7 of the Hazardous Substances Ordinance results for a certain activity overall in only a low risk¹ for the workers and the measures according to Section 8 Subs. 1 to 8 are sufficient to protect the workers.

(3) The employers' duties to give instruction and provide discussion facilities as per Section 12 of the Occupational Safety and Health Act (ArbSchG) and Section 81 of the Works Constitution Act (BetrVG) remain unaffected.

2 Working instruction

2.1 General information

(1) The employer must ensure that prior to commencement of their activity the workers are given access to a written working instruction which takes account of the risk assessment. The working instruction must be drawn up in a form and language understandable for workers and must be accessible at a suitable location in the establishment as close as possible to the workplace.

(2) Working instructions are workplace- and activity-related, binding, written orders and rules of conduct relating to the workplace and working activities, issued by the employer to the workers to provide protection against accident risks and hazards to health, fire and explosion risks, and environmental protection in the case of activities involving hazardous substances.

(3) It may be useful to subdivide the working instruction into a substance-specific and an activity-specific part (the properties of the substance, hazards due to the substance, specific protection measures etc.), and into a company-specific part (alert plan, emergency service numbers, persons to be notified, conduct in the event of breakdowns etc.). Several substance-related parts can be allocated to one specific activity. The requirement to draw up a “workplace and substance-related” working instruction requires special information from both areas.

(4) The staff must adhere to the working instructions.

(5) It is the employer’s responsibility to prepare the working instruction. He may delegate his duty to prepare the working instruction and seek advice from specialists for occupational safety and health, company doctors or other specialists (e.g. occupational safety and health authorities, accident insurance institutions, consultants).

(6) The results of the risk assessment, in which particular attention must be paid to hazards arising during activities involving hazardous substances, form the basis of the working instruction. Possible breakdowns must be taken into account.

(7) The following must be taken into account when preparing a working instruction:

1. Workplace-specific circumstances
2. Regulations of the Hazardous Substances Ordinance and its annexes thereto,

¹ see Number 6.2 of TRGS 400 “Risk Assessment for Activities involving Hazardous Substances“

3. Safety data sheets,
4. Technical Rules for Hazardous Substances and other generally recognised rules covering safety, occupational medicine and hygiene.

Manufacturers' information, such as technical specifications, may be useful in addition.

(8) The working instructions must be adapted to new findings and knowledge, it must be updated to comply with the latest state of risk assessment.

(9) The language used in the working instructions must be such that workers will be able to understand the instructions and apply them in their work activities. Where workers do not have sufficient knowledge of German, the working instructions must be written in a language that they can understand.

(10) Clear and unambiguous statements must be used. Commands should be expressed in terms of "must", prohibitions in terms of "must not" or paraphrases thereof. Collective or general terms such as "respirator", "goggles" or "work" must be stipulated in concrete terms.

(11) The outward appearance of the working instruction is not stipulated. However, a uniform design for working instructions within a workshop reinforces the "recognition effect" for workers. Pictograms and symbol signs according to BGV A8 "Safety and Health Signs and Labels at Work" and/or the Workplace Rules ASR A 1.3 "Safety and Health Signs and Labels" can be used.

(12) Where, besides the working instruction issued in accordance with the GefStoffV, additional instructions are necessary by virtue of other legal requirements (such as the BetrSichV [Plant Safety Ordinance], BioStoffV [Biological Agents Ordinance], VAWS [Water-Endangering Substances Ordinance]) the instructions can be summed up within a single working instruction - provided that all the required protection objectives are maintained. This makes it possible to comprehensively illustrate all the dangers present in the working area, thus avoiding redundancies.

(13) Sample working instructions (e.g. templates for particular industrial sectors), or machine-generated working instructions must be adapted and supplemented to comply with the situation pertaining to the specific activity.

(14) If many hazardous substances are used (e.g. at a paint shop, in a warehouse or at laboratories) it may be reasonable not to produce a separate working instruction for each individual hazardous substance. It may be better to group them into group or collective working instructions in the case of similar hazards and comparable protective measures. The same applies for example also to standardised work processes.

2.2 Content of the working instruction

2.2.1 Structure

Working instructions consist of the following:

1. Working areas, workplace, activity

2. Hazardous substances (identification)
3. Hazards to human health and the environment
4. Protective measures, rules of conduct
5. Conduct in the case of danger
6. First Aid, and
7. Proper disposal.

2.2.2 Working areas, workplace, activity

The scope is established by identifying the company, the working area, the workplace or the activity.

2.2.3 Hazardous substances (identification)

(1) The working instructions must name the hazardous substances in terms known to the workers. In the case of preparations and articles these are generally their trade names.

(2) In the case of preparations it is recommended to indicate the hazard-determining component(s) (e.g. contains: diphenylmethane-diisocyanate).

(3) In the case of activities where hazardous substances occur or are released only during the process of the activity (for example, in woodworking, soldering or welding), such hazardous substances must also be indicated in the working instruction.

2.2.4 Hazards to human health and the environment

Potential dangers arising from the risk assessment must be described for activities involving hazardous substances:

1. As a minimum, information on the possible hazards (R phrases in their wording; not only the figure combination). The content of the R phrases can also be paraphrased in a comprehensible manner.
2. If relevant to the workplace/activity, other hazards should be included, for example hazards that are known from work experience or mentioned in chapter 3 of the safety data sheet and that do not cause classification (e.g. dust contamination, risk of dust explosion and fire, risk of suffocation, frostbite/burns or other effects on the environment).
3. Hazard symbols can be used in addition to the written text.

2.2.5 Protective measures and rules of conduct

(1) The necessary protective measures and rules of conduct that the workers must adhere to for their own protection and that of other workers at the workplace must be described. They should be subdivided as follows:

1. Hygiene regulations
 2. Technical and organisational protection measures to prevent exposure and
 3. Personal protective equipment (type and instructions for use).
- (2) It is also recommended to point to the employment restrictions and restrictions of use.

2.2.6 Conduct in the case of danger

- (1) Unless otherwise regulated it is necessary to state the measures to be taken by the workers, in particular by rescue teams in the case of danger, breakdowns, accidents and emergencies (for example, unusual rises in pressure or temperature, leaks, fire, explosion).
- (2) The information given must deal in particular with:
1. appropriate and inappropriate extinguishing agents,
 2. absorbents and binders, neutralising agents,
 3. additional technical protection measures (e.g. Emergency Off and additional personal protective equipment and
 4. the necessary measures to take to prevent hazards to the environment.
- (3) Attention must be drawn to existing alert plans and escape and rescue plans.

2.2.7 First Aid

- (1) The description of First-aid measures must be sub-divided as follows:
1. inhalation,
 2. contact with skin and eyes,
 3. swallowing, and
 4. burns and frostbite.
- (2) The measures to be carried out on the spot must be given. It should be clearly stated as to when a physician should be called in, and what actions may not be taken.
- (3) Internal company rules covering the provision of First Aid must be taken into consideration. In particular information must be provided concerning:
1. first-aid posts,
 2. first-aiders,
 3. emergency service numbers, and
 4. special first-aid measures (e.g. provision of special antidotes).

2.2.8 Proper disposal

(1) The protection measures and rules of conduct necessary for the proper disposal of waste, that occurs in the course of normal handling or unintentionally, and that are hazardous substances within the meaning of the GefStoffV (e.g. leakage quantities, production residues or packaging materials) should be described. Information must be given with regard to:

1. personal protective equipment,
2. disposal containers and collecting points,
3. absorbents, and
4. cleaning agents and methods.

(2) If the disposal procedure is the actual activity, it may be necessary to draw up a separate working instruction.

2.3 Interface to the safety data sheet

Many sets of substance-related safety information can be taken from the safety data sheet: See annex 1 for a diagram. The employer must check whether the information taken from the data sheet is plausible and sufficient for his company.

3 Access to safety data sheets and the list of hazardous substances

(1) In accordance with Section 7 Subs. 8 GefStoffV employers must keep a list of hazardous substances used at the company, in which reference is made to the relevant safety data sheets. The list must be accessible to all those concerned and their representatives.

(2) According to Section 14 Subs. 1 GefStoffV employers must ensure that workers are granted access to all safety data sheets for the substances and preparations used to carry out their activities.

(3) Access to these data sheets can be granted to workers in written or digital form, or by means of other information systems. The employer should agree upon the type and nature of such access with the workers and their representatives.

4 Course of instruction

4.1 General

(1) Employers must ensure that, prior to commencement to their work and then at least once every year, workers carrying out activities using hazardous substances be given verbal instruction relating to the workplace or the activity, on the basis of the working instruction.

- (2) Additional instructions are required when the conditions of the activity alter (for example when a procedure changes) or when other hazardous substances are brought into use, and also when there is a change in regulations.
- (3) Such instructions must be carried out by work superiors.
- (4) It must be ensured that the workers attend such courses of instruction.
- (5) When providing such courses of instruction, the level of training and the experience of the workers must be taken into consideration. Inexperienced workers must be given particular training and guidance.

4.2 Content

(1) In the course of instruction the workers must be informed of the specific dangers involving activities with or in the presence of hazardous substances in their working area, and about the protective measures and rules of conduct to avert these dangers. The content of the instruction comprises the subjects stated in Number 2.2 of the working instruction. It may also be necessary to deal with the following subjects:

1. Information relating to new or modified industrial plant, work equipment, work procedures, and occupational safety and health regulations,
2. Restrictions and prohibitions of use and employment restrictions and prohibitions (e.g. for particular groups of people: women of child-bearing age, pregnant and nursing mothers or young people), and
3. Conclusions drawn from current accident events involving hazardous substances.

(2) Within the framework of the course of instruction the employer must ensure that the workers are instructed in the methods and procedures that must be applied with regard to safety in the use of hazardous substances. In particular workers must be provided with information and instructions regarding the safe technical sequence of the work procedure (e.g. correct dosing, check of level indications, attention to warning devices etc.)

(3) Within the instruction and training framework workers must also be informed of their right to examine the list of hazardous substances and the safety data sheets. Basic instructions can be given to help workers to understand the content of the data sheets in terms of occupational safety and health.

4.3 Procedure

(1) Instructions must be given verbally and in relation to the individual workplace. At the same time attention must be paid to knowledge available with respect to learning psychology and work pedagogy (e.g. performance of practical exercises). Electronic media can be used to support and prepare the workers for the instruction. However, the instruction of the workers must always also be given verbally.

- (2) If working instructions have largely been prepared on the basis of manufacturers', sector-specific or other documents, the instruction should also be used to check whether these have been sufficiently adapted to the workplace and the specific activity and have been understood by the workers in terms of language and content.
- (3) Courses of instruction can be given jointly for workplaces and activities with comparable hazards.
- (4) The content of the courses of instruction must take account of the previous knowledge and abilities of the trainees.
- (5) The courses of instruction must be given to the workers in an understandable form and language.
- (6) Within the framework of his supervisory duties, the employer must satisfy himself that the workers have understood the content of the working instruction and the course of instruction and that they put them into practice.
- (7) The content, subjects (e.g. in note form), participants, the name of the instructor and the date of the course of instruction must be recorded in writing. The instruction given may be documented informally. Upon request a copy must be handed to those who have received instruction.
- (8) Workers must confirm attendance to the course of instruction by means of their signature. Evidence of the course of instruction should be kept for a minimum of two years.

5 General occupational-medical and toxicological advice

5.1 General

- (1) In accordance with Section 14 Subs. 3 of the GefStoffV, employers must ensure that general occupational-medical and toxicological advice is given to all workers who carry out activities involving hazardous substances.
- (2) The transfer of background knowledge about the toxic effect of substances is intended to promote workers' awareness and responsibility for their own health.
- (3) Such advice is to be given within the course of instruction according to number 4 of this TRGS.

5.2 Involvement of the company doctor

- (1) Where necessary for occupational-medical reasons the advice should be given with the involvement of the responsible company doctor. The employer must verify the issue of medical need and, in cases of doubt, it is necessary to consult with the company doctor.
- (2) Taking the hazardous substances present and the risk assessment into consideration, the employer must decide whether, under the terms of Section 15 Subs. 3 Sentence 2 of the GefStoffV, the medical practitioner should be present at the course of instruction or provide the advice himself, or whether the employer or his

representative can carry out the instruction alone.

5.3 Content of the occupational-medical and toxicological advice

(1) Depending on the hazard, the occupational-medical and toxicological advice may cover the following aspects:

1. the potential intake routes of the hazardous substances (in particular dermal, inhalative, and in individual cases, oral),
2. limitation of exposure by protective measures and personal hygiene and
3. effects and symptoms (acute, chronic).

(2) The toxicologically significant intake routes should be illustrated taking account of the working circumstances and, as far as possible, with regard to their relevance. It may also be helpful to illustrate the factors that positively or adversely affect the intake of hazardous substances into the body.

(3) This includes in particular the illustration of how the intake of hazardous substances can be influenced by personal protective measures, and what errors in the use of personal protective equipment may influence or even nullify their protective effect. Where appropriate, reference must be made as to which personal behavioural measures can promote or prevent the intake of hazardous substances (e.g. not eat, drink, take a snuff at the workplace, and not keeping food at the workplace).

(4) The effects and symptoms must be explained to the workers in an understandable manner. The symptoms to be expected after the intake (dose) should preferably be related to the dose range expected at the workplace. If necessary, reference should be made to the possible target organs and any possible interaction or combination effects of the hazardous substances. This also applies to the interaction with exposures not related to the activity, such as smoking, drinking alcohol or the use of drugs.

(5) Where applicable for a company, the benefits offered by the special precautionary occupational medical examinations according to Section 15 Subs. 2 of the GefStoffV for the prevention of health disorders must be explained to the workers during the advice. The difference between voluntary and mandatory examinations must be explained to the workers. The attention of the workers should be drawn to the fact that they can consult the company doctor if they believe that there is a connection between their activity and a health disorder.

(6) If many hazardous substances are used (for example at laboratories), it is sensible for occupational-medical and toxicological advice to concentrate on the substances or substance groups which present the greatest hazard to health.

6 Additional obligations to provide information in the case of activities with hazardous substances classified as carcinogenic, mutagenic or toxic to reproduction, category 1 or 2

(1) Employers have additional obligations to supply information in the case of activities involving hazardous substances classified as carcinogenic, mutagenic or toxic to reproduction of category 1 or 2 and must take further measures according to Subsections 2 to 7.

(2) In the case of activities according to Subsection 1, the employer must provide workers and their representatives with the necessary information so that they can verify whether the provisions of the Hazardous Substances Ordinance apply. Together with the workers and their representatives, the employer should establish the how and in what form this can be ensured. This could be established, for example, within the scope of a works agreement or in the occupational safety and health committee.

(3) As part of his duty to inform, the employer must in particular ensure that the workers and their representatives can examine the consequences to health and safety linked to the selection, the wearing and use of protective clothing and protective equipment. The employer must in particular provide workers and their representatives with access to manufacturers' information relating to the protective equipment used. Such information must show that the protective clothing:

1. complies with the relevant regulations²,
2. is effective, and
3. is not harmful, or whether it contains substances harmful to health (e.g. allergens in protective gloves).

With regard to the selection of protective clothing and protective equipment the employer must also disclose the deliberations conducted and decisions made.

(4) In the case of activities with an increased exposure workers and their representatives must be able to verify whether measures have been taken to reduce the time of exposure as far as possible and that workers' protection during such activities is ensured. Such activities include in particular demolition, refurbishment and maintenance work where the possibility of a considerable increase in workers' exposure is to be expected, and where every possibility for taking further technical protective measures to limit such exposure has already been exhausted. For such activities the employer must disclose the organisational measures taken (for example action plans for workers) in order to reduce the exposure of workers. The maternity protection regulations ordinance or the Youth Labour Act must for example also be taken into account.

(5) In addition, the employer must inform workers and their representatives immediately in the event that unexpectedly high levels of exposure occur at the workplace that go beyond the otherwise usual exposure levels. Both the causes of the increased exposure and the corresponding countermeasures must be disclosed in this regard. This applies not only to demolition, refurbishment and maintenance

² see also Occupational Safety and Health Ordinance on the use of personal protective equipment at work, 4 September 1996 (Federal Law Gazette I 1996, p. 1841)

work, but in principal to all activities involving hazardous substances classified as carcinogenic, mutagenic and toxic to reproduction of category 1 or 2.

(6) Workers and their representatives must have access to the documents describing the technical measures taken to minimise exposure, and their efficacy. In general this is included in the risk assessment documentation.

(7) Employers must maintain a continually updated health record of those workers where the results of the risk assessment indicate a hazard to health or safety, as far as possible also stating the exposure. The form of this health record is not stipulated. The health record must be made accessible to the following persons and institutions:

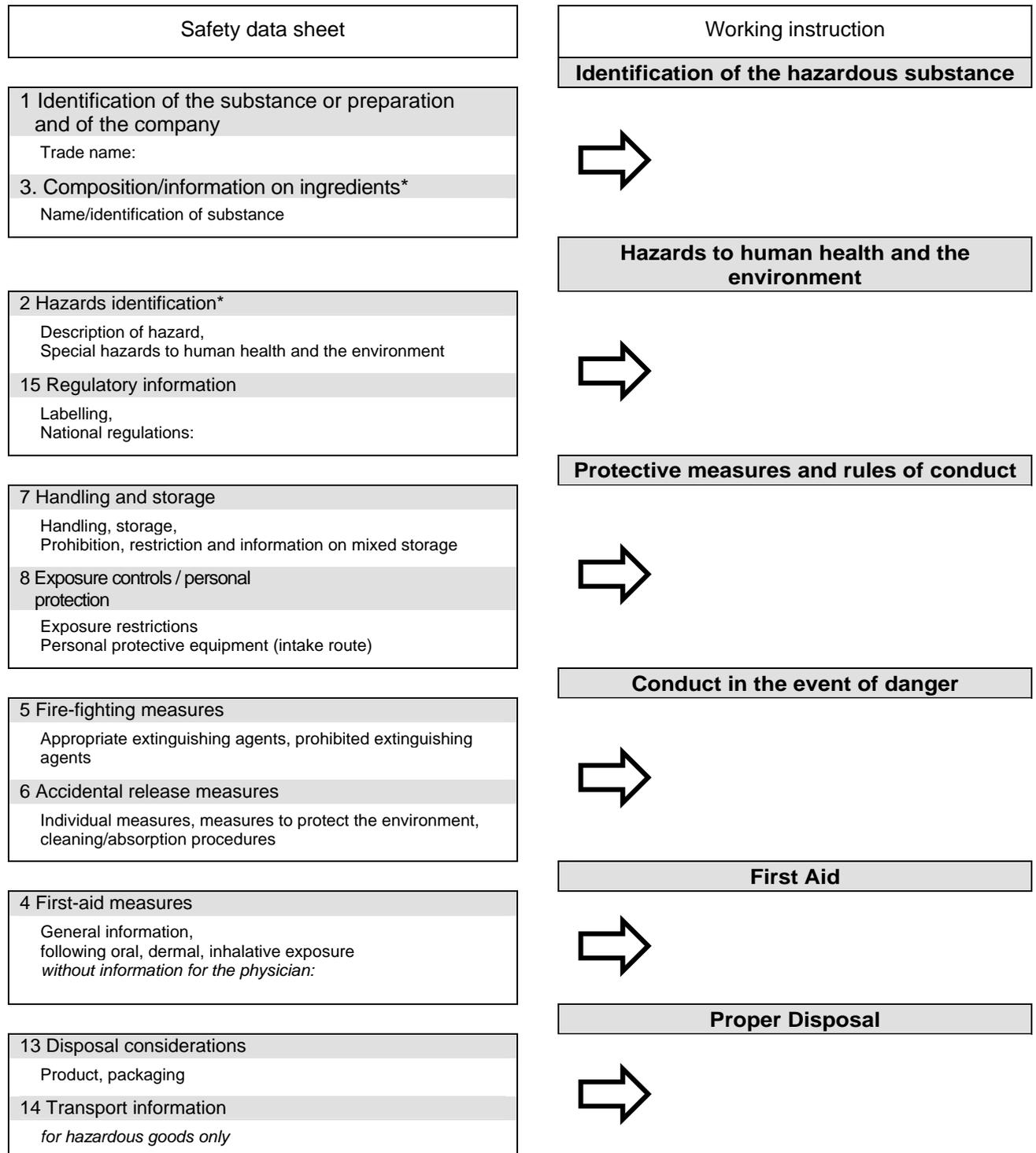
1. the workers concerned with regard to the indications concerning each of them personally,
2. the designated company doctor,
3. the persons responsible for health and safety at the workplace,
4. the competent supervisory authority and
5. all workers and their representatives with regard to general information not relating to specific individuals.

Where data relating to individuals are involved, the provisions of the data protection legislation must be observed.

Annex

Annex to TRGS 555

Diagram: "From the safety data sheet to the working instruction"



* The "composition/information on ingredients" must be given in the safety data sheet in accordance with Section 3 of (EC) Regulation 1907/2006 and the "Hazards identification" in Section 2. In safety data sheets produced in accordance with Directive 91/155/EEC repealed since 1.6.2007, the "Composition/information on ingredients" are listed in Section 2 and the "Hazards identification" in Section 3.