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Working Safely

Guide for New Employees

General Topics

9/2016

VISION ZERO.

ZERO ACCIDENTS - HEALTHY WORKING!

The new BG RCI prevention strategy "Vision Zero. Zero accidents – healthy working!" addresses directly to human life. This means that all accidents might be prevented if suitable measures have been taken beforehand. The goal is to organise the world of work in such a way that accident-free

work is possible and nobody falls ill through work. Particular attention has been paid to lethal occupational accidents and severe illnesses or injuries which can result in life long complications.

In order to achieve this goal BG RCI has formulated seven precise targets and defined seven Golden Rules for the implementation of the Vision Zero strategy at enterprise level.



This Code of Practice particularly deals with the Golden Rule "Ensure a Safe and Healthy System – Be Well Organised!"

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1 Working Safely Right from the Start

The workplace is new to you and your job involves working with machinery, work equipment as well as substances you are unacquainted with.

Knowledge and sufficient practice is lacking to carry out the new tasks independently and safely.

The following advice will help you to work safely right from the start.

Working safely means: working without endangering oneself or colleagues!



Basic suggestions for working safely are as follows:

- > Basic Safety Advice (Section 2),
- > Hazardous Substances (Section 3),
- > Work Equipment (Section 4),
- > Prevention of Fires and Explosions (Section 5),
- > Storage and Transport (Section 6),
- > Electric Resources (Section 7),
- > Personal Protective Equipment (Section 8),
- > First Aid (Section 9).

Read the sections which apply to your tasks; memorise the advice and act accordingly!

Memorise the following rules:

- > Carry out only the task you were told to do!
- Carry out the task precisely the way you have been instructed to by your supervisor!
- Comply with the operating instructions of your workplace!
- > Ask questions, if you are unsure!
- > Report lacking safety measures!

When the settling-in period is finished, you will have learnt how to work independently and will be aware of which activities can be performed without the supervision of your team leader.

2 Basic Safety Advice

- Meet the Safety Advisor responsible for your working area and get to know who the first aiders are.
- > Observe the mandatory and prohibition signs like:





- Basic Safety Advice
- > Notice the location of emergency showers, eye showers, breathing apparatuses, fire extinguishing arrangements (e.g., fire extinguisher, fire alarm), First Aid installations and assembly stations.
- Memorise the location of the emergency exits and the pathways of the escape routes.



Combination of the Sign E001 "Escape Route/Emergency Exit left)" and a direction arrow

- > Keep emergency exits and escape routes clear of obstacles.
- > Ensure free accessibility of traffic routes.
- Only keep working tools at your work station which are needed for the work at hand.
- > Comply with the operating guidelines faithfully.
- Do not enter plants or parts of plants you are not involved in. Observe bans on access.
- > Eat, drink and smoke only where permitted.
- Always be alert during working hours:
 - Do not drink alcohol during working hours.
 - When taking medication, consider whether your working ability is impaired, e. g. with regard to driving and control operation, and talk to your superior, if necessary.
 - Observe existing works agreements concerning alcohol and further intoxicating or addictive drugs.

Basic Safety Advice

- > Eliminate the risk of tripping or slipping immediately, e. g. by removing objects or spilled oil from traffic routes.
- Use apparatuses, work equipment and safety devices according to regulations.
- Be sure that all sharp or pointed objects like knives are safely sheathed.
- > Do **not** wear watches, rings, necklaces, bracelets, ankle chains or other pieces of jewellery during work, if they may pose a risk, e. g. for transport work or working with unprotected moving parts of machinery. If you have long hair, wear hair protection.
- Only use ladders and step stools that are fully operational and without defect. Stools, chairs, barrels, boxes, sacks or similar objects are no replacement for ladders and step stools.
- Note that certain tasks like open flame operations, entering a container or electromechanical works may be executed with written permission only (permit-to-work form). This includes the execution of the safeguard measures required.

3 Hazardous Substances

- Always use the mandatory protective clothing and personal protective equipment like goggles or protective gloves.
- > Use the safeguard measures available, e. g. exhaust systems.
- > It is essential to be aware of:
 - Properties of hazardous substances
 Examples for properties of hazardous substances: hazardous substances may catch fire; they may be corrosive, toxic or carcinogenic. Some substances may react very fiercely when brought together, e. g. acids with bases or oxygen with fat or oil.
 - Suitable safeguard measures in the context of the hazardous substances you have to handle.
- As an adolescent and as an expectant or breast-feeding mother you are not allowed to deal with certain hazardous substances. Consult your superior. As an expectant mother indicate your pregnancy early.

Information on hazardous substances and safeguard measures can be found in the operating instructions.

- > Use filling aids like barrel pumps, carboy tipper or dosing devices.
- > Before dealing with hazardous substances, make sure you have been thoroughly briefed by your supervisor.
- Wash before the consumption of food and drink or before smoking.

Hazardous Substances As a rule, substances with hazardous characteristics have to be labelled with danger symbols.



Figure 1: Simplified overview of the new labelling system according to GHS

This labelling according to CLP Regulation has been introduced into the EU step by step, i. e. the Global Harmonised System (GHS) of the United Nations has also been implemented here. In companies old labels showing orange danger symbols can be found. These may be used in trade for mixtures until midyear 2017 – for inhouse use a deadline has not been set yet.

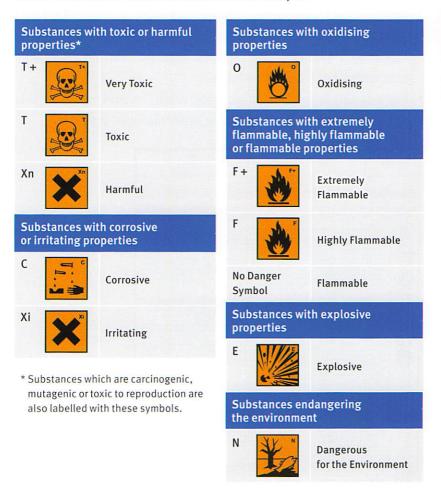


Figure 2: Previous Labelling of Hazardous Substances

Hazardous Substances

- Observe the hazards listed in the operating instructions and implement the safeguard measures given.
- Read carefully the label of the hazardous substance with the help of the hazard statements (R-Statements and H-Statements) and precautionary statements (S-Statements and P-Statements). The safety data sheets of the producer also give further references concerning hazardous substances.
- > Immediately inform your supervisor, when the working material is not properly parcelled, labelled or in an improper state.



Figure 3: Example of an operating instruction for hazardous substances

- Your working area should be at all times clean and tidy in order to prevent spreading of hazardous substances.
- Never fill hazardous substances into vessels which are made for food storage, or any container which might be mixed up. Contrariwise do not store food or drinks in containers made for hazardous substances.

Hazardous Substances



Figure 4: Container filled with Methanol

4 Work Equipment

- Do not work on machinery or work equipment, when unfamiliar with their operation or without supervision.
- Use facilities and work equipment only for their intended purpose.
- Do not try to repair deficiencies, defects or service failures without authorisation.
- Before starting the task, be sure about the proper function of the safety devices, e. g. emergency stop devices (emergency stop switch).
- Power up machines only, when the entire danger zone is visible. If this is not possible, check whether the danger zone is free of persons.

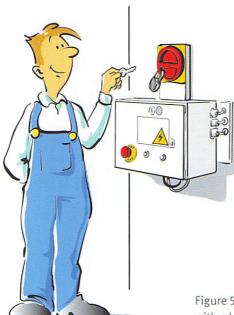


Figure 5: Securing against restart with a lockable main switch

- Only carry out cleaning and maintenance work on facilities which are not in operation and be sure that the power switch has been properly secured.
- Perform a visual examination as well as a basic function test for the proper and safe condition of the facilities and work equipment before using them.
- If your safety or health is at risk due to deficiencies/defects or hazards which you are not permitted to eliminate notify your supervisor immediately and do not commence work until a remedy has been provided.
- > Do not use faulty machinery or work equipment.

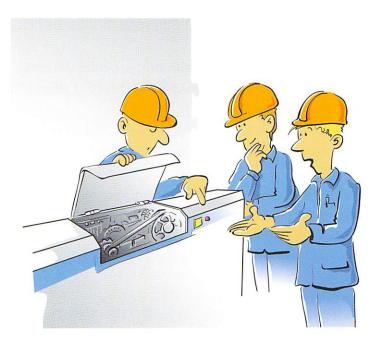


Figure 6: Protective function of control guards

Work Equipment

5 Prevention of Fires and Explosions

- Get acquainted with the emergency measures valid in the event of fire.
- Keep the fire load at the workplace as low as possible:
 - Only store the daily amount of input material at the workplace
 - Dispose of waste promptly.



D-W 021: Warning Explosive Atmosphere

- > Used cleaning cloths may only be collected, stored and transported in robust, tightly closed containers, e.g. containers made of metal or high-molecular low-pressure polyethylene. Containers for cleaning rags which are moist with solvents must be dissipative or conductive and earthed.
- > Execute open flame operations with written permission only.
- > In the event of fire observe the potential suffocating effect of fireextinguishing agents.
- Consult your supervisor whether you work in a hazardous explosive atmosphere (divided into "Zones"). Pay attention to warning signs.
- > If you do work in a hazardous explosive atmosphere, ask your supervisor about working guidelines (authorisation certificate for open flame operations).
- Avoid ignition sources of all kinds in a hazardous explosive atmosphere.

- Comply strictly to not smoking. Also observe the prohibition sign "No Open Flame; Fire, Open Ignition Source or Smoking Prohibited!"
- > Wear shoes with dissipative soles in Zone 1 or in hazardous explosive atmospheres of any Zone.
- Use only conductive or dissipative items or installations in a hazardous explosive atmosphere. This applies to vessels and equipment for transferring liquids as well as powders. Observe the guidelines for earthing measures and keep the prescribed order.
- Only use electrical devices approved for the working area. The opposite sign is a first indication.
- Earth container, devices (e. g. filling funnels) and pipes. Otherwise electrostatic charging may occur followed by an electrostatic discharge. This electrostatic discharge produces a spark which is a potential ignition source.

Prevention of Fires and Explosions

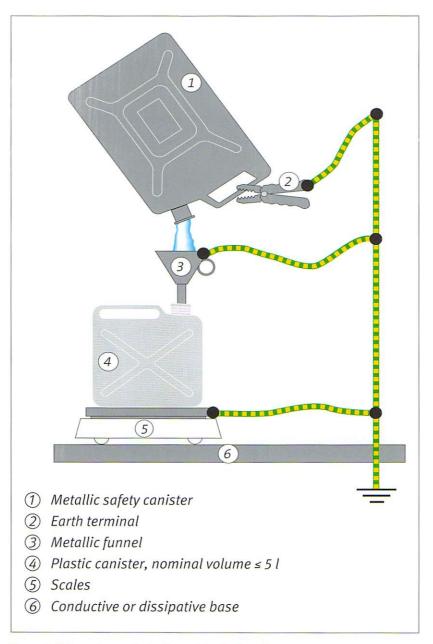


Figure 7: Filling of a small plastic canister in Zone 1

- Be sure that ambient and processing temperature of flammable liquids do not exceed the flashpoint.
- > Take care that vessels with volatile flammable organic liquids are always kept closed. Do not expose these vessels to the sun or place them near the heater.
- Avoid splattering when filling or transferring flammable organic liquids. Figure 8 illustrates examples.
- Avoid the formation of dust when filling or transferring powder. Safety measures are:
 - Let the container run dry very slowly.
 - Transfer carefully with a shovel.
- > Never shake out an emptied/depleted sack.
- > Remove dust deposits e. g. by liquid purification or with an explosion-proof vacuum cleaner.

Warning: Do not use compressed air to clean!

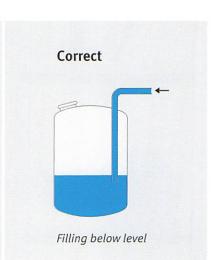


Figure 8: Correct transfer of flammable organic liquids

Prevention of Fires and Explosions

Wrong

6 Storage and Transport

- > Always keep access to emergency exits, fire extinguishers, emergency showers and further safety installations as well as switches, valves and further controls clean.
- > Keep emergency and traffic routes free from obstacles.
- > When storing and stacking, be sure that all articles are secured to minimize the risk of objects falling down, falling over or rolling away.

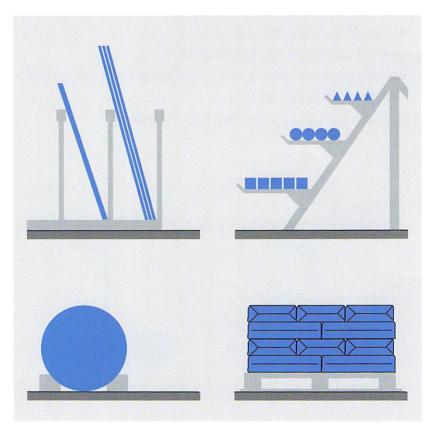


Figure 9: Safe storage and stacking of objects

- > Use designated traffic routes only.
- > Do not touch rolling barrels at the drum edge.
- > Transport fragile vessels filled with hazardous substances in buckets or transport boxes.
- > Lift loads from a squatting position and keep the spinal column as straight as possible.
- > Do not linger below hanging loads.
- > Wear personal protective equipment made available by your employer, e. g. safety shoes or a safety helmet.



Figure 10: Transport cart for use on steps

- Use adequate means of transport only.
- Only use means of transport such as industrial trucks or cranes and lifting devices if you are instructed or you have the corresponding driving licence.

Storage and Transport

7 Electric Resources

- Perform a visual examination of the electrical resources before use:
 - the connector cable must not be damaged,
 - the kink protection (grommet) must be at the inlet of the connecting lead into the device,



W 08: Warning Dangerous Voltage

- the cable jacket of the connecting lead must not be ripped out of the machine,
- · the insulation must not be damaged,
- switches, connectors, sockets and machine housings must not have any visible external damage.

In individual cases a simple function test may also be required.

- > Damaged equipment must not be used.
- > It is essential that connecting leads are always installed safely to minimize the risk of tripping and the cable being damaged.
- Never repair damaged electrical resources without authorisation. Report the damage immediately.

- > Always switch off equipment before unplugging.
- If you want to remove a connector out of the socket, never pull from the cable, but from the connector only.
- In potentially explosive areas only approved explosion-proof electrical resources may be used.



Figure 11: Unplugging safely

Resources

8 Personal Protective Equipment

- Always use the personal protective equipment required for defined working areas or tasks. Observe respective mandatory signs. Personal protective equipment is e. g.:
 - Head Protection
 - Hearing Protection
 - · Face and Eye Protection
 - · Respiratory Protection
 - Protective Clothing
 - Hand Protection
 - Foot Protection

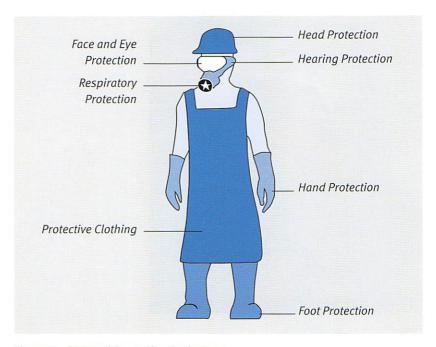


Figure 12: Personal Protective Equipment

- Learn how to use the personal protective equipment provided and how to handle contaminated personal protective equipment.
- > Avoid the spreading of hazardous substances by following the instructions of the supervisor.
- > Your working clothes may protect you as well. Clothing should be fastened. Remove clothes if they have been contaminated with hazardous substances.
- > When dealing with hazardous substances like acids, alkaline solutions or solvents, keep in mind that not every protective glove is suitable for any hazardous substance. Generally for activities with liquid hazardous substances only non-absorbent and tight gloves made of adequate plastics or rubber types come into consideration. Gloves made of cloth or leather are completely inadequate. You will find the protective glove suitable for your task in the operating instructions.
- Suitable breathing apparatuses protect you against the inhalation of harmful concentrations of gases, vapours, mist or dust. Breathing apparatuses may only be used after a proper training programme (theoretically and practically) has been completed.
- Hearing protection helps to avoid noiseinduced deafness. It has to be worn in noisy areas. These areas are recognised by the mandatory sign "Use Hearing Protection".



Personal Protective Equipment

9 First Aid



E003: First Aid

- Find out about the first-aid measures needed in the event of an occupational accident.
- Report each accident and near-accidents to the superior, so measures may be adopted immediately.
- Do not forget, you must write down all first-aid measures. These documents must be stored in the company files.
- Leave the danger zone if a leak of harmful substances is suspected.
- If you intend to save injured persons from the danger zone, protect yourself against contact with hazardous substances (respiratory protection, protective gloves etc.).
- Initiate immediate medical aid. Tell the doctor the name of the chemical substance and the first-aid measures that have already been executed. Any information may be helpful for the doctor (Safety Data Sheet or Code of Practice about the hazardous substance).
- It is recommended to take a course as a first aider to be able to efficiently give first aid.
- Do not forget to cordon off the place of accident immediately in order to avoid additional mishaps.

Emergency Numbers		
Fire		
Accident		
In case of emergency give the	following information:	
Who is calling?	Your name	
Where did it happen?	Describe place of accident as precisely as possible	
What happened?	Short description of accident	
How many injured persons?	Number of injured persons	
What kind of injuries?	Notably describe life- threatening injuries	
Waiting for queries	Replace receiver only after the control centre has finished the call	

Picture Credits

The pictures in this Code of Practice are for illustrative purposes. They do not involve any kind of recommendation.

Frontispiece and the figures on page 4, 13 and 23: Jedermann-Verlag GmbH

Figure 10: Currenta GmbH & Co. OHG, Alte Heerstraße, D-41450 Dormagen

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This Code of Practice is focused on essential items of individual regulations and rules. Thus, it does not demonstrate all measures required in a given case. Furthermore, since the issue of this Code of Practice the state of the art and the legal basis may have changed as well.

The Code of Practice has been compiled with great care. However, this does not absolve the entrepreneur from the duty and responsibility of checking the information to be complete, correct and up to date.

In companies women and men carry responsibility equally. In this Code of Practice, however – like in laws, ordinances and the accident prevention regulations – only the male equivalent is used in order to facilitate reading.

The Act on the Protection at Work uses the term "employer", the Social Security Code VII and the Accident Prevention Regulations of the German Social Accident Insurance Institutions say "entrepreneur". Both terms are not completely identical, because an entrepreneur does not necessarily employ workers. This fact is irrelevant for the topic treated in this Code of Practice, and the term "entrepreneur" is used here.

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Do you have any questions, suggestions or criticism?

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