

Personal protective
equipment



Protective gloves – effective protection against mechanical hazards



Training
Support Material for Workplace Safety Briefings



How to properly use protective gloves against mechanical hazards

Our hands are remarkably complex tools. Comprising 27 bones, over 30 muscles, numerous ligaments, tendons and nerves, plus thousands of sensory receptors, they allow us to feel and grasp things, communicate with others and carry out our work. Hands and fingers are particularly at risk of cuts, puncture wounds, crush injuries, bruises, broken bones and even amputations. Approximately 40% of all workplace accidents at companies that are members of BG ETEM involve the hands. However, such injuries can be prevented, especially by using the right tools and appropriate protective gloves.

Causes of injury

Hand injuries often occur during everyday tasks that are performed frequently:

- Cuts caused by sharp edges or sheet metal, or slipping while using wire cutters or utility knives
- Bruises caused by being struck with a hammer or by slipping, e.g. while loosening or tightening screws
- Crush injuries at roller feed points caused by manually lifting plates or covers
- Puncture wounds caused by the screwdriver slipping or by nails in pallets

Hierarchy of controls (STOP principle)

Protective gloves, i.e. personal protective equipment (PPE) should only be used where hazards cannot be prevented or sufficiently minimised through substitution or technical and organisational measures.



Substitution/replacement, for example:
use a safety knife instead of a utility knife



Technical measures:
safety devices and guards on machines



Organisational measures:
clean workstations (removing chips, burrs and splinters) using only the appropriate tools; dispose of utility knife



blades in the blade and knife container instead of on the floor or in a bucket; glove plans, knife organisation system

Personal protective equipment:
protective gloves



Prohibitive sign
“Wearing of protective gloves prohibited”



Mandatory sign
“Use hand protection”

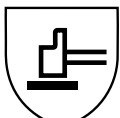
Protective gloves – yes or no?

Protective gloves must be worn in areas marked with a “Wear protective gloves” sign.

If there is a risk of being caught by rotating machine parts – for example on drilling, milling or lathe machines – the use of protective gloves is strictly prohibited. Injuries ranging from bruises and fractures to amputations are possible.

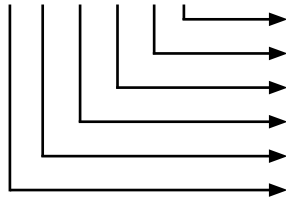
Use appropriate protective gloves

Only gloves specified in the operating instructions or in the hand or skin protection plan may be used. This is because gloves must be appropriate for the specific task and the associated hazards. The properties of a glove can be identified by the pictograms printed on it. For example, a glove with the hammer symbol protects against mechanical hazards but does not offer protection against chemicals.



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Protection against impact

Cut resistance according to DIN EN ISO 13997

Puncture resistance

Tear resistance

Cut resistance (coup test)

Abrasion resistance

(X and A to F)

(X and 0 to 4)

(X and 0 to 4)

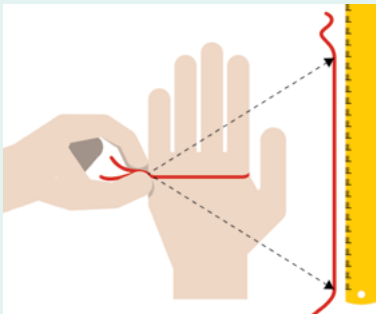
(X and 0 to 5)

(X and 0 to 4)

Note:

The higher the number, the better the test result. X stands for “Not tested” or “Test not applicable”.

If there is no letter in the fifth and sixth positions, the corresponding tests were not performed.



Determining the right glove size

The size of the gloves is crucial for comfort and optimal protection. The size is determined by measuring the hand at its widest point (excluding the thumb). As an alternative to a measuring tape, you can also use a piece of string. You can then measure the length using a ruler or folding rule.

Hand size	6	7	8	9	10	11
Hand circumference (mm)	152	178	203	229	254	279
Hand length (mm)	160	171	182	192	204	215

Use and replacement of protective gloves

Before use, check protective gloves for damage and dispose of them if necessary. In addition, you must wash your hands and dry them thoroughly before putting on the gloves. Depending on the glove model, your hands may start to sweat after a certain amount of time. Therefore, protective gloves should be worn only as long as necessary and changed regularly. They should be allowed to dry thoroughly before the next use (but not on radiators, as this can cause the glove coating to become brittle).

Use only
undamaged,
dry gloves!

FURTHER INFORMATION



Important information about the accident insurance consultant

Click this link to find out when and why you must see an accident insurance consultant after a workplace accident:

[bgetem.de](https://www.bgetem.de),
Webcode: 11430417

Via this link, you'll find practical tips from BG ETEM on how to respond correctly in the event of a workplace accident:

[bgetem.de](https://www.bgetem.de),
Webcode: 11245595



What to do in the event of accidents, first aid

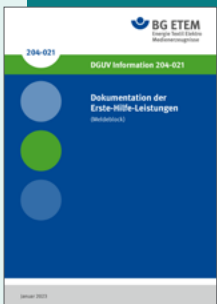
After an injury, you should see an accident insurance consultant approved by the workers' compensation association, especially if the wound is deep and bleeding heavily, if the pain does not subside or is getting worse, if you are experiencing sensory or mobility problems or if a bone fracture is suspected. If a finger is amputated, never bring the severed part into direct contact with ice or other frozen items. Instead, wrap it loosely in sterile dressing materials and keep it cool, for example by placing it inside a specialised double-walled sterile plastic bag.

Even for minor cuts, it is highly advisable to seek medical evaluation to ensure the wound is properly cleaned and dressed. Failing to do so can lead to infection and, in severe cases, sepsis.

All injuries must be recorded in the site accident book or similar in full compliance with data protection laws, detailing the name, date, time, nature of the injury, circumstances of the accident and the initial first aid measures applied.

DGUV information 204-021 and 204-006:
Documentation of first aid services (reporting form) and first aid guide

[medien.bgetem.de](https://www.medien.bgetem.de)





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