

# ELK DEFENDER

User's Instruction

*Hand protecting -  
the save way!*



**August Penkert**  
Technische Leder- und  
Kunststoffzeugnisse



ELK  
DEFENDER

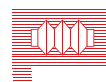


ELK  
DEFENDER (ST)



## ELF DEFENDER

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# ELK DEFENDER

Gloves for firefighters

## Specification

The gloves **ELK DEFENDER & ELK DEFENDER (ST)** are made in accordance with Directive 89/689/EC and satisfy the following norms:

- >> **EN 420:2003 (Gloves general requirements)**
- >> **EN 659:2008 (Protective gloves for firefighters)**
- >> **The gloves don't consist of any allergic components**
- >> **Issued by: CEN NR 0493/Certificate no. 04609607**
- >> **Manufactured in Poland**



## Application

Gloves protect firefighter's hands during standard work and operations such as extinguishing fires or actions – search and rescue. Thanks ergonomic shape and carefully selected materials the gloves provide maximum protection with the highest dexterity and comfort. The unique gloves system consist of specially treated leather – waterproof, non-flammable and liquid chemicals resistant.

### EN 659:2008



Waterproof and breathable membrane combined with fire-resistant liner based on mixture of KEVLAR®/ProtexM® and mineral fibres. **The ELK DEFENDER** is not designed for removing liquid chemicals. In circumstances of contact with chemicals provides protection. Because of max tear resistance gloves can be a hazard if there is a possibility they could snag into moving parts and put the user in danger.

### FACTS

Fireman's (protective) gloves in accordance with EN 659:2008

**MODELL** ELK DEFENDER, ELK DEFENDER (ST)

**SIZE** 7 - 11

## How to use?

1. Gloves should be used for their intended purpose.
2. Before every action inspection must be performed in order to check if there is no visible damage.
3. Soiled gloves reduce protective properties, keep them clean.
4. Gloves that have become wet dry without heating devices.
5. Inappropriate use of the gloves can lead to serious injury or burns and release the manufacturer from all responsibility.

## Performance Levels

	Requirements	Results
Abrasion resistance	at least level 3	level 3
Cut resistance	at least level 2	level 5 (palm) level 4 (back)
Tear resistance	at least level 3	level 4
Puncture resistance	at least level 3	level 3
Burning behaviour	level 4	level 4
Convective heat resistance	at least 13,0s	s 14 (palm) s 47 (back)
Radiant heat resistance	at least 22,0s	s 71
Contact heat resistance, dry conditioning 250°C	at least 10,0s	s 10
Contact heat resistance, wet conditioning 250°C	at least 10,0s	s 10
Heat shrinkage	≤ 5%	passed
Dexterity	at least level 1	level 5
Seam breaking strength	at least 350 N	N 350
Time for the removal of gloves, dry conditioning	≤ 3s	s 2
Time for the removal of gloves, wet conditioning	≤ 3s	s 2
Resistance to liquid chemical penetration	no penetration	passed