



DEHNcare® protects  
Workers exposed to Arc Faults







DEHNcare® ensures a higher degree of safety and wearing comfort

## Why arc fault protection?

Each and every day electrotechnical work is carried out all over the world. The risk that technical defects, maloperations, contaminants or foreign objects in the installation cause arc faults cannot be excluded. If arc faults occur, workers are exposed to temperatures of more than 10,000°C and suffer severe burns.

In addition to technical systems, arc-fault-tested personal protective equipment protects workers against the thermal effects of an arc fault.

Personal protective equipment from DEHN consists of:

- safety helmet for electricians with face shield
- protective gloves
- protective suit or
- protective coat

According to the International Social Security Association and national regulations, employers shall include arc fault protection in the risk assessment. If this risk assessment indicates that there is a risk of an arc fault, employers shall provide suitable personal protective equipment to their employees and ensure that it is worn. Personal protective equipment must be tested and approved by an accredited certification body.

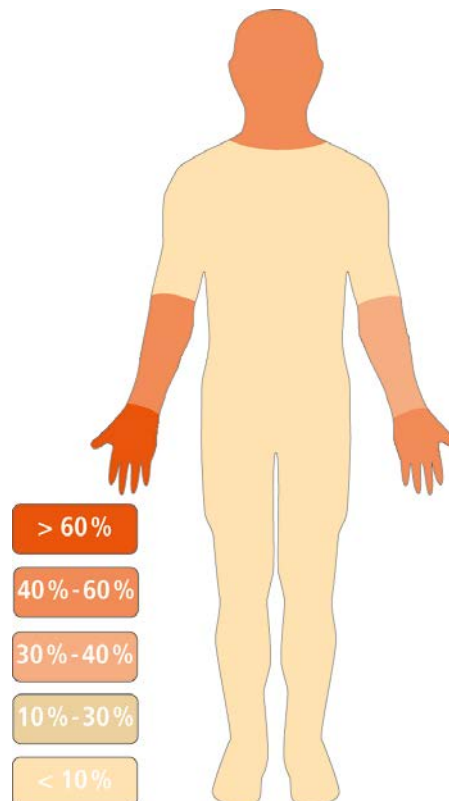
Personal protective equipment from DEHN is tested to international standards. Visors made of nanoparticles, gloves and protective suits made of neoprene and leather provide maximum protection and excellent wearing comfort.



## Arc faults endanger the safety and health of employees

According to the International Social Security Association and national regulations, employers shall include arc fault protection in the risk assessment. Depending on the risks to be expected, employers shall provide tested personal protective equipment in compliance with the EEC directive 89/686/EEC to their employees. Moreover, employers shall ensure that the personal protective equipment is properly used.

### Body regions affected by thermal damage



The hand and forearm region is particularly at risk of being burnt by arc faults whilst working on electrical installations.\*

\*Source: BG ETEM – German trade association for energy, textiles, electrical goods and media products





## Arc faults cause skin burns and injuries

Without arc fault protection



Standard protective gloves do not prevent injury and burns.

With arc fault protection



Arc-fault-tested protective gloves provide adequate protection.



Wearing helmets without face shield can result in serious injury.



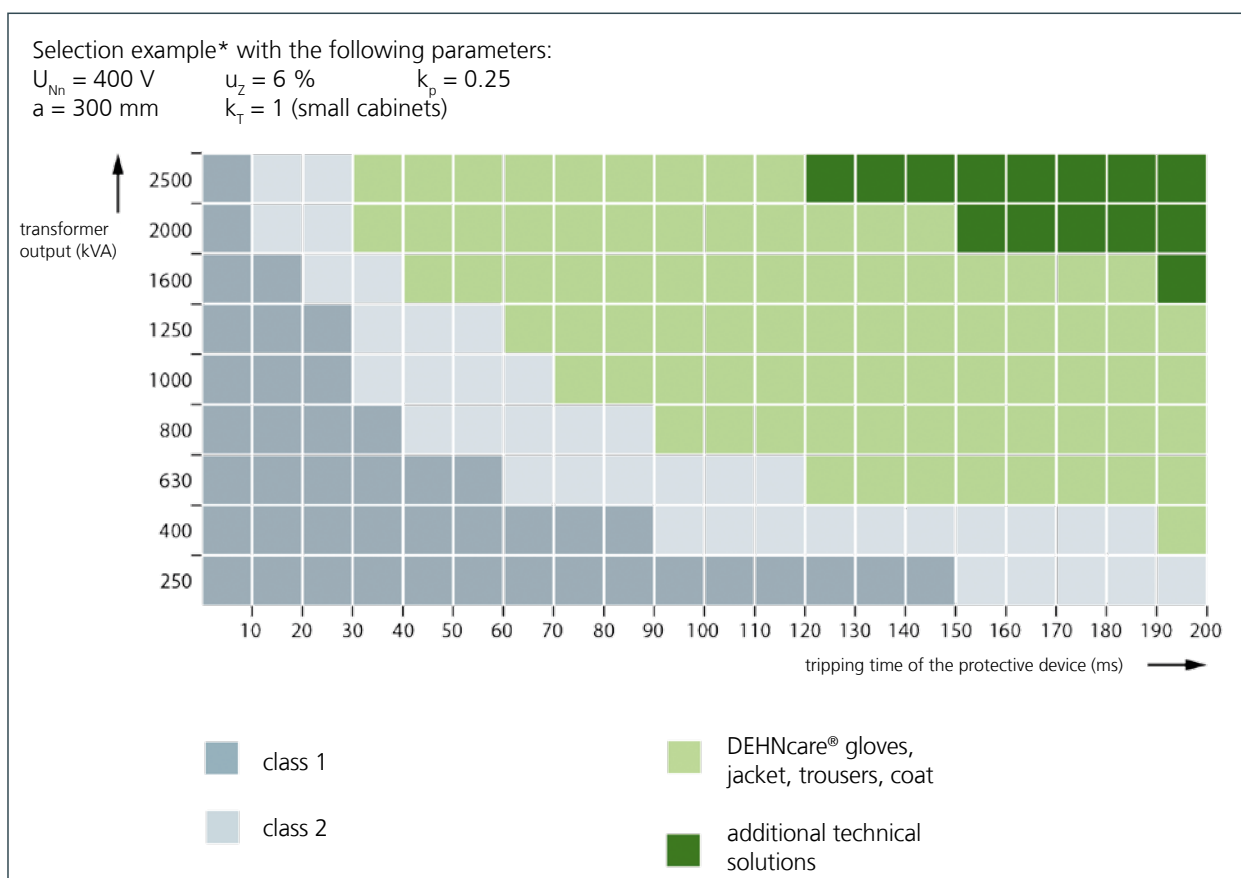
Safety helmet for electricians with face shield protects the face and head region from injuries and burns.



Photo: J. Vogler

## Selecting arc-fault-resistant protective clothing

The diagram shows suitable arc-fault-resistant protective clothing depending on the tripping time of the protective device and the transformer output.



\*This selection chart is no substitute for a risk assessment.





## DEHNcare® protective gloves

The hand and forearm region is particularly at risk of being burnt by arc faults whilst working on electrical installations. DEHNcare® protective gloves of type APG provide reliable protection in the event of an arc fault. They comply with applicable laws and regulations and have been extensively tested in box tests.

### DEHNcare® protective gloves (APG)

Protection against

- second-degree skin burns caused by arc faults
- cut and stab wounds

Maximum wearing comfort thanks to

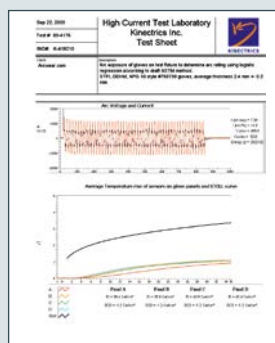
- minimised sweat
- exceptional touch sensitivity
- excellent fit



Type	Part No.
APG 8	785 796
APG 9	785 797
APG 10	785 798
APG 11	785 799
APG 12	785 800

## Approved and documented tests

- Arc fault protection as per IEC 61482-1-2, class 2 (box test: 7 kA / 0.5 s)
- Arc fault protection as per IEC 61482-1-1 (ATPV: 32.8 cal / cm<sup>2</sup> (leather palm) and 45 cal / cm<sup>2</sup> (coated back))
- Hazard Risk Category HRC 3 (leather palm) and HRC 4 (coated back)
- Protection against thermal risks (EN 407:2004)
- Protection against mechanical risks (EN 388:2003)





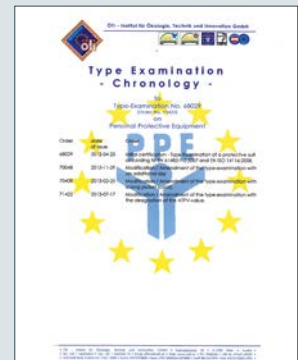
## DEHNcare® protective clothing

DEHNcare® protective clothing protects workers from burns caused by arc faults. The materials (combination of breathable leather and neoprene) ensure protection as per IEC 61482-1-2 (class 2) and provide a high wearing comfort.

The flame-retardant lining and the reflective strips ensure maximum protection. All materials such as zip and hook-and-loop fasteners are also made of flame-retardant material. The flapped side pockets round off the appearance. The suit is available in six sizes to ensure right fit. The coat is available in three double sizes.

## Approved and documented tests

- Arc fault protection as per IEC 61482-1-2, class 2 (box test: 7 kA / 0.5 s)
- Arc fault protection as per IEC 61482-1-1 (ATPV: 33.1 cal / cm<sup>2</sup>)
- Hazard Risk Category HRC 3
- Protection against thermal risks (EN 407:2004)
- Protection against mechanical risks (EN 388:2003)







#### DEHNcare® jacket (APJ)

Arc-fault-tested protective jacket, sizes 46 to 58

- flame-retardant zip and hook-and-loop fasteners
- reinforced stand-up collar
- reflective strips
- useful side pockets



Type	Part No.
APJ 46	785 769
APJ 48	785 770
APJ 50	785 771
APJ 52	785 772
APJ 54	785 773
APJ 56	785 774
APJ 58	785 775

#### DEHNcare® trousers (APT)

Arc-fault-tested protective trousers, sizes 48 to 58

- flame-retardant fasteners
- reflective strips
- pockets for knee pads
- useful cargo pockets
- adjustable belt
- pair of braces
- knee pads



Type	Part No.
APT 48	785 780
APT 50	785 781
APT 52	785 782
APT 54	785 783
APT 56	785 784
APT 58	785 785

#### DEHNcare® coat (APC)

Arc-fault-tested protective coat, sizes 48/50 to 56/58

- flame-retardant zip and hook-and-loop fasteners
- reinforced stand-up collar
- reflective strips
- useful side pockets



Type	Part No.
APC 48 50	785 755
APC 52 54	785 756
APC 56 58	785 757



## DEHNcare® safety helmet with arc-fault-resistant face shield

Accident statistics show that the face region is frequently affected by severe burns. The DEHN safety helmet with arc-fault-resistant face shield protects workers from second-degree skin burns, flying debris and splashes. The visor is extremely robust and scratch-proof.

### Safety helmet for electricians (ESH)

Protection of the head and face region with maximum wearing comfort

Easy to use thanks to

- push / rotary knob for adjusting the size
- plug-in system (helmet, face shield)

### DEHNcare® arc-fault-resistant face shield (APS)

Excellent visibility due to

- anti-mist coating
- natural colour reproduction
- high light transmittance

High degree of protection due to nano-technology

- energy absorbing
- low wear



Type	Part No.
ESH 100 S Y, yellow	785 740
ESH 1000 S W, white	785 741
ESH 1000 S O, orange	785 742
ESH 1000 S B, blue	785 743
ESH 1000 S R, red	785 744

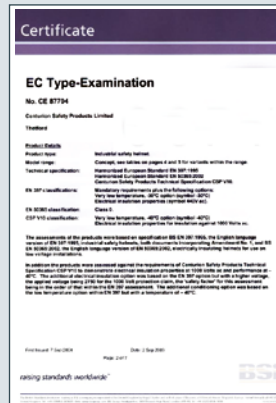
Type	Part No.
APS CL2 SC	785 746
APS 12C SC	785 747
APS CL2 FS	785 748
APS 12C FS	785 749





## Approved and documented tests

- Arc fault protection as per GS-ET-29, class 2 (box test: 7 kA / 0.5 s)
- Arc fault protection as per ASTM F2178 (12 cal / cm<sup>2</sup>)
- Hazard Risk Category HRC 2
- Protection against thermal and mechanical risks as per EN 166 and EN 177 (face shield)
- Electrical requirements according to EN 50365 (helmet)
- Protection against thermal and mechanical risks as per EN 397





## Accessories for DEHNcare®

### Chin strap (KR)

Chin strap for safety helmets



Type	Part No.
KR ESH 1000	785 751

### Storage bag (AT)

Storage bag for safety helmet, face shield and protective gloves



Type	Part No.
AT 50 30	785 442

### Storage backpack (ARS)

Storage backpack for the complete DEHNcare® protective equipment



Type	Part No.
ARS 65 40	785 443





## DEHN protects.

DEHN stands for top-quality safety equipment as well as lightning and surge protection products. Our high-grade protective clothing was tested by renowned and accredited institutes in line with international standards. The DEHNcare® protective suit and safety helmet are certified as follows:

### **DEHNcare® jacket, trousers and coat:**

- Institut für Ökologie, Technik und Innovation GmbH, independent test institute with expertise in textiles
- Öko-Tex-Standard, independent test and certification system for textile products

### **DEHNcare® face shield:**

- ECS, independent test institute specialised in the conformity assessment of eye protectors

### **DEHNcare® gloves:**

- STFI, Sächsisches Textilforschungsinstitut e.V., accredited test institute of the textile industry





Our promise



## DEHN protects.

Our key objective is to protect workers and material assets. It was our pioneering spirit and innovative ideas that have defined our company for more than 100 years and made us a market leader with more than 1,500 employees. Market needs as well as our determination and innovative ideas are incorporated into new products and safety concepts.

As early as in 1923 our founder Hans Dehn started the production of external lightning protection and earthing components to optimise the protection of buildings and installations. In 1954, we launched the first series of surge protective devices. Constant further development of these devices ensures safe operation and permanent availability of electrical and electronic installations. Also in the 1950s, our third sector, safety equipment, was added to our portfolio.

The Bavarian town of Neumarkt is the heart of our activities where product managers and developers advance our protection technologies. Here we manufacture our high-quality safety products.

## We offer the best solution.

Our concern is to be a reliable and fair partner for our industrial, commercial and technical customers all over the world. To this end, we always focus on the best solution to protection problems. Our sales teams and our global network of 17 subsidiaries and offices as well as more than 70 international partners competently serve customer needs. Proximity and close contact with our customers are of utmost importance to us, be it on-site support by our experienced field staff team, our telephone hotline or personal contact at trade fairs. In hundreds of seminars, workshops and conferences held every year we impart practical knowledge of our products and solutions. Our specialised book "Lightning Protection Guide" and our brochures will broaden your know-how.

Visit us at [www.dehn-international.com](http://www.dehn-international.com).



**Surge Protection  
Lightning Protection  
Safety Equipment  
DEHN protects.**

DEHN + SÖHNE  
GmbH + Co.KG.

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