


**PRODUCT:** Protective clothes the intended use of which is welding and similar works, such as: cutting, grooving with compressed air in electric arc, metallization, etc.

**Type:** MOFOS blouse with or without a hood, MOFOS trousers, MOFOS bibpants.

**Manufacturer:**  contact address: Poděbradská 260/59, Hloubětín, 198 00 Praha 9, Czech Republic.

**MATERIAL:** MOFOS fabric; 390g/m<sup>2</sup>, Material composition: 100% Cotton, permanent fireproof treatment.

**LAWS, STANDARDS, DECREES:**

In accordance with the requirements of the Regulation (EU) 2016/425 for personal protective equipment of category II.

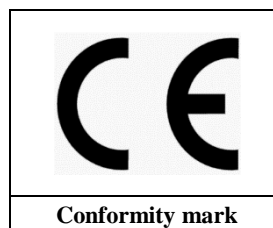
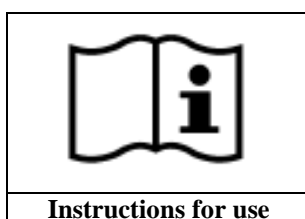
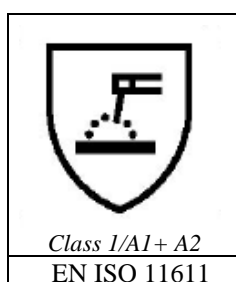
EN ISO 13688:2013 Protective clothing - general requirements.

EN ISO 11611:2007 Protective clothing for use in welding and allied processed.

**INTENDED USE:**

Protection of users against spatter (small quantities of melted metal), short-term contact with flames, radiant heat from electric arc, and reduction of electric current injuries at short-term or accidental contact with live electric conductors with electric voltage approximately up to 100V - direct current, at standard conditions for welding.

**PIKTOGRAMY:**



**Note:**

A1 – flame spread, procedure A – surface ignition.

A2 – flame spread, procedure B – edge ignition.

**Instructions for selection of type of welding clothes (category 1 / category 2)**

Type of welding clothes	Selection criteria related to procedures:	Selection criteria related to environmental conditions:
Class 1	The techniques for manual welding are connected with occurrence of light, spatter, and drops, e.g.: - gas welding, - WIG welding, - MIG welding, - micro-plasma welding, - hard soldering, - spot welding, - MMA (manual arc welding with stick electrode) welding (rutile-type electrode).	Operations of machines, e.g.: - oxygenic cutting machines, - plasma cutting machines, - incandescent welding machines, - machines for thermal coating, - welding tables.
Class 2	The techniques of manual welding connected with occurrence of large spatters and drops, e.g.: - MMA welding (basic electrodes or electrodes with cellulose surface), - MAG welding (with CO <sub>2</sub> or with gas mixture), - MIG welding (high current), - arc welding tubular cored electrode without protective gas, - plasma cutting, - grooving, - oxygenic cutting, - metallization.	Operations of machines, e.g.: - in confined spaces, - for overhead welding / cutting or in comparable unnatural positions.

**NOTICE FOR USERS:**

The clothes may be used solely as a protection against small particles of melted metal (e.g. scales at welding) and as a protection against slight hazards affecting surfaces. In the event of disruption of the clothes (tearing, wearing through, inadequate thinning of material, bursting at seams etc.) the protection level of clothes decreases and the product becomes inconvenient in accordance with the above mentioned legal and technical regulations. It may impair the feature which limits spread of flames if the protective clothes for welding are polluted with flammable substance. For technical reasons it is not possible to protect all parts of installed welding voltage of arc welding against direct contact.

The welding protective clothes themselves do not provide protection against electric current injuries. It is determined only for protection against short-term unintentional touching live parts at arc welding. In places with increased hazard of electric arc injury it is necessary to use other layers insulating against electrical injuries.

If additional protective clothes parts are used, the basic clothes must satisfy conditions of the category 1. Aprons which are used for additional protection should protect the front part of the body from one side seam to another side seam at least, and must be intended for protective clothing providing the protection against welding hazards.

## Information on hazards brought about by UV radiation

Specification of minimal requirements for clothes which are able to protect the user against common hazards arising at welding on condition they are used correctly. These hazards include exposure of skin to ultraviolet radiation (UV) which is brought about by all operations of electric arc welding. The UV radiation includes UVA, UVB, and UVC radiation arising at intensive impulses.

However, at this exposure the textile degrades and may not provide protection. This applies particularly in cases when the clothes are used at electric arc welding (especially at MIG/MAG welding), at which the damage caused by intensive UV radiation, radiant heat, and massive sparks or drops of melted metal may decrease their effectiveness very quickly. In such situation it is suitable to use higher level of protection, such as additional leather sleeves, aprons etc., which extend the time of effectiveness of pieces of clothes and help at the protection of their users.

The clothes of the category 2 are designed to provide higher resistance against degradation caused by these hazards than the category 1. Although, it is not possible to determine it exactly starting from the moment they are influenced by the welding process, skilfulness of the welder, the welding current used, arising spatter, and position of welding.

The Regulation (EU) for personal protective equipment requires selecting PPE at the start after a careful hazard assessment, to check them regularly, and maintain or replace them to secure permanent protection. The users who are exposed to UV radiation must be informed on the hazard and regularly controlled.

A simple check carried out for the purpose of further use for protection against UV radiation for this type of clothes (e.g. once a week) shall be carried out by lifting the clothes parts against light of a 100 W bulb at the length of an arm (the approximate distance is 1 m); if light penetrating through the fabric can be seen, then the UV light penetrates through it as well.

We also recommend the users who ascertain that they are tanned (which is a sign of UVB radiation penetration) to have their clothes repaired (if it is possible) or replace them by other clothes and use other additional accessories - and provision of more resistant protective layer should be considered for the future.

### Unsuitable use

- The level of protection against flames is reduced in case the welding protective clothes are contaminated with flammable substances.
- Increased content of oxygen in air substantially reduces the level of protection of the welding protective clothes against flames. Attention should be paid particularly to welding in confined space, e.g. in case it is not excluded that the air is oxygen-enriched.
- The electric insulation provided by the clothes is reduced in case the clothes are wet, dirty, or soaked with sweat.
- Two-part protective clothes (blouse + trousers): to ensure provision of prescribed level of protection it is necessary to wear both parts together.
- For the MOFOS clothes - the variant with hood - the hood must be taken off for proper welding.

**RECOMMENDATION:** to extend the lifetime of MOFOS clothes we recommend to use also protective leather welding accessories together with these clothes (protective aprons, gaiters, sleeves..).

**SIZES:** They are marked with 2 control sizes in accordance with EN ISO 13688.

**MARKING:** Sewed in tag

- trade mark, type, and category of product
- CE conformity mark
- material composition in a whole type name
- symbols for treatment
- pictogram for protection including harmonized standards
- class
- notice on the necessity to read the instructions for use
- notice
- lot
- identification of manufacturer

**STORING:** In dry, shady, and well-ventilated place at the temperature ranging from 10 to 30°C.

### METHODS OF MAINTENANCE:



**MAINTENANCE:** the clothes must be washed separately from other materials made of other mixtures or with other treatments; to increase efficiency it is necessary to ensure so that flammable rests do not remain on the surface of the fabric; the ratio of filling the wash machine should be under 1:20 to secure ideal washing process and minimize scuffing of clothes; it is recommended to apply the two-level washing, pre-washing and proper washing at the temperature of 40°C; it is recommended not to use any softeners or other additives since they may reduce effectiveness of the fireproof treatment.

The product should be washed at the temperature not exceeding 40°C, applying moderate procedures. The product should not be bleached. The product should not be dried in a tumble drier! Ironing permitted at the temperature of the ironing surface not exceeding 150°C. The product may be chemically cleaned applying tetrachloroethene, monofluorotrchloromethane, and all dissolving agents marked with the symbol F- limited mechanical impacts. Permanent fireproof treatment.

Welding protective clothes must be regularly cleaned in accordance with the above mentioned recommendations. The clothes must be checked after cleaning. In case the clothes are damaged it is necessary to repair them, if possible, or replace them with new protective clothes. Repair them only using the materials and fabrics that meet the requirements of the respective standard.

**ATTENTION:** If the product is used, kept, or treated differently than as specified here in this document, it may be destroyed or its functions may be changed.

**DISPOSAL:** The clothes should be disposed in accordance with the Waste act.

**Identification of the Notified Body that carried out the conformity assessment:** Institut pro testování a certifikaci, a.s. (Institute for testing and certification), tř. T. Bati 299, 764 21 Zlín-Louky, CZ, Notified body no. 1023.

The Declaration of Conformity can be found here: [www.canis.cz](http://www.canis.cz); for individual products, in the bar "Documents to download".

