



Mod. 33-0001



Mod. 33-0003







Mod. 33-0007



Mod. 33-0009

Jacket / Coat



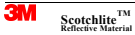



- basic length 950 mm
- designed to allow easy motion
- front closure by zipper (optional: hooks) with flap and velcro
- fluorescent or retroreflective rear shield, 42 x 10 cm, without print (print on request), detachable by velcro fastener
- radio pocket for 2 different length of radios with flap and velcro fastener and loop for antenna
- 3 outside pockets with flap and velcro fastener
- 1 inner pocket with zipper
- retroreflective and / or fluorescent elements
- hook for torch, gloves etc.
- high collar with velcro fastener
- knitted wrist cuff
- velcro fastener at the sleeve ends
- optional: zipper for detachable thermal lining

Colour				
Colour code „Z“ of article number has to be replaced	ecru Z = 1	orange Z = 3	yellow Z = 6	navyblue Z = 8

Not all fabrics are available in each colour, special dyeing on request depends on quantity.



All layers fixed together

Jacket / Article-No.	Trim	Outer shell	Moisture Barrier	Thermal- + Innerlining	Notified Body / Certification No
33-0001.32/805.Z* 33-0003.32/805.Z* 33-0007.32/805.Z* 33-0009.32/805.Z*	silver yellow silver / yellow yellow/silver/yellow 	Du Pont™ Nomex ® Comfort 265 g/m ² water and oil repellent, antistatic, mat. 805.Z	No moisture barrier	meta-aramide fleece, 110 g/m ² , quilted with Nomex ® / FR Viscose, 120 g/m ² , 2-layers, mat. 823.5	 BIA Alte Heerstraße 111, D-53757 St. Augustin Test report no. 1998 23574 Certificate no. 98 1141
33-0001.61/930.8 33-0003.61/930.8 33-0007.61/930.8 33-0009.61/930.8	silver yellow silver / yellow yellow/silver/yellow 	Nomex ® Outershell Tough 195 g/m ² water and oil repellent, antistatic, mat. 930.8	Fireblocker, 90 g/m ² PUR/BASOFIL/ meta-/para-Aramid mat. 818.8	Nomex ® Basicwear mit KEVLAR® Cord Lining 612 195 g/m ²	 BIA Alte Heerstraße 111, D-53757 St. Augustin Test report no. 2008 23038 Certificate no.
33-0001.67/930.8 33-0003.67/930.8 33-0007.67/930.8 33-0009.67/930.8	silver yellow silver / yellow yellow/silver/yellow 	Nomex ® Outershell Tough 195 g/m ² water and oil repellent, antistatic, mat. 930.8	Fireblocker, 90 g/m ² PUR/BASOFIL/ meta-/para-Aramid mat. 818.8	meta-aramide fleece, 110 g/m ² , quilted with Nomex ® / FR Viscose, 120 g/m ² , 2-layers, mat. 823.5	 BIA Alte Heerstraße 111, D-53757 St. Augustin Test report no. 97 06724 Certificate no. FIH 97.0.7214

* Z has to be replaced by colour code.

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Mod. No. 36-0041



Mod. No. 36-0043







Mod. No. 36-0047



Mod. No. 36-0049

Trousers







- 2 side pockets
- 2 cargo pockets with flap and touch and close fastener
- 1 hip pocket with flap and touch and close fastener
- belt loops
- knee reinforcement
- retroreflective and / or fluorescent trim
- slit closure by zip fastener
- leg adjustment by touch and close fastener
- optional: zip fastener for detachable thermal lining

Colour				
Colour code „Z“ of article number has to be replaced	ecru Z = 1	orange Z = 3	yellow Z = 6	navyblue Z = 8

Not all fabrics are available in each colour, special dyeing on request depends on quantity.



All layers fixed together

Trousers / Article-No.	Trim	Outer shell	Moisture Barrier	Thermal- + Innerlining	Notified Body / Certification No
36-0041.32/805.Z* 36-0043.32/805.Z* 36-0047.32/805.Z* 36-0049.32/805.Z*	silver yellow silver / yellow yellow/silver/yellow 	DuPont™ Nomex® Comfort 265 g/m ² water and oil repellent, antistatic, mat. 805.Z	No moisture barrier	meta-aramide fleece, 110 g/m ² , quilted with Nomex® / FR Viscose, 120 g/m ² , 2-layers, mat. 823.5	 BIA Alte Heerstraße 111, D-53757 St. Augustin Test report no. 1998 23574 Certificate no. 98 1141
36-0041.61/930.8 36-0043.61/930.8 36-0047.61/930.8 36-0049.61/930.8	silver yellow silver / yellow yellow/silver/yellow 	Nomex® Outershell Tough 195 g/m ² water and oil repellent, antistatic, mat. 930.8	Fireblocker, 90 g/m ² PUR/BASOFIL/ meta-/para-Aramid mat. 818.8	Nomex® Basicwear mit KEVLAR® Cord Lining 612 195 g/m ²	 BIA Alte Heerstraße 111, D-53757 St. Augustin Test report no. 2008 23038 Certificate no.
36-0041.67/930.8 36-0043.67/930.8 36-0047.67/930.8 36-0049.67/930.8	silver yellow silver / yellow yellow/silver/yellow 	Nomex® Outershell Tough 195 g/m ² water and oil repellent, antistatic, mat. 930.8	Fireblocker, 90 g/m ² PUR/BASOFIL/ meta-/para-Aramid mat. 818.8	meta-aramide fleece, 110 g/m ² , quilted with Nomex® / FR Viscose, 120 g/m ² , 2-layers, mat. 823.5	 BIA Alte Heerstraße 111, D-53757 St. Augustin Test report no. 97 06724 Certificate no. FIH 97.0.7214

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Selection, Use, Care and Maintenance (SUCAM)

Concerning the criteria for the selection, use, care, maintenance and storage are valid basically the information given in info 0-150 (Nomex®). By the composition of the fire protective clothing from different materials different methods of treatment can arise.

Thus, e.g., a moisture barrier from Gore-Tex - differently than with Proline - is not only washable but also can be chemically cleaned. Therefore, it is urgently advised to pay strictly attention to the washing instructions and cleansing instructions in the label.

Basic requirements on Personal Protective Equipment (PPE)

Annex II of the Directive 89/686 EC demands for the fulfilment of basic requirements on the health and safety of PPE. Under it are also requirements which are not, only partially or inexactly defined in the standards, and which we answer below after the best knowledge and the state of art, related to the products described here.

Para 1.2 Innocuousness of PPE

The materials used in the PPE described here do not release pollutants in normal atmosphere which have effects on the hygiene or health of the user.

However, it cannot be avoided, that - with which material ever - by foreseeable and intended use under heat effect gases of pyrolysis may release which are relevant for health if no breathing apparatus is worn.

Para 1.3.2 Compatibility

The PPE described here is compatible with all saleable fire boots, fire hoods, breathing apparatuses and gloves with cuff. It cannot be worn with the gloves which are provided with a knitted wristlet, because the wristlet in the sleeve and the wristlet in the glove collide with each other. In this case the sleeves of the jacket can be also equipped with thumb loops instead of wristlets.

Para 2.4 Ageing

Under ageing one understands the change of the product properties during the use or storage time. It is caused by different factors as

- wear and tear
- effect of IR / UV-radiation
- effect of high, low or varying temperatures
- effect of chemicals, incl. humidity
- effect of biological agents, like bacteria, fungus, insects or other pests
- effect of mechanical forces, like abrasion, bend, pressure or stretch
- contamination with dirt, oil, splashes of liquid metal, etc.
- cleaning, repair or disinfection

Most and most effective causes depend on the respective use which the manufacturer of PPE cannot judge, because they depend on the individual situation.

It is not very useful to the user if the manufacturer gives an information which refers only to the effects of the washing and excludes the use. Such a statement would never admit conclusions for the life span of the PPE or answer the question whether the PPE meets still the health and safety requirements.

Therefore, some information is provided hereunder which may be useful for the user.

Outershell material

The outershell material can be more often washed than it is necessary during the life span of the garments. In industrial applications single layer PPE has been washed more than 250 times and was still fully functional.



Indeed, the PPPE described here is dirt-, oil- and water repellent impregnated whose effect decreases after some (5-10 laundry). To avoid a wicking effect and also for organizational reasons it is recommended to renew the impregnation **after every laundry** (see care instructions info 0-150).

Though ultraviolet radiation affects the strength of the outside material, however, the initial value of the strength is so far about the values required in EN 469:2005 that the remaining strength is even more than enough.

Retro-reflective / fluorescent material

Certificates are given to reflex material that the combined retro-reflective / fluorescent stripes used with the PPE described here, reach the requested level of visibility still after 50 laundries with 60°C.

Moisture barrier

The tape sealing of the seams is the critical area, where leakages can appear after laundry, in particular with crossing seams. Therefore, regular intermediate checks are made at these neuralgic points also during the production to ascertain the seam density.

Present experiences and lab tests have shown that the waterproofness is still guaranteed after 25 laundry with 60°C.

Indeed, in particular the moisture barrier can be affected **unrecognized** by other influence, e.g., sting, tear, flame or radiation, and lose the demanded achievements.

Inner lining

The lining used in the PPE described here is inherently flame-resistant, i.e. the flame spread properties cannot get lost by laundry. Hence, the statements to the outershell material are also valid basically for the lining.

Accessories

Knitted wristlets and sewing thread, as well as reinforcements and inserts are totally produced on the base of meta- or para-aramide fibres (Nomex®, Kevlar®, Twaron®). Therefore the statements given for the outershell material are valid for them, too.

Para 3.6 Protection against heat and/or flame

Para 3.6.2 Complete PPE ready for use

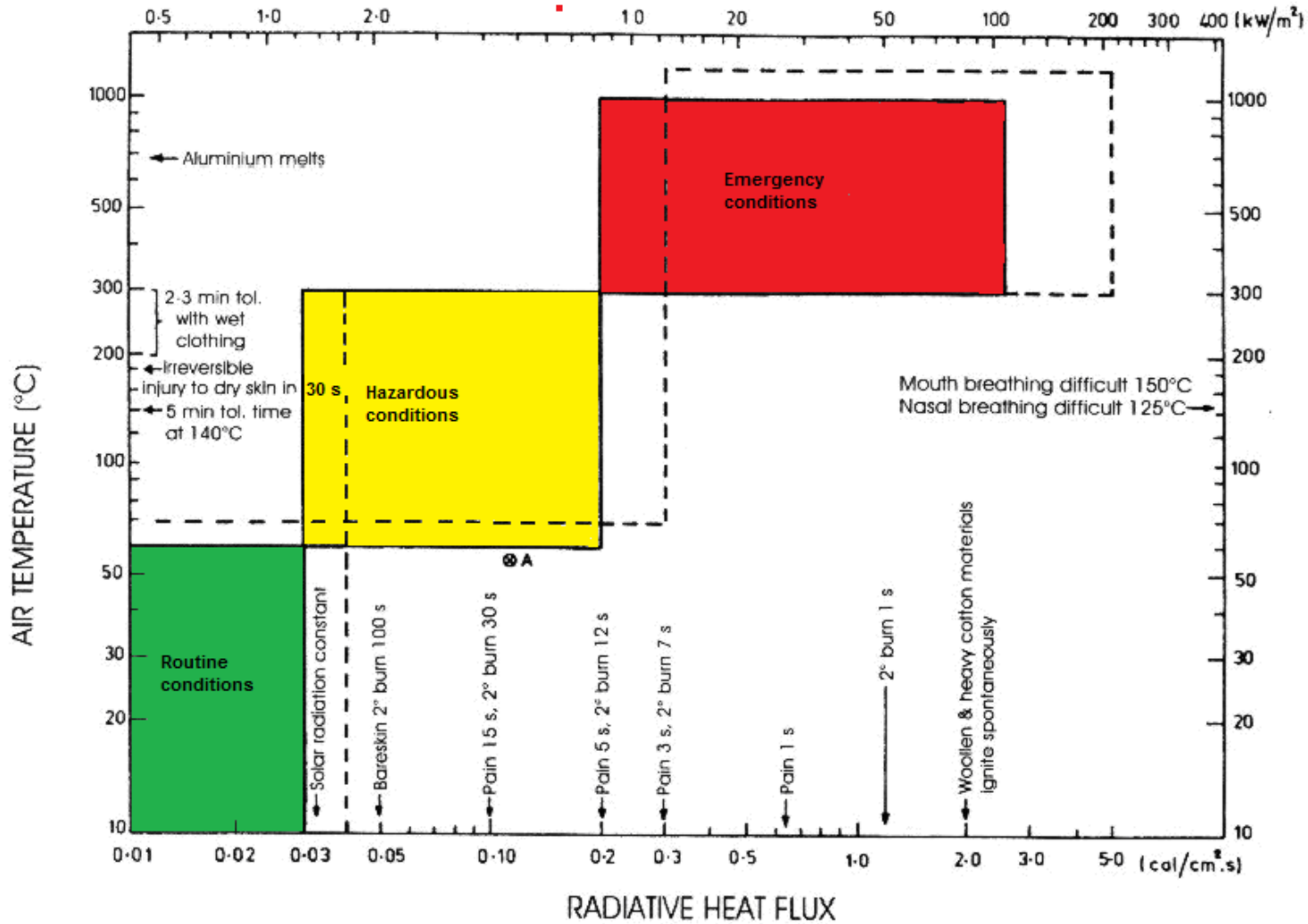
The manufacturer has to explain by this basic requirement, how long the user may be exposed to the incident heat transmitted by the PPE.

On the one hand this factor is very much depending on the physical constitution of the user (fitness), on the other hand, the amount of the heat transmission during firefighting is quite different, and cannot be determined. It will even normally change during the application (several times).

Therefore, only some values are returned here which arise from the diagramme of Hoschke „firefighters` exposure conditions“.

Exposition	Duration	Temperature	Heat flux density
a) normal	8 h	40°C	1 kW/m ²
b) dangerous	5 min	250°C	1,75 kW/m ²
c) emergency	10 s	800°C	40 kW/m ²

In modern fire protective clothing and also in this PPE used materials own a high heat capacity. This means that they take up heat for a longer period, store and then suddenly, without warning pass on to the body. Therefore, it is urgently to be recommended to retreat from the danger zone with the smallest sign of a heat transfer.



Firefighter's exposure conditions (N. Hoschke, Fire Safety Journal 4(1981)125-137.)