

Glossary - Một số từ ngữ kỹ thuật

A

ABS

Acrylonitrile Butadiene Styrene (ABS) is a thermoplastic used in industry to make rigid, light and moulded products. Material used to make the shells of safety helmets.

Antistatic (garment)

Antistatic protective clothing is designed to prevent the risk of sparks, strong, accidental electrical flashover, caused by the accumulation of electrical charge on the body. They are mainly used in explosive risk environments such as: chemical plants, refineries, weapons factories, mines. They are also widely used to protect materials sensitive to electrical discharge such as on electronics manufacturing or semi-conductor assembly sites. Finally, they are used in controlled-atmosphere sites such as automobile paint workshops, the aim being to prevent the emission of particles which may be deposited on bodywork paint.

Antistatic (shoe)

It is both conducting and dissipating. Often requested in industrial environments, they offer a good compromise when the two risks of electrical discharge and electrocution are present.

APR

APR is an abbreviation for: Air Purifying Respirator. This type of device is used for respiratory protection in an environment with less than 17% oxygen, and more than 5% toxicity.

APV

Assumed Protection Value: complete method

- Attenuation per frequency (63Hz, 125Hz, 250Hz, 500Hz, 1000Hz, 2000Hz, 4000Hz & 8000Hz).

- Mean Attenuation: mean attenuation every 16 people tested.

- Standard Deviation: statistical presentation of the results.

- Assumed Protection: minimum attenuation at each Frequency level.

Aramid

Thermostable fibres used mainly in heat-proof applications (fireproof clothing).

D

Decibels

Acoustic pressure, in other words the intensity or amplitude of sounds and noises, expressed in decibels (dB), and determines the danger to humans. The safety level has been fixed at 85 dB: above this, pain occurs, and injuries appear.

Decibels are usually measured using a sound meter which converts the sound signal into an electric current.

Dual-density (sole)

Dual-density means the sole is made of 2 superimposed parts: the underpart in contact with the ground is more rigid whereas the upper part is more flexible and shock absorbent.

Dyneema*

High modulus polyethylene fibre (by-product of petrol). It has exceptional mechanical properties (abrasion and cutting). Material inert to many chemical products, and resistant to cleaning products.

E

Electric arc

An arc is a light discharge which accompanies the passage of electricity between two conductors with a suitable difference in potential. This phenomenon was discovered in 1813 by the English physicist and chemist Davy, who studies its effects through various gases. Burns by electric arc occur at high voltage currents and in the absence of direct contact with the electric conductor. A spark gap exists, which when crossed, places the victim in the same situation as if he were touching the conductor, causing intense eye pain.

Electric flashover

Electric flashovers are electrical burns without the current passing through the body. In low voltage, following an electric arc, the skin injuries are superficial and mainly affect the hands and face.

Protection is provided by the polycarbonate of a thickness >1.4mm. The best protection is provided by a face shield.

Ergonomics

Studies and research into the methodical organisation of work and the arrangement of protective equipment according to the anatomical possibilities of people.

European directive

The directive is a community legal act taken by the Council of the European Union, alone or with the Parliament depending on the case. Member states are bound by the directive in the objective to be reached, but are free to choose the means and way of reaching this objective within the time limits fixed by it.

H

HACCP

Hazard Analysis Critical Control Point. This is a method of quality control in the food industry, used to:

- Identify and analyse the risks associated with various stages in the production process of a foodstuff.

- Define the means required to control them.

- Ensure that these means are implemented effectively and efficiently.

It is a systematic and rational approach to controlling microbiological, physical and chemical hazards in food.

I

Impact force

This is the force subjected to the body at the moment of the fall, expressed in daN (decaNewton).

Infrasounds

Sounds of a frequency too low to be heard by humans (< 20 Hz). The average human ear only hears sounds within a certain range of frequencies between about 30 Hz (below that the sounds are called infrasounds) and 15 kHz (above which the sounds are called ultrasounds). Some physiologists even extend the limits of this range from 20 Hz to 20 kHz.

K

Kevlar*

Para-aramide fibre manufactured by DuPont de Nemours. It combines lightness and resistance. For equal weight, Kevlar* is five times tougher than steel. Its properties: very resistant to cutting, carbonises between 425°C and 475°C; does not melt; self-extinguishing; dimensional stability; chemical stability; alteration of colour under UV.

N

Neoprene

It is a synthetic latex. It is obtained by polymerization of a chlorinated compound: polychloroprene.

Nitrile

It is a synthetic latex. Its vulcanisation gives it properties similar to natural latex and many advantages (resistance to abrasion; excellent performance in oily and greasy environments; good resistance to chemical products).

Nomex*

Nomex* (DuPont de Nemours) is a thermostable fibre (non flammable), part of the family of synthetic meta aramids. As its fireproof properties are intrinsic, no treatment is required after washing the fabric.

This fibre is also very tough (resistance to rupture).

NPF

Formula used to define the level of protection provided by wearing a respiratory protective mask, and in standard test conditions:

$NPF = 100 / TIL (\%)$.

the maximum exposure concentration corresponds to: $NPF \times MEV$.

P

Phylon*

Phylon* is a synthetic material, supple, ultra light, shock absorbent, used in running shoes by all the major sports brands; it is an EVA insert (Ethylene Vinyl Acetate) moulded.

Pigmented (split leather)

Split leather coated with a layer of pigment. This is an economical, quality and resistant shoe leather.

Delta Plus innovation: piece of expanded rubber which absorbs and reduces shock waves to the spinal column.

Polyethylene

Polymer obtained by polymerisation of ethylene molecules. This is a low-density material, with good chemical resistance, high stability, and easily recycled.

S

SNR

Simplified Noise level Reduction: an unreliable but widely used method (measurement of decibels without taking account of frequencies).

T

TIL

Total Inward Leakage.

It corresponds to the performance of the filtering face piece, and is expressed in %. The lower the %, the greater the protection performance.

FFP1: 22%

FFP2: 8%

FFP3: 2%

TLV-STEL

Threshold Limit Values - Short Term Exposure Limit: The TLV-STEL is the threshold limit value for exposure to concentrations of toxic substances with a risk to the individual. This exposure time must not exceed 15 min.

Concentrations are expressed in mg/m³ of air for all chemical gas pollutants, and aerosols (dust, smoke, mist). They are expressed in ppm (parts per million volume concentration) for gases and vapours.

These values are indicative and take account of scientific knowledge at the moment of publication. These values are frequently revised downwards, as the toxicological knowledge of a product evolves.

TLV-TWA

(Threshold Limit Values - Time Weighted Average). The TLV-TWA is the mean exposure value to concentrations of toxic substances with a risk to the individual. This exposure time must not exceed 8 hours.

Concentrations are expressed in mg/m³ of air for all chemical gas pollutants, and aerosols (dust, smoke, mist). They are expressed in ppm (parts per million volume concentration) for gases and vapours.

These values are indicative and take account of scientific knowledge at the moment of publication. These values are frequently revised downwards, as the toxicological knowledge of a product evolves.

Tyvek*

The basic material in Tyvek* is polyethylene. Under the effects of pressure and heat (Flash spinning), a multitude of continuous filaments are obtained which are melt bonded to give a non-woven that is lightweight, flexible and resistant.