



A number of hazards threatening the user's health and/or safety can be identified :

- * Mechanical hazards : impacts, crushing, perforation...
- * Chemical hazards : hazardous or corrosive products ...
- * Heat-related hazards : cold, heat, weather, molten metal projections ...
- * Electric hazards : electrical discharge, static electricity
- * Hazards related to radiation and contamination : ultra-violet
- * Biological hazards : allergies, irritations...
- * Hazards related to the user's movements : skidding...

The materials used for those products are broken down into two classes:

Class 1 : all leather and other materials (except for all rubber or all polymer)

Class 2 : all rubber (fully vulcanised) or all polymer (fully moulded)

STANDARDS

There are 3 categories of shoes for professional use:

EN ISO 20345

« Specifications for safety footwear for professional use». Toe protection against shocks equivalent to a level of energy equal to 200J and the risks of flattening under a maximal weight of 1500 daN

EN ISO 20346

« Specifications for protective shoes for a professional use» Toe protection against shocks equivalent to a level of energy equal to 100J and the risks of flattening under a maximal weight of 1000 daN

EN ISO 20347

"Specification for occupational footwear for professional use " No specification about toe protection.

EN ISO 20344

Test methods for footwear

Besides of the general requirements, the shoes may comply with additional facultative requirements; examples:

- shoes with steel midsole: symbol «P»
- heel energy absorption : symbol «E»

Categories identifiable by a code group combinations gather most of common requirements.

Examples:

- Symbol "S1": EN ISO 20345 + closed back + anti-static properties + heel energy absorption
- Symbol "S3": EN ISO 20345 + + closed back + anti-static properties + heel energy absorption + water-proofness+ anti-puncture sole + studded sole