



PART 1

GENERAL REQUIREMENTS

This “umbrella” document establishes broad technical requirements for materials and the performance criteria for materials and assemblies. For example, the materials and components which make up the garment are not permitted to contain chemicals which are known to be hazardous to the health of the wearer, and which may leech into the skin when the garment becomes wet or when the wearer perspires.

Part 1 also covers design principles and explains the controversial “zoning” principle for motorcycle clothing where the protective performances of different parts of the garment are proportionate to the severity of the forces they will be expected to withstand in an impact with and slide along a hard, abrasive road surface. For example, the various limb joints and the buttocks are expected to provide a significantly higher level of impact abrasion, impact cut and burst resistance because these are the areas of a garment which are most at risk of heavy and prolonged contact with the road. Figure 1 explains the zoning principle.

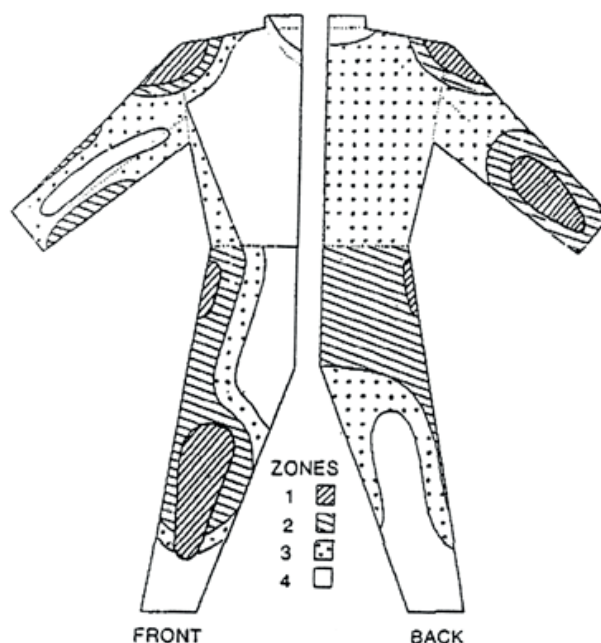


Figure 1 - Diagram of zone positions on a suit. Drawn from a suit laid out flat, slightly simplified.

The ergonomic performance of the test clothing is also evaluated via a brief series of standardised tests. A further important test is for “restraint”. Many otherwise satisfactory garments in the marketplace exhibit sleeve and ankle cuffs that are significantly oversized, so an assessment is made of the resistance of the sleeves and legs of the garment to ride up the limb and expose the wearer to injury, or the join between the two halves of a two-piece suit separating and allowing the wearer’s midriff to become exposed to the road.

Part 1 also specifies two levels of protective performance: Level 1 and Level 2. Clothing meeting the Level 1 requirements is defined as “Clothing designed to give some protection whilst having the lowest possible weight and ergonomic penalties associated with its use” whereas Level 2 clothing is said to be “Clothing providing a moderate level of protection, higher than that provided by level 1. There are, however, weight and restriction penalties in providing this level of protection”.

In practical layman’s terms, Level 1 clothing should provide adequate protection in accidents at urban speeds, not higher than 30 mph/48 kph. Level 2 clothing should provide adequate protection in higher speed accidents but may not subsequently be reusable or repairable. If even higher levels of protection are required, clothing should further meet the Level 3 requirements of the Cambridge standard or the SATRA alternative technical specification.