



WHY USING A CE APPROVED BACK PROTECTOR

INTRODUCTION:

The road, not the track, is the place where the trauma to the spine are more common.

Most serious accidents occur at speeds below 50 km/h in town.

Much of injuries to the spine are caused not only by impact-trauma but by crushing and hyper-extension (often caused by impact against fix obstacles or cars that cause the body, because of inertia, to assume unnatural positions).

WORK OF A BACK PROTECTOR:

The back protector works essentially in two ways.

- First protects: prevents or reduces abrasions and lacerations of the skin, stretching of muscles and excessive crushing of tissues. To perform this the protector must be substantially rigid, because our body is vulnerable to the concentrated pressure peaks; in this way the protector distribute the effects of impact over a larger area increasing (considering the same force exerted to the body) the ability to cope the force.

- The second way of working is the function of absorption, ie not only distributes power, but decreases and dispels some of the kinetic energy of impact, thus decreasing the acceleration that the body must endure.

CERTIFICATION OF A BACK PROTECTOR:

European Standard EN1621-2 provides various tests (by conditioning the protector for 24 hours at +20°C for motorcycling use, and by -20°C for wintersports use): ergonomic testing, efficacy testing of the fastening system, impact tests with verification of generation of hazardous parts.

The impact test provides that the back protector is located on a floor, while on it is dropped vertically from the striker a wedge profile in order to play the toughest conditions possible (eg the impact against the edge of a sidewalk). It is then measured how much force (50J) is transmitted by the protector to the sensor underneath, in this way it is measured the capacity of the protector to absorb. They are carried a minimum of five impacts throughout the development of the protector (spaced at least 90mm between them) and the average measure is considered. The approvals include two levels of protection:

- Level 1: The residual force should not exceed a maximum average of 18 kN without ever exceeding 24 kN;

- Level 2: The residual force should not exceed a maximum average of 9 kN without ever exceeding 12 kN.

The purpose of the rule is to establish two levels of compromise: in the first case we have a product that tends to be more flexible and lighter, in the latter case more protective but tends to be more rigid.

ADDITIONAL FEATURES ON OUR BACK PROTECTORS:

- Against crushing and hyper-extension, due to the excessively prone bending position that the back can assume, we have developed the ANTI-TORSION system. You can find it on our new SPINE EVC – SHARK EVC back protectors.

- Our level 2 back protectors (SPINE EVC – SHARK EVC) have E.V.C. internal shock-absorber (Evolved Viscoelastic Cells), which have been developed to offer exceptional performance at effective temperatures twice than what required by the normative (+40°C).

- Our back protectors provide high absorption and anti-perforation properties in the entire area covered by the protection, beyond the requirements of the normative.



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