

C.A.R.E. STANDARDS – HOW THEY MEASURE UP

SAFETY

CATEGORY	INDUSTRY STANDARD	C.A.R.E. STANDARD
Impact absorption	There is no legal requirement for specially fitted left and right-hand protectors.	BMW Motorrad offers left and right-hand protectors that can be adapted to the rider's specific shape. It offers excellent impact absorption performance and has won countless consumer awards.
Tear resistance	Materials must be able to withstand a minimum force of 100 N/cm ² . (DIN EN ISO 13937-2:2000; tear resistance*)	The materials we use must be able to resist a force of at least 1000 N/cm ² .
Abrasion resistance	In standard industry testing, materials are exposed solely to an abrasive belt running at approx. 29 km/h. (DIN EN ISO 13595; abrasion resistance*)	The BMW testing institute simulates the impact, fall and slide of a 75-kg rider on motorway tarmac, at speeds of up to 120 km/h.
Helmet aerodynamics/ aeroacoustics	Helmets are tested individually for aerodynamic and aeroacoustic performance, without the rider or motorcycle.	We analyse the aerodynamics and aeroacoustics for the helmet, rider and motorcycle together, over 20 hours of wind tunnel testing.
Helmet angles of sight	Standard regulations do not call for helmets to offer an expanded (and thus safer) field of vision.	By offering angles of sight that go beyond industry norms, our helmets provide a wider field of vision, particularly laterally.

INNOVATION

CATEGORY	INDUSTRY STANDARD	C.A.R.E. STANDARD
Water resistance	According to DIN standards, fabric with a water head of 1,300 mm is considered waterproof. (DIN EN 20811:1992; water resistance*)	The BMW climate membrane offers a 10,000-mm head of water, while also being incredibly breathable.
Practicality	Legal requirements do not call for motorcycle clothing to be tested in use at all.	BMW Motorrad test riders assess the functionality of every item we produce over numerous rides (including endurance testing) in a range of weather conditions.
Helmet water resistance	There is no legal requirement to integrate seals within the structure of helmets. If desired, manufacturers can simply apply seals using adhesive.	Our innovative seals are built in to the structure of our helmets, and are not glued on. This ensures peerless protection and water resistance in even the toughest conditions.
Helmet angle of removal	By law, the maximum angle of removal permitted for helmets is 30 degrees (ECE 22.05 roll-off test*)	BMW Motorrad enduro helmets, for example, offer an angle of removal of no more than 15 degrees, thanks to their innovative neck straps.

* correct as of October 2013

COMFORT

CATEGORY	INDUSTRY STANDARD	C.A.R.E. STANDARD
Fit and ergonomics	In general, only standardized sizes are available. (DIN EN ISO 340*)	The sizes we offer are based entirely on the dimensions measured and supplied to us by our customers.
Height-adjustable protectors	There is no legislation that requires knee protectors to be height-adjustable.	Our protectors are height-adjustable as standard, ensuring the perfect fit for each rider.
Helmet ventilation	Standard helmets offer ventilation around the upper part of the head only.	BMW Motorrad helmets are designed to allow air to circulate around the entire head.

QUALITY

As there are no legal requirements for quality, we are using the appropriate DIN EN ISO standards as a basis. BMW Motorrad requirements dictate that at least 5 of the 7 criteria should be met.

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Resistance to fading	No industry standard.	Garments are spread out under xenon light to test their resistance to fading. (Taken from DIN EN ISO 105-B02:2002; resistance to fading*)
Rub fastness	No industry standard.	Each material is placed alongside a wet or dry testing fabric, then rubbed together. The rub fastness is assessed based on the colouring of the test fabric. (Taken from DIN EN ISO 105-X12:2002; rub fastness*)
Colour fastness to perspiration	No industry standard.	Textiles are placed alongside a testing fabric soaked in sweat, and then rubbed together. (Taken from DIN EN ISO 105-E04:2013; fastness to perspiration*)
Oil repellency	No industry standard.	Materials are tested for their resistance to oil, in the same way as the colour fastness analysis. (Taken from DIN EN ISO 105-X12:2002; rub fastness*)
Fastener abrasion resistance	No industry standard.	Textiles are subjected to the Martindale abrasion test, at a force of 9kPa over 4,000 cycles, to assess their resistance to wearing. (VDA 230-210:2008, taken from DIN EN 530:2013; fastener abrasion resistance*)
Abrasion resistance	No industry standard.	Each material is rubbed against a standardized piece of test fabric over 30,000 cycles. (Taken from DIN EN ISO 12947-2:2007; wear resistance*)
Washing fastness	No industry standard.	Textiles are sewn into a piece of test fabric, then placed in a beaker full of detergent solution and agitated. The test fabric is then dried, and the colouring assessed. (Taken from DIN EN ISO 105-C06:2010; textile washing fastness*)
Helmet UV and impact resistance	No industry standard.	Our paint systems are subjected to strict testing to ensure they maintain their appearance and performance over time.
Helmet chin section wear	No industry standard.	In fatigue testing, the opening and closing of the visor and chin section is repeated over and over again. This ensures the helmet functions correctly throughout the entire life cycle.