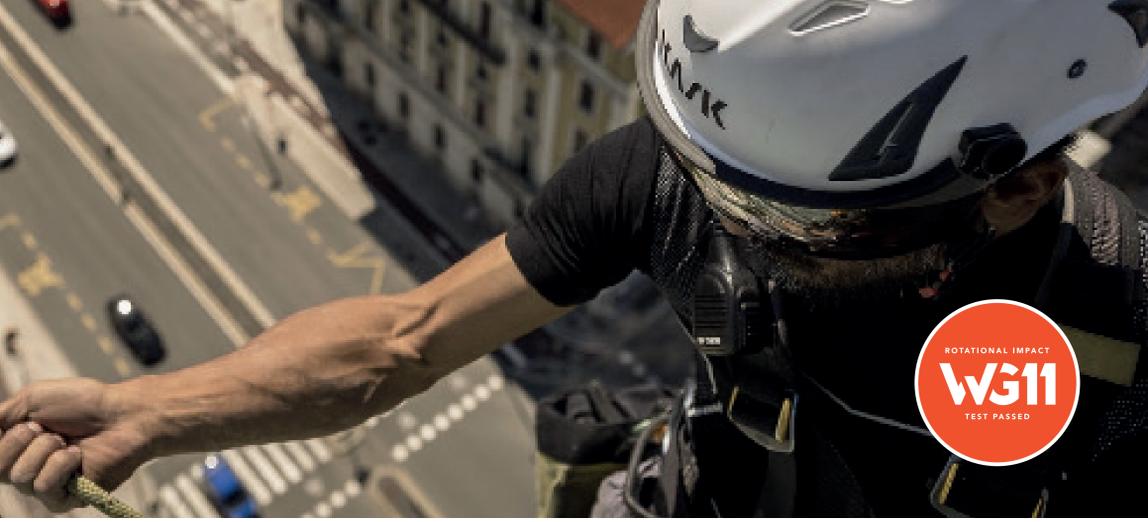


# EVERY KASK HELMET IS TESTED FOR ROTATIONAL IMPACT PERFORMANCE



HIGHER RISK OF BRAIN INJURY: >0.68  
KASK PROTECTION: <0.39

### THE KASK ROTATIONAL IMPACT WG11 TEST

KASK has been using this protocol, since 2019, to test all products – cycling, equestrian, snow sports, and industrial safety helmets.

**All KASK products have BrIC values <0.39\***

\*BrIC is an algorithm that defines the level of brain injury. A lower number corresponds to a lower risk of injury. Pronounced “brick”, it stands for (Brain Injury Criteria). Recent research has indicated a value of <0.68 for athletes.†



The KASK Rotational Impact WG11 Test is the result of over 10 years of KASK development and evaluation of rotational impact testing methods and measurements.

While there is no formal standard, WG11 reflects best practices in testing and the strictest criteria for evaluating rotational impact protection.

## THE KASK ROTATIONAL IMPACT WG11 TEST



### MOVING TOWARDS A STANDARD

While standardization committees and groups have worked on the topic over the years, rotational impact testing has not been included in any formal standard globally for industrial, cycling, equestrian, snow sport, or climbing helmets.

Only recently has the European Union updated the motorcycle helmet safety standard to include testing for rotational impact. The new standard ECE 22.06, in effect as of 2020, includes a specific testing method and criteria for rotational impact. The KASK Rotational Impact WG11 Test is grounded in this new standard.

### THE KASK ROTATIONAL IMPACT WG11 TEST

<b>Headform</b>	EN960: friction coefficient = 0.3
<b>Drop Speed</b>	Speed at impact: 4.5 meters/second
<b>Anvil</b>	45-degree shaped anvil
<b>Anvil Coating</b>	80-grit oxide abrasive
<b>Accelerometer</b>	wireless triaxle (X, Y, & Z axis)
<b>Pass/Fail</b>	BrIC value <0.68** (lower = lower risk of concussion)

\*\*All KASK helmets tested since 2019 have BrIC values <0.39

### DROP TEST

A headform with helmet is dropped at height and reaches a velocity before impact of 4.5 meters per second.

### TESTING CONDITIONS

The headform is dropped onto a 45-degree anvil coated with an 80-grit oxide sandpaper. This simulates a rough surface and a “rotational impact”.

### THE HEADFORM

The EN960 series headform is used, as it is specified in the ECE 22.06 standard, and is considered to be the most accurate representation of a human biological system available.

### “PASS/FAIL” BrIC VALUE

KASK has established a “pass/fail” criteria based on a BrIC value of <0.68.†

For more information on terms and standards

[GLOSSARY](#)

Since 2019, every KASK helmet made has been tested with the KASK Rotational Impact WG11 Test  
All KASK helmets have BrIC values <0.39.

### COMMITTED TO PERFORMANCE

The KASK Rotational Impact WG11 Test ensures all wearers get home safely. At KASK, advanced performance and head protection are a continuous pursuit.



Performance is a beautiful thing.

†“Development of Brain Injury Criteria”, by Erik Takhounts, et al., Stapp Car Crash Journal, Vol. 57 (November 2013), pp. 243-266.

\*\*Kinematic rotational brain injury criterion.” by Erik Takhounts, et.al., 22nd International Technical Conference on the Enhanced Safety of Vehicles, 2011