

UNECE

SAFETY-BELTS

Occupants' guide
to wearing safety-belts



UNITED NATIONS

The benefits of buckling up safety-belts are clear. If you buckle up in the front seat of a passenger car you can reduce your risk of a fatal injury by 45% (Kahane, 2015) and moderate to critical injury by 50%. Fastening safety-belts helps you to stay in control of your vehicle during when the unexpected occurs such as an abrupt deceleration.

This leaflet is designed to provide basic information on the importance of wearing safety-belts. It contains an overview of why wearing safety-belts is extremely important and serves as a guide for vehicle occupants upon using properly safety-belts type approved according to UN Regulation No. 16.

UN Regulation No. 16 is the only widely internationally recognized requirement. However, while other similar requirements may exist at a national or regional level, this leaflet addresses safety-belts approved to UN Regulation No. 16 only. Though it is equally valid (except for the question of marking) for safety belts certified to equivalent national requirements.

1. Why wearing safety-belts?



Buckled occupants in the front-seats have a 45% reduced risk of fatal injuries, as recognized by all road safety experts.

Safety-belts remain the best vehicle safety device to protect you from being severely injured in a crash or being ejected from the vehicle. Safety-belts type approved according to UN Regulation No. 16 are tested under the most severe conditions to endure ageing and work together with other safety systems (e.g.: air-bags, pretensioners and load limiters) as part of the complete vehicle crashworthiness.

Safety-belts are considered effective if they are anchored properly to the vehicle. Always verify that height-adjusters are placed in a way that the diagonal belt does not touch your neck and is passing over your shoulder properly.

Always wear safety-belts and make sure your passengers are wearing too.

In the event of a high-velocity impact, the unbelted rear passenger can turn into a deadly 'bullet' fired at the driver or passenger in the front seats. That's why UN Regulation No. 16 requires that safety-belts are supported by a "Safety-belt reminder": a system dedicated to alert the driver when any of the occupants do not use the safety-belt. The system is established by a detection of an unfastened safety-belt and by two levels of driver's alert.

2. Am I legally obliged to wear safety-belts?

The answer is almost certainly YES. Nearly all countries have enacted legislation requiring drivers and passengers to wear safety-belts, although laws differ from country to country. The driver may be responsible for the use of safety belts by the passenger(s). The cause of the damage resulting from non-use of safety belts may therefore be attributable both to the driver and to the passenger who is not properly buckled, since the driver's responsible for their use by the passenger as well. The driver should refuse to start the trip unless everyone is buckled up.

Use only safety-belts approved according to

UN Regulation No. 16 or certified to equivalent

national law.

Drivers or vehicle occupants should choose a vehicle equipped with safety-belts being compliant with safety requirements that prescribe rigorous testing. Related regulations are adopted to ensure that safety-belts available on the market protect occupants in an accident. UN Regulation No. 16 and its complementing UN Regulation No. 14 on safety-belt anchorages, is one the most widely respected and used regulation in the world, endorsed by almost 60 countries.



3. UN Regulation No. 16 requirements and tests for safety-belts

UN Regulation No. 16 defines the requirements an effective safety-belt must comply with and tests for their certification to keep safe any kind of occupant: adults, elderly people, women and pregnant women. Children wear safety-belts in association with their child restraint systems such as booster seats. Some child restraint systems are designed to work with UN Regulation No. 16 type approved safety-belts. Always read the instruction with the child restraint system to check if and how it uses the UN Regulation No. 16 type approved safety-belt.

4. How do I recognize UN Regulation No. 16 compliant safety-belt?

The safety-belt must carry the type approval mark on the buckle tongue. A type-approved safety-belt shall display a capital E in a circle followed by a number that represents the country whose certified authority granted its approval. This is followed by a series of numbers and letters representing specifics of the type approval, approval number and production serial number.

Type-approved safety-belts can be easily identified by their label.

Type approval markings are placed on the attachment shank, or with a tag or on the buckle tongue:

e.g. buckle tongue:

E = UN Regulation No. 16 certified by 1 = German authority;

06 1869 = UN Regulation No. 16+06 series of amendments

+ Approval Number **1869** issued in Germany

ZAer4mp = The belt bearing the above approval mark is part of a restraint system ("**Z**") is a three-point belt ("**A**") type **4** with a multiple-sensitivity ("**m**") with pretensioner ("**p**")

This safety-belt must be fitted to a vehicle equipped with an **airbag** in the given seating position.



L1TB-A61295-AD9MW
ZF 34292450E
LOC. BBDUA
65930
ZAer4mp
E1 B120419X1135806
07 2003 AIRBAG

5. Facts and myths about safety-belt use

✓ *Myth: Safety-belts hamper occupants to evacuate passenger compartment after a crash*

Fact: Being buckled up during a crash helps keep you safe and secure inside your vehicle; being completely ejected from a vehicle is almost always deadly.

✓ *Myth: Air bags are enough to protect occupants*

Fact: Only the teamwork of the seat belt together with an airbag provides the protection, the restraint system is developed for. Both systems independently from each other can only provide a part of the job, which is essential to be protected and finally to survive a severe impact.

✓ *Myth: Safety-belts are dangerous for pregnant women and the baby*

Fact: Safety-belts are unharmful to the fetus, on the contrary, they considerably reduce the risks in the event of an accident. The airbag alone is not enough, but the combined action of the two safety systems can reduce the danger to the mother and the baby she is carrying.

✓ *Myth: Safety-belts break bones of elderly people during sudden deceleration*

Fact: Most of vehicles provide load-limiters devices on their safety-belt systems. It is a device which is incorporated in the retractor and reduces the tension of the strap automatically on chest, shoulder and neck of vehicle occupants during an impact. UN Regulation No. 94 tests biomechanical criteria during a front crash test, where the dummies wear the seatbelts, in order to reduce or eliminate fractures to elderly occupants.

✓ *Myth: Wearing safety-belts under the arm or travelling in a reclined seat is comfortable and safe*

Fact: Such behaviour in case of crashes or sudden deceleration when traveling at 50 km/h may cause injuries to the liver, spleen and abdomen and then lead to death or serious disabilities.

✓ *Myth: Children may wear safety belts instead of a child restraint system*

Fact: Safety belts are designed to restrain adult occupants and do not necessarily accommodate children's anatomy, which would likely lead to serious or fatal injuries. It is essential to use approved child restraint systems to protect them.

UNECE and its Inland Transport Committee have always worked hard to ensure that you and those you care about are kept safe on the road. The vehicle regulations developed and administered by the World Forum for Harmonization of Vehicle Regulations (WP.29) encompass everything conceivable about road vehicles, from the quality of the helmet that you wear to controls on levels of emissions.

Inland Transport Committee (ITC)
United Nations platform for Inland Transport