

# Supervision of the safety of airbags and other pyrotechnic systems of motor vehicles

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# Background (1)

The French authorities highlight to WP.29 the problem of premature ageing of certain airbags present in vehicles in France and other countries.

Manufacturers have experienced and are still experiencing a massive **safety problem linked to airbags**, from the supplier Takata, which were fitted to vehicles approved according to current regulations, and are still in circulation in France (metropolitan and overseas) and other countries.

## Background (2)

**Cause of this safety issue is a chemical degradation of the active ingredient, which is composed of ammonium nitrate in a stabilized phase, which is sensitive to moisture. This degradation is accelerated by high temperature and humidity conditions, which can cause faster than expected gas generation when the airbag inflator deploys in the event of an impact.**

**This results in overpressure causing the gas generator to burst and metal fragments to be released.** In addition to destroying the protective function of the airbag, which increases the risk of injury in the event of an impact, the **projection of metal components at very high speeds can significantly injure the driver or occupants of the vehicle, which can be fatal.**

# Request of action (1)

**This issue raises more generally the guarantees provided for the durability and maintenance of performance over time of this type of safety system.**

**In order to prevent any similar risk in the future**, the French authorities are calling on UNECE, for an initiative to ensure, or even supervise the safety of airbags (and by extension, of **all pyrotechnic systems** in vehicles).

This framework would **aim in particular to guarantee their durability and the maintenance of their performance over time**, whatever the characteristics of the vehicle concerned and the environmental conditions encountered.

## Request of action (2)

UNECE have already established UNR 114 for replacement airbags, which call a ISO standard (ISO 12097-2 (Establishes uniform test methods and requirements for airbag modules in road vehicles – one part is dedicated to Thermal humidity cycling test).

One opened question is on an application of requirements for products to be installed as original equipment on new cars.

**➔ French authorities suggest to start this discussion with the experts of GRSP, at its next session in May.**