



Safety Data Sheet

according to Directive 2007/23/EG

VDA

290

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1. Description of the product and the company**1.1 Description of the product:**

Pyrotechnical articles for vehicles (apply for all airbag modules, gas generators and seat-belt of Takata Europa)

1.2 Use of the product:

Safety devices for vehicles

1.3 Description of the company:

TAKATA AG

Bahnweg 1

63743 Aschaffenburg /Germany

1.4 Emergency number:

TAKATA AG, Safety & Environment

Tel: +49 6021 650

2. Possible hazards

Classification: not applicable (the pyrotechnical ingredients contained in the object represent an explosion hazard and can only be released by destroying the object – hazard during sudden activation; with integrated compressed gas container: gases are under high pressure, hazard of frostbite during release).

Other hazards:

- Hazard of an uncontrolled activation during fire, heat or electrostatic discharging, induction through electromagnetic radiation and greater mechanical load.
- Hazard from projectile pieces and / or through quickly moving parts during activation in a non-assembled condition.
- Hazard of burn injuries when there is direct contact with activated objects or their combustion products (particles and gases).
- Hazard of irritation to eyes and respiratory airways through combustion products.
- Hazard of blast trauma from noise impulses of higher volume during activation.

3. Composition / Information on components

The pyrotechnical ingredients are hermetically sealed from the environment in the object (delivery condition). The pyrotechnical ingredients in the objects cannot, therefore, be released under normal or reasonably foreseeable conditions of use including professional disposal. The housing parts are positively interconnected and are only to be opened by destroying the entire object.

4. First-aid measures

General first-aid rules are to be followed.

- If combustion products are inhaled:
Supply fresh air.
- If products come into contact with skin:
If burns result: keep area cool and free of germs.
If skin is broken, cover with a sterile covering.
- If combustion products come into contact with eyes:
Rinse eyes thoroughly with clear water.
- If products are ingested:
n.a.

5. Fire-fighting measures

Extinguish fire from a safe distance. Objects can become dangerous projectiles.

Suitable extinguishing agents: Customary substances (e.g. water, powder, foam, carbon dioxide)

Extinguishing agents not suitable for safety reasons: none known

Special hazards from the combustion products: none

Special protective equipment/clothing for extinguishing fires: none

6. Measures during unintentional release

Precautionary measures for humans:

In the case of destruction or delaboration of the object (discharge of the pyrotechnical ingredients), remove the ignition source at all costs. The pyrotechnical ingredients can be activated by heat, impact, sparks and electrostatic discharging. In the case of an integrated compressed gas container: compressed gases escape abruptly, gases block breathable air and can, in large quantities, act in an asphyxiating manner.

Environmental measures:

Do not allow to get into bodies of water, waste water or soil.

Process for cleaning:

Carefully pick up pyrotechnical mixtures mechanically and place in a container with water. Disposal must be done by an authorised specialty firm.

7. Handling and storage

General requirements:

The handling and use of pyrotechnical objects for vehicles is only permitted within the framework of an authorised commercial operation.

- Handling and use of P1 objects only by trained personnel.

- Handling and use of P2 objects only by personnel with special know-how.

Following activation or fire load, it must be ensured that only completely activated objects remain (i.e., all steps of the object have been activated or the compressed gas containers are depressurised).

7.1 Handling:

- Do not connect to an electrical power source improperly. Only approved connections to the onboard electronics in the vehicle or suitable testing devices with a measured current of a max. of 0.01 A are permitted.
- After dropping or any other mechanical demands, objects must not be used again.
- Do not open objects, do not undertake any repairs or repair attempts.
- The manufacturer's state of construction on delivery may not be changed or modified.
- Do not remove existing jumpers.
- Keep away from ignition sources and protect against heat and sparks.
- Take measures to prevent electrostatic charging.
- Avoid use of sources of electromagnetic radiation (e.g. radiotelephones, walkie-talkies, or mobile telephones) in the proximity (approx. 2 m).
- Safeguard against theft and unauthorised use.
- If applicable, observe manufacturer's installation and dismantling instructions.
- Handle airbag module with the air bag facing upward and place in this position.
- Do not change or cover exhaust ports.
- Protect hands and keep object's mechanically movable parts away from body.

7.2 Storage:

- Observe regulations specific to each country for storage.
- Store dry in the original packaging, in rooms specifically provided for this.
- Protect from sources of heat, electrical sparks or open flames, blows or impact or electrostatic charging (adequate discharge capacity e.g. concrete floors).
- Do not store together with oxidising, flammable or other materials or objects that might increase the hazards.
- Safeguard against theft or unauthorised removal.

7.3 Specific applications:

The objects may only be used for the designated purpose.

8. Threshold limits and monitoring of the exposition/personal protective equipment

8.1 Exposition threshold limit values for products:

none

8.2 Threshold limits and monitoring of the exposition

8.2.1 Threshold limits and monitoring of the exposition at the workplace

When handling non-activated objects:

- Respiratory protection: n.a.
- Hand guards: n.a.
- Eye protection/goggles: Protective goggles (EN 166) when handling objects in category P2.
- Body protection: Conductive footwear (EN 61340-4-3).
- Protective and hygiene measures: n.a.
- Threshold limits/monitoring of the environmental exposition: n.a.

When the object is activated, e.g. for testing purposes:

- Handle only in suitable rooms and on suitable plants.
- Use suitable room/object exhaust system.
- With dust deposits, the rooms are to be cleaned regularly using moisture. The cleaning must be done with extra water; hand and eye protection are recommended (alkaline or acidic reaction of the combustion product is possible when extinguishing with water).
- Respiratory protection: Appropriate respiratory protection must be worn if the workplace threshold values are exceeded.
- Hand guards: No contact with activated, hot objects.
Protective gloves made of cotton or leather when handling following activation and cooling off.
- Ear protection: When activating, wear ear protection.
- Eye protection/goggles: Protective goggles (EN 166).
- Body protection: Conductive footwear (EN 61340-4-3).
- Protective and hygiene measures: Do not inhale combustion gas and residue.
Avoid contact with skin, and, if applicable, wash off.

8.2.2 Threshold limits und monitoring of the environmental exposition

Not applicable

9. Physical and chemical properties**9.1 General information:**

- Appearance: solid object with no specific colour.
- Odour: none

9.2 Important information on health and environmental protection as well as safety:

- Activation of the object beginning at 130 °C and through electrical current beginning at 0.15 A.
- Other parameters: n.a.

9.3 Miscellaneous:

Not applicable.

10. Stability and Reactivity:

No hazardous reactions are expected if handled and stored properly.

10.1 Conditions to be avoided:

See also Point 7 "Handling and storage".

10.2 Materials to be avoided:

Avoid contact with corrosive media such as acids, bases, oils or solvents.

10.3 Hazardous decomposition products: n.a.

When activated, carbon dioxide, carbon monoxide, nitric oxide and dust, among other things, result.

11. Toxicological information

When used correctly, no health hazards are anticipated.

The pyrotechnical ingredients contained in the object are hermetically sealed in the object and cannot be released.

- Other parameters: n.a.

12. Environmentally-related data

No environmental damage is expected when used correctly.

The pyrotechnical ingredients contained in the object could be environmentally hazardous but are hermetically sealed in the object and cannot be released.

- Other parameters: n.a.

13. Details regarding disposal

- Objects which have not been activated or only partially activated must only be disposed of by specialised companies licensed in this area with respect to existing regulations (see also Point 7 "Handling and storage").
- Code according to Regulation 1013/2006/EG: 16 01 10 explosive components (e.g. from airbags).
- According to the Directive 2000/53/EG on end-of-life vehicles, non-activated or partially activated objects may not be shredded together with end-of-life vehicles.
- Any objects damaged by fire, heat or an accident must be disposed of as non-activated objects.
- Only objects which are completely activated may be used.

14. Details regarding transport

According to ADR/RID (road/rail), IMDG (sea) and ICAO/IATA (air freight):

Classification is dependent on the type of object, the packaging and, if applicable, the existing assignment by the responsible authority.

Airbag modules/airbag gas generators/seat-belt pretensioners:

- ☐ UN 0432, Pyrotechnical objects, 1.4S
- ☐ UN 0503, Airbag modules /airbag gas generators/seat-belt pretensioners, class 1.4G
- ☐ UN 3268, Airbag modules/ airbag gas generators/seat-belt pretensioners, class 9, III *

* UN 3268 only applicable if objects have been successfully tested in the designated shipping package in accordance to the test series 6c) of the UN Manual of Tests and Criteria Part I.

Other relevant information:

Objects may only be transported within or through the U.S.A. with a permit from the relevant U.S.A. authority.

15. Regulations

Not subject to specific labelling under current EU regulations according to Directive 67/548/EEG and 1999/45/EEG.

National regulations are to be observed.

16. Other information

The information contained herein only describes the safety requirements of the product and is based on the present state of our knowledge. It does not represent a legal guarantee of the properties of the product described. The recipients of our product have sole responsibility for complying with existing laws and regulations.

The safety and product information contained in this safety data sheet must be made available to the users, employees and all other persons who handle this product before using the product. In order to eliminate hazards, the information for the safe handling and storage must be exactly observed. The manufacturer assumes no responsibility for any bodily injury or property damage, or similar, which results from the improper use or non-compliance of the safety data sheet.