SECTION 1: Identification of the substance/mixture and of the company/undertaking

· 1.1 Product identifier
   · Trade name: Luftfeder / Luftfederbein
     Air spring / Air spring module

· 1.2 Relevant identified uses of the substance or mixture and uses advised against
   No further relevant information available.

· 1.3 Details of the supplier of the safety data sheet
   · Manufacturer/Supplier:
     ThyssenKrupp Bilstein Tuning GmbH
     Milsper Straße 214
     D-58240 Ennepetal
     Tel: +49 2333-791-0
     Fax: +49 2333-791-4900

   · Informing department:
     Tel: +49 173 5687534
     Email: anna-catharina.bell@thyssenkrupp.com

· 1.4 Emergency telephone number: Tel: +44 18645 407333 GlobalChem24

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture
   · Classification according to Regulation (EC) No 1272/2008
     GHS04 gas cylinder

   Press. Gas C H280 Contains gas under pressure; may explode if heated.

· 2.2 Label elements
   · Labelling according to Regulation (EC) No 1272/2008
     The product is classified and labelled according to the CLP regulation.

   · Hazard pictograms
     GHS04

   · Signal word Warning
   · Hazard statements
     H280 Contains gas under pressure; may explode if heated.

   · Precautionary statements
     P101 If medical advice is needed, have product container or label at hand.
     P102 Keep out of reach of children.
     P103 Read label before use.
     P410+P403 Protect from sunlight. Store in a well-ventilated place.

· 2.3 Other hazards
   · Results of PBT and vPvB assessment
     · PBT: Not applicable.
     · vPvB: Not applicable.
SECTION 3: Composition/information on ingredients

- 3.2 Chemical characterisation: Mixtures
- Description:
The air spring contain an air or helium/air-mixture.
The shock absorber contains nitrogen and small amounts of hydraulic oil.

- Dangerous components:

| CAS: 7727-37-9 | nitrogen |
| EINECS: 231-783-9 |  
| Press. Gas R, H281 | \( \leq 10\% \) |

- Additional information
  The air spring can contain 1.0 to 4.5 l compressed gas (air/helium-mixture or air) at a pressure of 0.01 to 4.5 bar.
The shock absorber (air spring module) contain up to 0.3 l compressed gas (nitrogen) at a pressure of 5 to 30 bar.
The maximum product of pressure and volume is 18 bar * l.

SECTION 4: First aid measures

- 4.1 Description of first aid measures
- General information
  No special measures required.

- After inhalation
  Provide fresh air. Keep victims quiet and warm.
  In case of unsteady breathing or breathing arrest induce artificial respiration.
  Call a doctor immediately.

- After skin contact
  The product is not skin irritating.

- After eye contact
  In case of permanent aches and pains please go and see the doctor.

- After swallowing
  Swallowing is not considered to be a possible way of exposure.

- 4.2 Most important symptoms and effects, both acute and delayed
  No further relevant information available.

- 4.3 Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

SECTION 5: Firefighting measures

- 5.1 Extinguishing media
- Suitable extinguishing agents
  The product itself does not burn.
  Use fire lighting measures that suit the environment.

- 5.2 Special hazards arising from the substance or mixture
  Formation of toxic gases is possible during heating or in case of fire.
  Can be released in case of fire:
  Carbon monoxide (CO)
  Nitrogen oxides (NOx)

- 5.3 Advice for firefighters
- Protective equipment:
  In case of fire wear breathing equipment being independent of ambient air and suit provided full protection against chemicals.

- Additional information
  Remove goods in stock from incendiary zone, if possible.
  Cool endangered containers with water spray.
SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
  Ensure adequate ventilation
  Keep away from ignition sources
- 6.2 Environmental precautions:
  Inform authorities if gas escapes.
  Do not allow to enter drainage system, surface or ground water.
- 6.3 Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, universal binders) and disposal in suitable containers.
- 6.4 Reference to other sections
  See Section 7 for information on safe handling
  See Section 8 for information on personal protection equipment.
  See Section 13 for information on disposal.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling
  Keep empty containers away from heat and ignition sources.
  Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
  No special measures required.
- Information about protection against explosions and fires: The product is not flammable.
- 7.2 Conditions for safe storage, including any incompatibilities
- Storage
  Requirements to be met by storerooms and containers:
  Store containers in a well aired place at a temperature of less than 50 °C.
  Store only undamaged original packaging drums.
  Information about storage in one common storage facility:
  Keep away from combustible and/or inflammable materials.
- Further information about storage conditions:
  Store in a cool place. Heat will increase pressure and may lead to the container exploding.
- 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- 8.1 Control parameters
  Components with limit values that require monitoring at the workplace:
  The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
  Additional information: The lists that were valid during the compilation were used as basis.
- 8.2 Exposure controls
  Personal protective equipment
  General protective and hygienic measures Wear suitable protective clothing at work.
  Breathing equipment: Not required.
  Protection of hands:
  Not required.
  The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
  Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
**Trade name:** Luftfeder / Luftfederbein  
Air spring / Air spring module

**Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Not required.

### SECTION 9: Physical and chemical properties

**9.1 Information on basic physical and chemical properties**

**General Information**

- **Appearance:** Shock absorber, pneumatic / hydraulic  
- **Form:** Condensed gas  
- **Colour:** Colourless  
- **Odour:** odourless

**Change in condition**

- **Melting point/Melting range:** Not determined  
- **Boiling point/Boiling range:** n.a. °C

**Flash point:** Not applicable

**Inflammability (solid, gaseous)** Not applicable.

**Ignition temperature:** Not determined.

**Decomposition temperature:** Not determined.

**Self-inflammability:** Product is not selfigniting.

**Danger of explosion:** Product is not explosive.

**Vapour pressure:** Not determined.

**Density**

- Not determined

**Vapour density**

- Not applicable.

**Evaporation rate** Not applicable.

**Solubility in / Miscibility with**

- **Water:** Insoluble

**Partition coefficient (n-octanol/water):** Not applicable.

**Viscosity:**

- **dynamic:** Not applicable.  
- **kinematic:** Not applicable.

**Solvent separation test** Not applicable.

**Solvent content:**

- **Organic solvents:** 0.0 %  
- **Water:** 0.0 %

**9.2 Other information** The bonfire-test resulted in no flying away components.

### SECTION 10: Stability and reactivity

**10.1 Reactivity** No further relevant information available.
SECTION 11: Toxicological information

11.1 Information on toxicological effects
- Acute toxicity: Based on available data, the classification criteria are not met.
- Primary irritant effect:
- Skin corrosion/irritation: Based on available data, the classification criteria are not met.
- Serious eye damage/irritation: Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.
- Additional toxicological information:
  When inhaling high concentrations narcotic symptoms are possible.
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
  - Germ cell mutagenicity: Based on available data, the classification criteria are not met.
  - Carcinogenicity: Based on available data, the classification criteria are not met.
  - Reproductive toxicity: Based on available data, the classification criteria are not met.
  - STOT-single exposure: Based on available data, the classification criteria are not met.
  - STOT-repeated exposure: Based on available data, the classification criteria are not met.
  - Aspiration hazard: Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity
- Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability: No further relevant information available.
- 12.3 Bioaccumulative potential: No further relevant information available.
- 12.4 Mobility in soil: No further relevant information available.
- Additional ecological information:
  - General notes:
    Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
    The product contains materials that are harmful to the environment.
  - 12.5 Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
  - 12.6 Other adverse effects: No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
- Recommendation: Contact manufacturer for recycling information.
- European waste catalogue
  - 16 00 00: WASTES NOT OTHERWISE SPECIFIED IN THE LIST
  - 16 05 00: gases in pressure containers and discarded chemicals
  - 16 05 05: gases in pressure containers other than those mentioned in 16 05 04
SECTION 14: Transport information

- **14.1 UN-Number**
  - ADR, IMDG, IATA
  UN3164

- **14.2 UN proper shipping name**
  - ADR
  3164 ARTICLES, PRESSURIZED, PNEUMATIC
  - IMDG, IATA
  ARTICLES, PRESSURIZED, PNEUMATIC

- **14.3 Transport hazard class(es)**
  - ADR
    - Class
      - 2
    - Label
      - 6A Gases.
  - IMDG, IATA
    - Class
      - 2.2
    - Label
      - 2.2

- **14.4 Packing group**
  - ADR, IMDG, IATA
  Void

- **14.5 Environmental hazards:**
  - Marine pollutant:
    - No

- **14.6 Special precautions for user**
  - Warning: Gases.
  - Kemler Number:
    - -
  - EMS Number:
    - F-C,S-V
  - Stowage Category
    - A

- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**
  - Not applicable.

- **Transport/Additional information:**
  - **ADR**
    - Limited quantities (LQ)
      - 120 ml
    - Excepted quantities (EQ)
      - Code: E0
      - Not permitted as Excepted Quantity
  - **Transport category**
    - 3
  - **Tunnel restriction code**
    - E
  - **Remarks:**
    - Special Provisions: 283, 371, 594
  - **IMDG**
    - Limited quantities (LQ)
      - 120 ml
    - Excepted quantities (EQ)
      - Code: E0
      - Not permitted as Excepted Quantity
**SECTION 15: Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - Labelling according to Regulation (EC) No 1272/2008
    The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**
  - GHS04

- **Signal word** Warning

- **Hazard statements**
  - H280 Contains gas under pressure; may explode if heated.

- **Precautionary statements**
  - P101 If medical advice is needed, have product container or label at hand.
  - P102 Keep out of reach of children.
  - P103 Read label before use.
  - P410+P403 Protect from sunlight. Store in a well-ventilated place.

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.

- **National regulations**
  - **Water hazard class**: Water hazard class 1 (Self-assessment): slightly hazardous for water.
  - **Other regulations, limitations and prohibitive regulations**
    The regulations concerning pressure vessels and gases under pressure have to be observed.

- **Substances of very high concern (SVHC) according to REACH, Article 57**
  - None of the ingredients is contained.

- **15.2 Chemical safety assessment**: A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
  - H281 Contains refrigerated gas; may cause cryogenic burns or injury.

- **Department issuing data specification sheet:**
  - This Material Safety Data Sheet has been drawn up in cooperation with:
    DEKRA Assurance Services GmbH, Hanomagstr. 12, D-30449 Hanover, Germany,
    phone: (+49) 511 42079 - 0, reach@dekra.com.
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Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Press. Gas C: Gases under pressure – Compressed gas
Press. Gas R: Gases under pressure – Refrigerated liquefied gas
* Data compared to the previous version altered.