

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/06/2016

Version number 2

Reviewed on 09/06/2016

1 Identification

- **Product identifier**
- **Trade name: Luftfeder / Luftfederbein**
Air spring / Air spring module
- **Application of the substance / the mixture** Shock Absorber
- **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
- **Information department:**
Tel: +49 173 5687534
Email: anna-catharina.bell@thyssenkrupp.com
- **Emergency telephone number:** Tel: +44 18645 407333 GlobalChem24

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS04 Gas cylinder

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

- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS04

- **Signal word** Warning
- **Hazard statements**
H280 Contains gas under pressure; may explode if heated.
- **Precautionary statements**
P410+P403 Protect from sunlight. Store in a well-ventilated place.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

- **HMS-ratings (scale 0 - 4)**



HEALTH 0 Health = 0
FIRE 0 Fire = 0
REACTIVITY 0 Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

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· **vPvB:** Not applicable.

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3 Composition/information on ingredients

· **Chemical characterization: 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

≤10%

RTECS: QW 9700000

· **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.

4 First-aid measures

· **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:** Generally the product does not irritate the skin.

· **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.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

The product itself does not burn.

Use fire fighting measures that suit the environment.

· **Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

In case of fire, the following can be released:

Carbon monoxide (CO)

Nitrogen oxides (NO_x)

· **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.

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Cool endangered receptacles with water spray.

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6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
 Ensure adequate ventilation
 Keep away from ignition sources
- **Environmental precautions:**
 Inform authorities in case of gas release.
 Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
 Absorb with liquid-binding material (sand, diatomite, universal binders) and disposal in suitable containers.
- **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 disposal information.

7 Handling and storage

- **Handling:**
- **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.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
 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 receptacle bursting.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Control parameters**
 - **Components with limit values that require monitoring at the workplace:**
- | |
|--|
| 7727-37-9 nitrogen |
| TLV withdrawn TLV, see App. F; simple asphyxiant |
- **Additional information:** The lists that were valid during the creation were used as basis.
 - **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.

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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

- **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.

9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

Form:	Shock absorber, pneumatic / hydraulic Condensed gas
Color:	Colorless
· Odor:	Odorless

- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	n.a. °C

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** Not determined.

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Vapor pressure:** Not determined.

- **Density:** Not determined.

- **Vapor density** Not applicable.

- **Evaporation rate** Not applicable.

- **Solubility in / Miscibility with Water:**

Insoluble.

- **Segregation 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 %

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- | | |
|--|--|
| <p>VOC content: 0.0 %</p> <p>· Other information The bonfire-test resulted in no flying away components.</p> | |
|--|--|

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**
Danger of receptacles bursting because of high vapor pressure if heated.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**
None in case of intended use and storage in compliance with instructions.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
When inhaling high concentrations narcotic symptoms are possible.
The product is not subject to classification according to internally approved calculation methods for preparations.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water (Germany)
The product contains materials that are harmful to the environment.

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- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Contact manufacturer for recycling information.
- **Uncleaned packagings:**
- **Recommendation:** Dispose of packaging according to regulations on the disposal of packagings.

14 Transport information

· UN-Number	
· DOT, ADR, IMDG, IATA	UN3164
· UN proper shipping name	
· DOT	Articles, pressurized pneumatic
· ADR	3164 Articles, pressurized pneumatic
· IMDG, IATA	ARTICLES, PRESSURIZED, PNEUMATIC
· Transport hazard class(es)	
· DOT	
	
· Class	2 Gases
· ADR	
	
· Class	2 6A Gases
· Label	2.2
· IMDG, IATA	
	
· Class	2.2
· Label	2.2
· Packing group	
· DOT, ADR, IMDG, IATA	Void
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Gases
· Danger code (Kemler):	-
· EMS Number:	F-C,S-V

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· Stowage Category	A
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· Remarks:	Special Provisions: 283, 371, 594
· IMDG	
· Limited quantities (LQ)	120 ml
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· Remarks:	Special Provisions: 283, 371
· IATA	
· Remarks:	Special Provisions: A48, A114, A195
· UN "Model Regulation":	UN 3164 ARTICLES, PRESSURIZED PNEUMATIC, 2.2

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

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- **Canadian substance listings:**

- **Canadian Domestic Substances List (DSL)**

None of the ingredients is listed.

- **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

- **Canadian Ingredient Disclosure list (limit 1%)**

None of the ingredients is listed.

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS04

- **Signal word** Warning

- **Hazard statements**

H280 Contains gas under pressure; may explode if heated.

- **Precautionary statements**

P410+P403 Protect from sunlight. Store in a well-ventilated place.

- **National regulations:**

- **Other regulations, limitations and prohibitive regulations**

The regulations concerning pressure vessels and gases under pressure have to be observed.

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

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:**

This Material Safety Data Sheet has been drawn up in cooperation with:
 DEKRA Assurance Services GmbH, Hanomagstr. 12, D-30449 Hanover, Germany,
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- **Date of preparation / last revision** 09/06/2016 / 1

- **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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Press. Gas: Gases under pressure – Compressed gas

- *** Data compared to the previous version altered.**