

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

1.1 Product identifier

hydraulic accumulator
Article number: 03279

1.2 Relevant identified uses of the substance or mixture and uses advised against

1.2.1 Relevant uses

Hydraulic accumulators

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company Ferdinand Bilstein GmbH + Co. KG
Wilhelmstr. 47
58256 Ennepetal / GERMANY
Phone +49 2333 911-0
Fax +49 2333 911-444
Homepage www.febi.com
E-mail info@febi.com

Address enquiries to

Technical information info@febi.com

Safety Data Sheet info@febi.com

1.4 Emergency telephone number

Advisory body +49 (0)89-19240 (24h) (English)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Press. Gas (Compressed gas): H280 Contains gas under pressure; may explode if heated.

2.2 Label elements

This product is defined as an "article" based on OSHA definition of an article (c). Therefore, this product is exempt from requirements of the hazard communication standard, 29 CFR1910.1200 (HCS 2012), hence a Safety-Data-Sheet is not required in accordance to HCS2012 (b)(6) and the sheets are supplied as a service. This Safety-Data-Sheet contains valuable information critical to the safe handling and proper use of the product.

Hazard pictograms



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.

2.3 Other hazards

None

The contained dangerous materials are not freely available with foreseeable use.

Physico-chemical hazards

This accumulator is a cylinder containing nitrogen, a colorless inert gas under pressure ranging between approximately [20°C/68°F]. Do not rupture, open or disassemble this accumulator. Do not expose the accumulator to direct flame or heat.

Environmental hazards

Does not contain any PBT or vPvB substances.

Other hazards

Further hazards were not determined with the current level of knowledge.

This product is classified as hazardous in accordance to OSHA Standard 29 CFR 1910.1200.

SECTION 3: Composition / Information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

The product is an article.

| Range [%] | Substance |
|-----------|----------------|
| 100 | Nitrogen |
| | CAS: 7727-37-9 |

Comment on component parts

The concentrations of the ingredients are valid for containing gases. They are not for the complete system.
The contained propellant are not freely available with foreseeable use.
Substances of Very High Concern - SVHC: substances are not contained or are below 0,1%.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

None
The contained dangerous materials are not freely available with foreseeable use.

Inhalation

Not required under normal conditions.

Skin contact

Not required under normal conditions.

Eye contact

Not required under normal conditions.

Ingestion

Not required under normal conditions.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Product itself is non-combustible. Fire extinguishing method of surrounding areas must be considered.

Extinguishing media that must not be used

None

5.2 Special hazards arising from the substance or mixture

Bursting Containers can be forcibly projected from a fire.

5.3 Advice for firefighters

Not required under normal conditions.

Cool containers at risk with water spray jet.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Not required under normal conditions.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up mechanically.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

No dangerous reactions known if used as directed.

Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities

Keep away from acids

Do not store together with oxidizing agents.

Keep in a cool place.

Protect from heat/overheating and from sun.

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with occupational
exposure limits to be monitored (US)

Not applicable

8.2 Exposure controls

Additional advice on system design No special measures necessary.

Eye protection Not required under normal conditions.

Hand protection Not required under normal conditions.

Skin protection Protective clothing (EN 340)

Respiratory protection Not required under normal conditions.

Thermal hazards None

**Delimitation and monitoring of the
environmental exposition** None

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|---|---------------------------|
| Physical state | Solid |
| Form | compressed gas capsule |
| Color | colourless |
| Odor | odorless |
| Odor threshold | Not applicable |
| pH-value | Not applicable |
| pH-value [1%] | Not applicable |
| Boiling point [°C] | Not applicable |
| Flash point [°C] | Not applicable |
| Flammability [°C] | No |
| Lower explosion limit | Not applicable |
| Upper explosion limit | Not applicable |
| Oxidizing properties | No |
| Vapor pressure/gas pressure [kPa] | No information available. |
| Density [g/cm ³] | No information available. |
| Relative density | Not determined |
| Bulk density [kg/m ³] | Not applicable |
| Solubility in water | insoluble |
| Solubility other solvents | No information available. |
| Partition coefficient [n-octanol/water] | Not applicable |
| Kinematic viscosity | Not applicable |
| Relative vapour density | Not applicable |
| Evaporation speed | Not applicable |
| Melting point [°C] | Not applicable |
| Auto-ignition temperature [°C] | Not applicable |
| Decomposition temperature [°C] | Not applicable |
| Particle characteristics | No information available. |

9.2 Other information

Pre-charge pressure [bar] [(20°C/68°F): 75
Permitted operating pressure [bar]: 140

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

The product is stable under standard conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

None

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

| |
|--|
| Product |
| oral, Based on the information available, the classification criteria have not been fulfilled. |

Acute dermal toxicity

| |
|--|
| Product |
| dermal, Based on the information available, the classification criteria have not been fulfilled. |

Acute inhalational toxicity

| |
|--|
| Product |
| inhalative, Based on the information available, the classification criteria have not been fulfilled. |

| | |
|--|--|
| Serious eye damage/irritation | Based on the information available, the classification criteria have not been fulfilled. |
| Skin corrosion/irritation | Based on the information available, the classification criteria have not been fulfilled. |
| Respiratory or skin sensitisation | Based on the information available, the classification criteria have not been fulfilled. |
| Specific target organ toxicity — single exposure | Based on the information available, the classification criteria have not been fulfilled. |
| Specific target organ toxicity — repeated exposure | Based on the information available, the classification criteria have not been fulfilled. |
| Mutagenicity | Based on the information available, the classification criteria have not been fulfilled. |
| Reproduction toxicity | Based on the information available, the classification criteria have not been fulfilled. |
| Carcinogenicity | Based on the information available, the classification criteria have not been fulfilled. |
| Aspiration hazard | Based on the information available, the classification criteria have not been fulfilled. |
| General remarks | |

The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists.

SECTION 12: Ecological information

12.1 Toxicity

| |
|--|
| Product |
| Based on the information available, the classification criteria have not been fulfilled. |

12.2 Persistence and degradability

Behaviour in environment compartments

| | |
|---------------------------|----------------|
| Behaviour in sewage plant | Not applicable |
| Biological degradability | Not applicable |

12.3 Bioaccumulative potential

Accumulation in organisms is not expected.

12.4 Mobility in soil

Not applicable

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Endocrine disrupting properties

Contains no ingredients with endocrine-disrupting properties.

12.7 Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

For recycling, consult manufacturer.

Contaminated packaging

Uncontaminated packaging may be taken for recycling.

RCRA Hazard Class (40CFR 261)

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities.

SECTION 14: Transport

14.1 UN number

Transport by land according to ADR/RID

Not applicable

Inland navigation (ADN)

Not applicable

Marine transport in accordance with IMDG

3164

Air transport in accordance with IATA

3164

DOT Road Shipment Information (49 CFR)

3164


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14.2 UN proper shipping name

| | |
|--|---|
| Transport by land according to ADR/RID | Not applicable |
| Inland navigation (ADN) | Not applicable |
| Marine transport in accordance with IMDG | Articles, pressurized, pneumatic |
| - EMS | F-C, S-V |
| - Label |  |
| - IMDG LQ | 0,12 I |

| | |
|---------------------------------------|---|
| Air transport in accordance with IATA | Articles, pressurized, pneumatic |
| - Label |  |

| | |
|--|---|
| DOT Road Shipment Information (49 CFR) | UN/NA 3164 Articles, pressurized pneumatic 2.2 |
| - Label |  |

14.3 Transport hazard class(es)

| | |
|--|----------------|
| Transport by land according to ADR/RID | Not applicable |
| Inland navigation (ADN) | Not applicable |
| Marine transport in accordance with IMDG | 2.2 |
| Air transport in accordance with IATA | 2 |

| | |
|--|-----|
| DOT Road Shipment Information (49 CFR) | 2.2 |
|--|-----|

14.4 Packing group

| | |
|--|----------------|
| Transport by land according to ADR/RID | Not applicable |
| Inland navigation (ADN) | Not applicable |
| Marine transport in accordance with IMDG | Not applicable |
| Air transport in accordance with IATA | Not applicable |
| DOT Road Shipment Information (49 CFR) | Not applicable |

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14.5 Environmental hazards

Transport by land according to ADR/RID No

Inland navigation (ADN) No

Marine transport in accordance with IMDG No

Air transport in accordance with IATA No

DOT Road Shipment Information (49 CFR) No

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

US Regulations

| | |
|---|--|
| National regulations | 29 CFR 1910.1200-HCS 2012, OSHA-PEL, ACGIH-TLV, NTP, IARC, SARA Title III, NFPA, TSCA, California - Prop. 65 |
| - SARA, 302 | Not applicable |
| - SARA, 311 | Not applicable |
| - SARA, 313 | Not applicable |
| - CA Proposition 65 | No components require labeling under California Proposition 65. |
| - TSCA | All chemical substances in this material are included on or exempted from listing on the TSCA Inventory. |
| - FDA | Not applicable |
| American Conference of Governmental Industrial Hygienists - ACGIH | Not applicable |
| International Agency for Research on Cancer IARC | Not applicable |
| National Toxicology Program - NTP | Not applicable |
| HAP-VOC | Not applicable |
| Transport-regulations | DOT-Classification, ADR (2023); IMDG-Code (2023, 41. Amdt.); IATA-DGR (2023) |

15.2 Chemical safety assessment

Not applicable

SECTION 16: Other information

16.1 Abbreviations and acronyms:

ACGIH = American Conference of Governmental Industrial Hygienists;
ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route;
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses;
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure;
CAS = Chemical Abstracts Service;
CERCLA = Comprehensive Environmental Response, Compensation and Liability Act;
CFR = Code of Federal Regulations;
CPR = Controlled Products Regulations;
DMEL = Derived Minimum Effect Level;
DNEL = Derived No Effect Level;
DOT = Department of Transportation;
EC50 = Median effective concentration;
EPA = Environmental Protection Agency;
GHS = Globally Harmonized System of Classification and Labelling of Chemicals;
IATA = International Air Transport Association;
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk;
IC50 = Inhibition concentration, 50%;
IMDG = International Maritime Code for Dangerous Goods;
IARC = International Agency of Research on Cancer;
IATA = International Air Transport Association;
TSCA = Toxic Substance Control Act;
HMIS = Hazardous Materials Identification System;
NFPA = National Fire Protection Association;
NIOSH = National Institute for Occupational Safety and Health;
OSHA = Occupational Safety and Health Administration;
LC50 = Lethal concentration, 50%;
LD50 = Median lethal dose, 50%;
MARPOL = International Convention for the Prevention of Marine Pollution from Ships;
PBT = Persistent, Bioaccumulative and Toxic substance;
PNEC = Predicted No-Effect Concentration;
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals;
SARA = Superfund Amendments and Reauthorization Act;
TLV®/TWA = Threshold limit value – time-weighted average;
TLV®STEL = Threshold limit value – short-time exposure limit;
VOC = Volatile Organic Compounds;
vPvB = very Persistent and very Bioaccumulative;

16.2 Ratings



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NFPA Ratings



TOP, FLAMMABILITY: 0 - Minimal Hazard
LEFT, HEALTH: 0 - Minimal Hazard
RIGHT, REACTIVITY: 0 - Minimal Hazard
BOTTOM, SPECIAL NOTICE: -

HMIS Ratings

| | |
|---------------------|---|
| HEALTH | 0 |
| FLAMMABILITY | 0 |
| PHYSICAL HAZARD | 0 |
| PERSONAL PROTECTION | X |

0 - Minimal Hazard
0 - Minimal Hazard
0 - Minimal Hazard
X - Personal protection rating to be supplied by user depending on use conditions

PERSONAL PROTECTION:

- A - Safety Glasses
- B - Safety Glasses and Gloves
- C - Safety Glasses, Gloves and Protection Apron
- D - Face Shield, Gloves and Protection Apron
- E - Safety Glasses, Gloves and Dust Respirator
- F - Safety Glasses, Gloves, Protection Apron and Dust Respirator
- G - Safety Glasses, Gloves and Vapor Respirator.
- H - Splash Goggles, Gloves, Protection Apron and Vapor Respirator.
- I - Safety Glasses, Gloves, Dust Respirator and Vapor Respirator.
- J - Splash Goggles, Gloves, Protection Apron, Dust Respirator and Vapor Respirator.
- K - Airline Mask or Hood, Gloves, Full Suit and Boots.
- X - Personal protection rating to be supplied by user depending on use conditions

Modified position

None