

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

### 1.1 Product identifier

**spheres**  
**Article number: 22521, 22523, 22525**

### 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](http://www.febi.com)  
E-mail [info@febi.com](mailto:info@febi.com)

#### Address enquiries to

**Technical information** [info@febi.com](mailto:info@febi.com)  
**Safety Data Sheet** [info@febi.com](mailto: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 [REGULATION (GB) CLP]

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

### 2.2 Label elements

This product is an article and therefore it does not require labelling according to directives REACH/CLP.

### 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. 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.

## SECTION 3: Composition / Information on ingredients

### 3.1 Substances

not applicable

### 3.2 Mixtures

The product is an article.

Range [%]	Substance
80 - 100	Nitrogen
	CAS: 7727-37-9, EINECS/ELINCS: 231-783-9
	GHS/CLP: Press. Gas (Compressed gas): H280

**Comment on component parts** The concentrations of the ingredients are valid for containing gases. They are not for the complete system.  
The contained dangerous materials 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 (GB)

not relevant

#### 8.2 Exposure controls

<b>Additional advice on system design</b>	No special measures necessary.
<b>Eye protection</b>	Not required under normal conditions.
<b>Hand protection</b>	Not required under normal conditions.
<b>Skin protection</b>	Protective clothing (EN 340)
<b>Other</b>	
<b>Respiratory protection</b>	Not required under normal conditions.
<b>Thermal hazards</b>	none
<b>Delimitation and monitoring of the environmental exposition</b>	none

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state	compressed gas
Color	colourless
Odor	odourless
Odour threshold	not applicable
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	not relevant
Flash point [°C]	not applicable
Flammability (solid, gas) [°C]	no
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	No information available.
Density [g/cm <sup>3</sup> ]	No information available.
Relative density	not determined
Bulk density [kg/m <sup>3</sup> ]	not applicable
Solubility in water	insoluble
Solubility other solvents	No information available.
Partition coefficient [n-octanol/water]	not relevant
Kinematic viscosity	not applicable
Relative vapour density	not applicable
Evaporation speed	not applicable
Melting point [°C]	not relevant
Auto-ignition temperature	not applicable
Decomposition temperature [°C]	not applicable
Particle characteristics	No information available.

### 9.2 Other information

No information available.

## 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 hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute oral toxicity

Product
oral, Based on the available information, the classification criteria are not fulfilled.

#### Acute dermal toxicity

Product
dermal, Based on the available information, the classification criteria are not fulfilled.

#### Acute inhalational toxicity

Product
inhalative, Based on the available information, the classification criteria are not fulfilled.

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

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.

### 11.2 Information on other hazards

<b>Endocrine disrupting properties</b>	Contains no ingredients with endocrine-disrupting properties.
<b>Other information</b>	

## SECTION 12: Ecological information

### 12.1 Toxicity

Product
Based on the available information, the classification criteria are not fulfilled.

### 12.2 Persistence and degradability

<b>Behaviour in environment compartments</b>	
<b>Behaviour in sewage plant</b>	not determined
<b>Biological degradability</b>	not determined

### 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

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

#### Product

For recycling, consult manufacturer.

#### Waste no. (recommended)

160505

#### Contaminated packaging

Uncontaminated packaging may be taken for recycling.

#### Waste no. (recommended)

150103  
150101  
150104

## SECTION 14: Transport information

### 14.1 UN number or ID number

Transport by land according to ADR/RID 3164

Inland navigation (ADN) 3164

Marine transport in accordance with IMDG 3164

Air transport in accordance with IATA 3164

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**14.2 UN proper shipping name**

- Transport by land according to ADR/RID** To the regulations ADR is not subject after special regulation 594
  - Inland navigation (ADN)** To the regulations ADR is not subject after special regulation 594
  - Marine transport in accordance with IMDG** To the regulations IMDG is not subject after special regulation 283
  - Air transport in accordance with IATA** Articles, pressurized, pneumatic
- 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** not applicable
- Air transport in accordance with IATA** 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

**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

**14.6 Special precautions for user**

Relevant information under SECTION 6 to 8.

#### 14.7 Maritime transport in bulk according to IMO instruments

not applicable

### SECTION 15: Regulatory information

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

<b>EEC-REGULATIONS</b>	2008/98/EC 2000/532/EC; 2010/75/EU; 2004/42/EC; (EC) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEC ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014
<b>TRANSPORT-REGULATIONS</b>	ADR (2021); IMDG-Code (2021, 40. Amdt.); IATA-DGR (2022)
<b>NATIONAL REGULATIONS (GB):</b>	EH40/2005 Workplace exposure limits (Second edition, published December 2011); UK REACH; GB CLP.
- Observe employment restrictions for people	none
- VOC (2010/75/CE)	0%

#### 15.2 Chemical safety assessment

not applicable

### SECTION 16: Other information

#### 16.1 Hazard statements (SECTION 3)

H280 Contains gas under pressure; may explode if heated.

## 16.2 Abbreviations and acronyms:

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  
ATE = acute toxicity estimate  
CAS = Chemical Abstracts Service  
CLP = Classification, Labelling and Packaging  
DMEL = Derived Minimum Effect Level  
DNEL = Derived No Effect Level  
EC50 = Median effective concentration  
ECB = European Chemicals Bureau  
EEC = European Economic Community  
EINECS = European Inventory of Existing Commercial Chemical Substances  
EL50 = Median effective loading  
ELINCS = European List of Notified Chemical Substances  
EmS = Emergency Schedules  
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  
IUCLID = International Uniform Chemical Information Database  
IVIS = In vitro irritation score  
LC50 = Lethal concentration, 50%  
LD50 = Median lethal dose  
LC0 = lethal concentration, 0%  
LOAEL = lowest-observed-adverse-effect level  
LL50 = Median lethal loading  
LQ = Limited Quantities  
MARPOL = International Convention for the Prevention of Marine Pollution from Ships  
NOAEL = No Observed Adverse Effect Level  
NOEC = No Observed Effect Concentration  
PBT = Persistent, Bioaccumulative and Toxic substance  
PNEC = Predicted No-Effect Concentration  
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals  
STP = Sewage Treatment Plant  
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

## 16.3 Other information

### Classification procedure

Press. Gas (Compressed gas): H280 Contains gas under pressure; may explode if heated.  
(On basis of test data)

### Modified position

none