

## Molecular sieve 4A

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

#### 1.1 Product identification

Molecular sieve 4A

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

Relevant identified uses:

Solid material for drying of gases

#### 1.3 Details of the supplier of the safety data sheet

Giebel FilTec GmbH

Carl-Zeiss-Str. 5

74626 Bretzfeld-Schwabbach (Germany)

Phone: +49(0)7946 944401-0

Mail: info@giebel-adsorber.de

#### 1.4 Emergency telephone number

+49(0)7946 9444010 (during normal business hours)

+49(0)176 42554437 (outside normal business hours)

### Section 2: Hazards Identification

#### 2.1 Label elements

According to Regulation (EC) No 1272/2008 [CLP]

The product does not require a hazard warning label in accordance with GHS criteria.

#### 2.2 Label elements

According to Directives (EG) No 1272/2008

Globally Harmonized System, EU (GHS)

The product does not require a hazard warning label in accordance with GHS criteria.

According to Regulation 67/548/EWG and 1999/45/EG

The product does not require a hazard warning label in accordance with EG criteria.

### 2.3 Other hazards

According to Regulation (EG) No. 1272/2008

This Solid/ this mixture contains no components with a concentration of 0.1 % or higher which are classified as persistent, bio accumulative and toxic (PBT) or very persistent and very bio accumulative (vPvB)

## Section 3: Composition/Information on Ingredients

### 3.1 Substances

Chemical nature

Synonyms: Molecular sieve

Na<sub>12</sub> ((AlO<sub>2</sub>)<sub>12</sub>(SiO<sub>2</sub>)<sub>12</sub>)

Sodium Alumina silicate

CAS No.: 1318-02-1

EC No.: 215-283-8

Includes Myrica rubra tannin

Hazardous ingredients (GHS) according to Regulation (EC) No. 1272/2008

No particular hazards known. In accordance with the leading statutory provisions there are no components which must get advised.

## Section 4: Composition/Information on Ingredients

### 4.1 Description of first aid measures

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air.

On skin contact:

Wash thoroughly with soap and water

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:

Rinse mouth and then drink plenty of water.

**4.2 Most important symptoms and effects, both acute and delayed**  
Symptoms: No significant reaction of the human body to the product known.  
Disease: Could cause eye and skin irritation. Could cause irritation in the respiratory tract and intestinal tract. Contains traces of quartz, which could lead to lung disease, a quartz dust bug or cancer.

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

Treatment: Symptomatic treatment (decontamination, vital functions).

## Section 5: Fire-Fighting Measures

**5.1 Extinguishing agent**

Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

No particular hazards known.

**5.3 Advice for fire-fighters**

Special protective equipment:

Wear a self-contained breathing apparatus.

Further information:

Product itself is non-combustible; fire extinguishing method of surrounding areas must be considered. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

## Section 6: Accidental Release Measures

**6.1 Personal precautions, protective equipment and emergency procedures**

Do not breathe dust. Avoid contact with the skin, eyes and clothing. Use personal protective clothing. Information regarding personal protective measures see, chapter 8.

**6.2 Environmental precautions**

Discharge into the environment must be avoided.

### **6.3 Methods and material for containment and cleaning up**

Avoid raising dust. Dampen, pick up mechanically and dispose of. Correctly dispose of recovered product immediately. Reclaim for processing if possible.

### **6.4 Reference to other sections**

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

## **Section 7: Handling and Storage**

### **7.1 Precautions for safe handling**

Avoid dust formation. Avoid inhalation of dusts. Avoid contact with the skin, eyes and clothing. Provide suitable exhaust ventilation at the processing machines.

Protection against fire and explosion:

The substance/product is non-combustible.

### **7.2 Conditions for safe storage, including any incompatibilities**

Store it a cool, dry and good ventilated place in a container which is tightly closed.

Storage class (TRGS 510): Non-flammable solids

Suitable materials for containers: carbon steel (iron), Low density polyethylene (LDPE). Further information on storage conditions: Containers should be stored tightly sealed in a dry place.

### **7.3 Specific end use(s)**

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

## **Section 8: Exposure Controls/Personal Protection**

### **8.1 Control parameters**

Components with workplace-related Monitoring limits.

Ingredient:

Molecular sieve

Specification:

TRGS 900 – Monitoring limits

Value:

4 mg/m<sup>3</sup>

Remark:

Senate Commission for exam of harmful substances from the DFG (MAK-Commission) Colloidal Amorphous Silica (7631-86-9) including fumed silica and in the wet process produced Silicic acid (Precipitated silicic acid, Silica gel). A risk of fetal damage does not need to be feared if the occupational exposure limit value and the biological limit value (BGW) are adhered to.

## 8.2 Exposure controls Personal protective equipment

Respiratory protection

Breathing protection if dusts are formed. Particle filter with low efficiency for solid particles (e.g. EN 143 or 149, Type P1 or FFP1)

Hand protection:

Chemical resistant protective gloves (EN 374)

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:

Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift.

Technical control:

Ensure adequate ventilation

## Section 9: Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

Form: granules

Colour: beige

Odour: odourless

Odour threshold: not determined

pH value: 8 – 11 (100 g/kg) (as suspension)

Melting point: > 550 °C

Boiling point: not relevant

Flash point: Non-flammable.

Evaporation rate: not applicable

Flammability: does not ignite

Lower explosion limit: not applicable

Upper explosion limit: not applicable



Ignition temperature: not applicable

Vapour pressure: (20 °C) negligible

Relative vapour density (air): not applicable

Solubility in water: practically insoluble (20 °C)

Partitioning coefficient n-octanol/water (log Kow): not applicable

Self-ignition: not self-igniting

Thermal decomposition: not determined

Viscosity, dynamic: not applicable

Explosion hazard: not explosive

Fire promoting properties: not fire-propagating

## 9.2 Other information

Bulk density: 650 – 750g/L

## Section 10: Exposure Controls/Personal Protection

### 10.1 Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Metal corrosion: Does not corrode metal.

Formation of flammable gases:

Forms no flammable gases in the presence of water.

### 10.2 Chemical stability

The product is chemically stable.

### 10.3 Possibility of hazardous reactions

Addition of water leads to increase in temperature.

The product is chemically stable.

### 10.4 Conditions to avoid

Avoid dust formation. Avoid deposition of dust.

### 10.5 Incompatible materials

Substances to avoid: Water

### 10.6 Hazardous decomposition products

Substances to avoid:

No hazardous decomposition products known.



## Section 11: Toxicological Information

### 11.1 Information on toxicological effects

#### Acute toxicity

Of low toxicity after single ingestion.

Experimental/calculated data:

LD50 rat (oral): > 2000 mg/kg

The product has not been tested. The statement has been derived from products of a similar structure or composition

LC50 rat (by inhalation): > 2,07 mg/l 4 h

The product has not been tested. The statement has been derived from products of a similar structure or composition. An aerosol was tested.

LD50 rabbit (dermal): > 5000 mg/kg

The product has not been tested. The statement has been derived from products of a similar structure or composition

#### Irritation

Not irritating to the eyes. Not irritating to the skin.

#### Respiratory/Skin sensitization

Skin sensitizing effects were not observed in animal studies. The product has not been tested. The statement has been derived from products of a similar structure or composition.

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

No data available

#### Reproductive toxicity

No data available

#### Developmental toxicity

No data available

#### Specific target organ toxicity (single exposure)

No data available



Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

No data available

Aspiration hazard

No data available

Other relevant toxicity information

The product was evaluated based on the data available of the components. There are partial data gaps for individual components. However, our current knowledge and experience do not lead to risks beyond the labelling.

## Section 12: Ecological Information

### 12.1 Toxicity

No data available

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

A PBT / vPvB assessment is not available because a chemical safety assessment is not required / not carried out.

### 12.6 Other adverse effects

Avoid entering the environment.

## Section 13: Disposal Considerations

### 13.1 Waste treatment methods

Product

Observe national and local legal regulations. If recycling is to be carried out,



specialized companies should be approached.

Contaminated packaging

Dispose of in accordance with national, state and local regulations. Used packaging is to be emptied optimally and how to dispose of the substance / the product.

## Section 14: Transport Information

### 14.1 UN-Number

ADR/RID: -

IMDG: -

IATA: -

### 14.2 UN proper shipping name

ADR: No dangerous good in the sense of transport regulations

RID: No dangerous good in the sense of transport regulations

IMDG: No dangerous good

IATA: No dangerous good

### 14.3 Transport hazard classifications

ADR/RID: -

IMDG: -

IATA: -

### 14.4 Packing group

ADR/RID: -

IMDG: -

IATA: -

### 14.5 Danger to the environment

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

### 14.6 Special precautions for user

No data available

## Section 15: Regulatory Information

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

Water hazard class (VwVwS, Appendix 4): 1 - Slightly water endangering.

Hazardous Substances Directive 96/82 / EC Directive 96/82 / EC

does not apply

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer

Not regulated

Regulation (EC) No 850/2004 on persistent organic pollutants and

amending Directive 79/117 / EEC

Not regulated

Regulation (EC) No 689/2008 on the export and import of dangerous chemicals

Not regulated

Substances of very high concern (SVHC)

This product does not contain any substances of very high concern above the relevant legal limit value (> 0.1% (w / w) REACH Regulation (EC) No 1907/2006, Article 57).

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection

### 15.2 Chemical safety assessment

No substance safety assessment has been carried out for this product.

## Section 16: Other Information

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Abbreviations and acronyms

IMDG: International Maritime Code for Dangerous Goods



GIEBEL  
Desiccants

# Material Safety Data Sheet

according to Regulation (EU) 2020/878

V.02.23

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association"

(IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

LC50 Lethal concentration, 50 percent

LD50 Lethal dose, 50 percent