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

1.1 Product identifier
Trade name **Molecular sieve, Type 13X**

Stock number: L06085
CAS Number: 63231-69-6

1.2 Relevant identified uses of the substance or mixture and uses advised against.
Identified use: SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier: Thermo Fisher (Kandel) GmbH
Zepplinstr. 7b
76185 Karlsruhe / Germany
Tel: +49 (0) 721 84007 280
Fax: +49 (0) 721 84007 300
Email: tech@alfa.com
www.alfa.com
Informing department: Product safety Tel +49 (0) 7275 988687-0

1.4 Emergency telephone number:
Carechem 24: +44 (o) 1235 239 670 (Multi-language emergency number)
Poison Information Center Mainz
www.gifinfo.uni-mainz.de Telephone: +49(0)6131/19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
The substance is not classified as hazardous to health or the environment according to the CLP regulation.

Other hazards that do not result in classification
No information known.

2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008 Not applicable

Signal word Not applicable
Hazard pictograms Not applicable
Hazard statements Not applicable

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

SECTION 3: Composition/information on ingredients

3.1 Substances
CAS# Designation: 63231-69-6 Molecular sieve, Type 13x
Concentration: ≤100%

SECTION 4: First aid measures

4.1 Description of first aid measures
After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
Seek immediate medical advice.

After skin contact
Instantly wash with water and soap and rinse thoroughly.
Seek immediate medical advice.

After eye contact
Rinse opened eye for several minutes under running water. Then consult doctor.

After swallowing
Seek medical treatment.

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 CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
Silicon oxide
Sodium oxide
Aluminum oxide
Additional decomposition products are unknown.

5.3 Advice for firefighters
Protective equipment:
Wear self-contained breathing apparatus.
Wear full protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.

6.2 Environmental precautions: Do not allow product to reach sewage system or water bodies.

6.3 Methods and material for containment and cleaning up: Collect mechanically.

Prevention of secondary hazards: No special measures required.

6.4 Reference to other sections
See Section 7 for information on safe handling
See section 6 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Handle under dry protective gas.
Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.

Information about protection against explosions and fires: No information known.
### SECTION 8: Exposure controls/personal protection

**Additional information about design of technical systems:**
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

#### 8.1 Control parameters

**Components with critical 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:**
No data

#### 8.2 Exposure controls

**Personal protective equipment**

**General protective and hygienic measures**
The usual precautionary measures should be adhered to in handling the chemicals.

- Keep away from foodstuffs, beverages and food.
- Instantly remove any soiled and impregnated garments.
- Wash hands during breaks and at the end of the work.
- Maintain an ergonomically appropriate working environment.

**Breathing equipment:**

- Use breathing protection with high concentrations.
- Use breathing protection in case of insufficient ventilation.

**Recommended filter device for short term use:**
Use a respirator with type N95 (USA) or PE (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

**Protection of hands:**

- Check protective gloves prior to each use for their proper condition.
- 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.

**Material of gloves:**

- Impervious gloves

**Eye protection:**

- Safety glasses with side shields / NIOSH (US) or EN 166 (EU)

**Body protection:**

- Protective work clothing.

### SECTION 9: Physical and chemical properties

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

**General Information**

- Appearance: Powder/crystalline/beads
- Odour: Odourless
- Odour threshold: Not determined.
- pH-value: Not applicable.

**Change in condition**

- Melting point/freezing point: Not determined
- Initial boiling point and boiling range: Not determined
- Inflammability (solid, gaseous): Not determined
- Ignition temperature: Not determined
- Decomposition temperature: Not determined
- Self-ignitability: Not determined

**Explosive properties:**

- Critical values for explosion: Not determined
- Lower: Not determined
- Upper: Not determined
- Steam pressure: Not applicable
- Density at 20 °C: 1.1 g/cm³
- Relative density: Not determined
- Vapour density: Not applicable
- Evaporation rate: Not applicable
- Solubility in Miscibility with: Not applicable
- Water: Insoluble
- Partition coefficient: n-octanol/water: Not determined
- Viscosity: dynamic: Not applicable
- kinematic: Not applicable

**9.2 Other information**
No further relevant information available.

### SECTION 10: Stability and reactivity

**10.1 Reactivity**
No information known.

**10.2 Chemical stability**
Stable under recommended storage conditions.

**Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.

**10.3 Possibility of hazardous reactions**
Reacts with strong oxidising agents

**10.4 Conditions to avoid**
No further relevant information available.

**10.5 Incompatible materials:**
- Oxidising agents
  - Water/moisture
- Hazardous decomposition products:
  - Silicon oxide
  - Sodium oxide
  - Aluminum oxide
- Additional decomposition products are unknown.
**SECTION 11: Toxicological information**

11.1 Information on toxicological effects
Acute toxicity: No effects known.
LD/LC50 values that are relevant for classification: No data
Skin irritation or corrosion: May cause irritation
Eye irritation or corrosion: May cause irritation
Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.
Germ cell mutagenicity: No effects known.
Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
Specific target organ system toxicity - repeated exposure: No effects known.
Specific target organ system toxicity - single exposure: No effects known.
Aspiration hazard: No effects known.
Subacute to chronic toxicity: No effects known.
Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

**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:
Generally not hazardous for water.
Avoid transfer into 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: Hand over to disposers of hazardous waste. Must be specially treated under adherence to official regulations. Consult state, local or national regulations for proper disposal.
Uncleaned packagings: Recommendation: Disposal must be made according to official regulations.

**SECTION 14: Transport information**

UN-Number: Not applicable
ADR, ADN, IMDG, IATA: Not applicable
14.2 UN proper shipping name
ADR, ADN, IMDG, IATA: Not applicable
14.3 Transport hazard class(es)
ADR, ADN, IMDG, IATA: Not applicable
14.4 Mobility in soil: No further relevant information available.
14.5 Environmental hazards: Not applicable.
14.6 Special precautions for user: Not applicable.
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Not applicable.
14.8 Transport hazard class(es) ADR, ADN, IMDG, IATA: Not applicable
UN-Number: Not applicable

**SECTION 15: Regulatory information**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Australian Inventory of Chemical Substances: Substance is listed.
Standard for the Uniform Scheduling of Medicines and Poisons: Substance is not listed.
Directive 2012/18/EU: Named dangerous substances - ANNEX I Substance is not listed.
National regulations:
Information about limitation of use: For use only by technically qualified individuals.
Water hazard class: Generally not hazardous for water.
Other regulations, limitations and prohibitive regulations:
ELINCS (European List of Notified Chemical Substances): Substance is not listed.
Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No 1907/2006: Substance is not listed.
The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.
Substance is not listed.
Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed.
15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing SDS: Global Marketing Department

Abbreviations and acronyms:
AFET: Acquis européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
ADN: International Maritime Code for Dangerous Goods
ADR: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
SVHC: Substances of Very High Concern
### Trade name Molecular sieve, Type 13X

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety</td>
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<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration (USA)</td>
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<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
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<td>PEL</td>
<td>Permissible Exposure Limit</td>
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<td>REL</td>
<td>Recommended Exposure Limit</td>
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<td>BEI</td>
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