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

1.1 Product identifier

Trade name Benzamide

Stock number: A10501
CAS Number: 55-21-0
EC number: 200-227-7

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:
Alfa Aesar
Avocado Research Chemicals, Ltd.
Shore Road
Port of Heysham Industrial Park
Heysham Lancashire LA3 2XY
United Kingdom
Office Tel: +44 (0) 1524 850506
Office Fax: +44 (0) 1524 850608
Email: uktech@alfa.com
www.alfa.com

Informing department: Product safety department.

1.4 Emergency telephone number:
Call Carechem 24 at +44 (0) 1865 407333 (English only); +44 (0) 1235 239670 (Multi-language)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

GHS08 health hazard

Muta. 2 H341 Suspected of causing genetic defects.

GHS07 Acute Tox. 4 H302 Harmful if swallowed.

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

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 The substance is classified and labelled according to the CLP regulation.

Hazard pictograms

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:
55-21-0 Benzamide

Identification number(s):
EC number: 200-227-7

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
Rinse with plenty of 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:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)

(Contd. on page 2)
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: Dispose of contaminated material as waste according to section 13.

Prevention of secondary hazards: No special measures required.

6.4 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 information on disposal.

SECTION 7: Handling and storage
7.1 Precautions for safe handling
Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires: No information known.

7.2 Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and containers: No special requirements.
Information about storage in one common storage facility:
Store away from strong bases.
Store away from oxidising agents.
Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.

7.3 Specific end use(s) No further relevant information available.

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.
Recommended filter device for short term use:
Use a respirator with type P100 (USA) or P3 (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
Penetration time of glove material (in minutes) Not determined

Eye protection: Safety glasses
Body protection: Protective work clothing.

SECTION 9: Physical and chemical properties
9.1 Information on basic physical and chemical properties
General Information
Appearance:
Form: Crystalline solid
Colour: White to pale cream
Smell: Not determined
Odour threshold: Not determined.
Pp-value: Not applicable.

Change in condition
Melting point/Melting range: 125-129 °C
Boiling point/Boiling range: 288 °C
Sublimation temperature / start: Not determined

Flash point: 180 °C
Inflammability (solid, gaseous) Not determined.
Ignition temperature: >500 °C
Decomposition temperature: Not determined
Self-inflammability: Not determined.

Danger of explosion: Not determined.
Critical values for ventilation:
Lower: Not determined
Upper: Not determined

Steam pressure: Not applicable.
Density at 20 °C: 1,341 g/cm³
Relative density Not determined.
Vapour density Not applicable.
Evaporation rate Not determined.
Solubility in / Miscibility with Water at 20 °C: 13 g/l
Partition coefficient (n-octanol/water): Not determined.
Trade name **Benzamide**

### 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:
  - Bases
  - Oxidising agents

#### 10.6 Hazardous decomposition products:
- Carbon monoxide and carbon dioxide
- Nitrogen oxides (NOx)

### SECTION 11: Toxicological information

11.1 Information on toxicological effects
- Acute toxicity:
  - Harmful if swallowed.
  - The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.
  - Oral LD50 1160 mg/kg (mouse)

#### Skin irritation or corrosion:
- May cause irritation

#### Eye irritation or corrosion:
- May cause irritation

#### Sensitization:
- No sensitizing effect known.

#### Germ cell mutagenicity:
- The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.

#### Carcinogenicity:
- No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

#### Reproductive toxicity:
- No effects known.

#### 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.

### SECTION 12: Ecological information

12.1 Toxicity
- Aquatic toxicity:
  - No further relevant information available.

#### Aquatic Persistence and degradability:
- No further relevant information available.

#### Bioaccumulative potential:
- No further relevant information available.

#### Mobility in soil:
- 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

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<td>14.3 Transport hazard class(es)</td>
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<td>14.5 Environmental hazards:</td>
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<tr>
<td>14.6 Special precautions for user</td>
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<tr>
<td>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</td>
<td>Not applicable</td>
<td></td>
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</tbody>
</table>

### 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 Drugs and Poisons Substance is not listed.

#### National regulations
- Employment restrictions concerning young persons must be observed.
- For use only by technically qualified individuals.

**Water hazard class:** Water hazard class 1 (Self-assessment): slightly 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 Material 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:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
vPvB: very Persistent and very Bioaccumulative
ACGIH: American Conference of Governmental Industrial Hygienists (USA)
OSHA: Occupational Safety and Health Administration (USA)
NTP: National Toxicology Program (USA)
IARC: International Agency for Research on Cancer
EPA: Environmental Protection Agency (USA)