1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers
   - Product name: MRS Broth
   - Product Number: 69966
   - Brand: Sigma-Aldrich

1.2 Relevant identified uses of the substance or mixture and uses advised against
   - Identified uses: Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet
   - Company: Sigma-Aldrich Chemie BV
     Stationsplein 4
     3331 LL ZWIJNDRECHT
     NETHERLANDS
   - Telephone: +31 78-620-5411
   - Fax: +31 78-620-5421
   - E-mail address: eurtechserv@sial.com

1.4 Emergency telephone number
   - Emergency Phone #: 112

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
   - Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
   - Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

2.2 Label elements
   - Labelling according Regulation (EC) No 1272/2008 [CLP]
     - Pictogram: none
     - Signal word: none
     - Hazard statement(s): none
     - Precautionary statement(s): none
     - Supplemental Hazard Statements: none

   - Safety data sheet available on request.
   - Safety data sheet available on request for professional users.
   - Caution - this mixture contains a substance not yet fully tested.

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triammonium citrate</td>
<td>Skin Irrit. 2; Eye Irrit. 2; STOT</td>
<td>&lt; 10 %</td>
</tr>
</tbody>
</table>
4. **FIRST AID MEASURES**

4.1 **Description of first aid measures**

**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled**
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**
Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**
Flush eyes with water as a precaution.

**If swallowed**
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 **Most important symptoms and effects, both acute and delayed**
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

4.3 **Indication of any immediate medical attention and special treatment needed**
No data available

5. **FIREFIGHTING MEASURES**

5.1 **Extinguishing media**

**Suitable extinguishing media**
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 **Special hazards arising from the substance or mixture**
Carbon oxides, nitrogen oxides (NOx), Oxides of phosphorus, Potassium oxides, Sodium oxides

5.3 **Advice for firefighters**
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 **Further information**
No data available

6. **ACCIDENTAL RELEASE MEASURES**

6.1 **Personal precautions, protective equipment and emergency procedures**
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

6.2 **Environmental precautions**
Do not let product enter drains.

6.3 **Methods and materials for containment and cleaning up**
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 **Reference to other sections**
For disposal see section 13.

7. **HANDLING AND STORAGE**

7.1 **Precautions for safe handling**
Provide appropriate exhaust ventilation at places where dust is formed.

7.2 **Conditions for safe storage, including any incompatibilities**
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
7.3 Specific end uses
no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Components with workplace control parameters

8.2 Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection
Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance
   Form: powder
   Colour: beige

b) Odour
   no data available

c) Odour Threshold
   no data available

d) pH
   6.5

e) Melting point/freezing point
   no data available

f) Initial boiling point and boiling range
   no data available

g) Flash point
   no data available

h) Evaporation rate
   no data available

i) Flammability (solid, gas)
   no data available

j) Upper/lower flammability or explosive limits
   no data available

k) Vapour pressure
   no data available
1) Vapour density
no data available

m) Relative density
no data available

n) Water solubility
no data available

o) Partition coefficient: n-octanol/water
no data available

p) Autoignition temperature
no data available

q) Decomposition temperature
no data available

r) Viscosity
no data available

s) Explosive properties
no data available

t) Oxidizing properties
no data available

9.2 Other safety information
no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
no data available

10.2 Chemical stability
no data available

10.3 Possibility of hazardous reactions
no data available

10.4 Conditions to avoid
no data available

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
no data available

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
no data available

Respiratory or skin sensitization
no data available

Germ cell mutagenicity
no data available

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
no data available

Specific target organ toxicity - single exposure
no data available
Specific target organ toxicity - repeated exposure
no data available

Aspiration hazard
no data available

Potential health effects
- **Inhalation**: May be harmful if inhaled. May cause respiratory tract irritation.
- **Ingestion**: May be harmful if swallowed.
- **Skin**: May be harmful if absorbed through skin. May cause skin irritation.
- **Eyes**: May cause eye irritation.

Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information
RTECS: Not available

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
no data available

12.6 Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
**Product**
Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**
Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number
**ADR/RID**: -
**IMDG**: -
**IATA**: -

14.2 UN proper shipping name
**ADR/RID**: Not dangerous goods
**IMDG**: Not dangerous goods
**IATA**: Not dangerous goods

14.3 Transport hazard class(es)
**ADR/RID**: -
**IMDG**: -
**IATA**: -

14.4 Packaging group
**ADR/RID**: -
**IMDG**: -
**IATA**: -

14.5 Environmental hazards
**ADR/RID**: no
**IMDG Marine pollutant**: no
**IATA**: no
14.6 Special precautions for user
no data available

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available

15.2 Chemical Safety Assessment
no data available

16. OTHER INFORMATION

Text of H-code(s) and R-phrase(s) mentioned in Section 3

Eye Irrit.          Eye irritation
H315               Causes skin irritation.
H319               Causes serious eye irritation.
H335               May cause respiratory irritation.
Skin Irrit.        Skin irritation
STOT SE            Specific target organ toxicity - single exposure
Xi                  Irritant
R36/37/38           Irritating to eyes, respiratory system and skin.

Further information
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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.