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

- **1.1 Product identifier**
  - Trade name: Morpholinoethane sulfonic acid, monohydrate
  - Synonyma MES
  - Article number: 29830
  - CAS Number: 145224-94-8
  - EC number: 224-632-3
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
  - No further relevant information available.
- **1.3 Details of the supplier of the safety data sheet**
  - Manufacturer/Supplier: SERVA Electrophoresis GmbH
    Carl-Benz-Str. 7
    D-69115 Heidelberg
    Tel.: +49 6221 13840-0
    FAX: +49 6221 13840-10
    msds.info@serva.de
  - Information department: Product Safety department
    Tel.: +49 6221 13840-35
- **1.4 Emergency telephone number:**
  - Poison Information Center Mainz - Phone: +49 (0) 6131 19240
    (advisory service in German or English language)

**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 according to the CLP regulation.
- **2.2 Label elements**
  - Hazard pictograms: Void
  - Signal word: Void
  - Hazard statements: Void
  - PBT: Not applicable.
  - vPvB: Not applicable.

**SECTION 3: Composition/information on ingredients**

- **3.1 Chemical characterisation: Substances**
  - CAS No. Description:
    145224-94-8 2-morpholinoethanesulphonic acid monohydrate
  - Identification number(s):
    - EC number: 224-632-3
  - Description:
    - Empirical formula: $C_6H_{13}NO_4S * H_2O$
    - MW: 195.25

(Contd. on page 2)
SECTION 4: First aid measures

4.1 Description of first aid measures
General information: No special measures required.
After inhalation: Supply fresh air; consult doctor in case of complaints.
After skin contact: Immediately rinse with water.
After eye contact: Rinse opened eye for several minutes under running water.
After swallowing: Rinse out mouth and then drink plenty of water. If symptoms persist consult doctor.

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 spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards arising from the substance or mixture
Carbon monoxide (CO)
Sulphur dioxide (SO₂)
Nitrogen oxides (NOx)

5.3 Advice for firefighters
Protective equipment: Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear protective clothing.

6.2 Environmental precautions: Do not allow to enter sewers/surface or ground water.

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

6.4 Reference to other sections
No dangerous substances are released.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Prevent formation of dust.
Information about protection against explosions and fires: No special measures required.

7.2 Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: Store in dry conditions.

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Additional information about design of technical systems: No further data; see item 7.

Additional information: The lists that were valid during the creation were used as basis.

(Contd. on page 3)
### 9.1 Information on basic physical and chemical properties

**General Information**

- **Appearance:** Powder
- **Colour:** White
- **Odour:** Recognisable
- **pH-value (100 g/l) at 20 °C:** 2.5 - 4.0
- **Change in condition**
  - Melting point/freezing point: > 300 °C
  - Initial boiling point and boiling range: undetermined
- **Flash point:** Not applicable
- **Flammability (solid, gaseous):** Product is not flammable.
- **Explosive properties:** Product does not present an explosion hazard.
- **Density:** Not determined
- **Bulk density at 20 °C:** ca. 57 kg/m³
- **Solubility in / Miscibility with Water at 20 °C:** 100 g/l
- **9.2 Other information**
  - No further relevant information available.

### 10.1 Reactivity

No further relevant information available.

### 10.2 Chemical stability

No decomposition if used according to specifications.

### 10.3 Possibility of hazardous reactions

No dangerous reactions known.
Trade name: Morpholinoethane sulfonic acid, monohydrate

10.4 Conditions to avoid: No further relevant information available.
10.5 Incompatible materials: No further relevant information available.
10.6 Hazardous decomposition products: No dangerous decomposition products known

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
Based on available data, the classification criteria are not met.

LD/LC50 values that are relevant for classification:
Dermal LD50 > 2000 mg/kg (rabbit)

Primary irritant effect:
Skin corrosion/irritation Based on available data, the classification criteria are not met.
Serious eye damage/irritation Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
CMR effects (carcinogeneity, mutagenicity and toxicity for reproduction)
Germl cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity Based on available data, the classification criteria are not met.
Reproductive toxicity Based on available data, the classification criteria are not met.
STOT-single exposure Based on available data, the classification criteria are not met.
STOT-repeated exposure Based on available data, the classification criteria are not met.
Aspiration hazard Based on available data, the classification criteria are not met.

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:
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5 Results of PBT and vPvB assessment
PBT: FBT - assessment not available.
vPvB: vPvB - assessment not available.

12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION 14: Transport information

14.1 UN-Number
ADR, ADN, IMDG, IATA Void
Trade name: Morpholinoethane sulfonic acid, monohydrate

- 14.2 UN proper shipping name
  - ADR, ADN, IMDG, IATA: Void

- 14.3 Transport hazard class(es)
  - ADR, ADN, IMDG, IATA: Void

- 14.4 Packing group
  - ADR, IMDG, IATA: Void

- 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.

- Transport/Additional information:
  - Not dangerous according to the above specifications.

- UN "Model Regulation":
  - Void

* SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
  - National regulations
  - Water hazard class: Water hazard class 1 (Assessment by list): slightly hazardous for water.

- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing SDS: Product safety department
- Contact: +49 6221 13840-35
- Abbreviations and acronyms:
  - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  - ICAO: International Civil Aviation Organisation
  - PBT: persistent, bioaccumulative, toxic substance (REACH)
  - vPvB: very persistent, very bioaccumulative substance (REACH)
  - REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
  - CLP: Regulation on classification, labelling and packaging of substances and mixtures
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised 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
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative

* Data compared to the previous version altered.