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

1.1 Product identifier

- Trade name: Phenazine-methosulfate
- Synonyma: PMS
- Article number: 32030
- CAS Number: 299-11-6
- EC number: 206-072-1

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
- Emergency telephone number:
  Medical Emergency Information in case of poisoning:
  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

GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H335 May cause respiratory irritation.

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 GHS07
- Signal word: Warning
- Hazard statements
  H315 Causes skin irritation.
  H319 Causes serious eye irritation.
  H335 May cause respiratory irritation.
- Precautionary statements
  P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
  P264 Wash thoroughly after handling.
  P302+P352 IF ON SKIN: Wash with plenty of water.
  P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

(Contd. on page 2)
SECTION 3: Composition/information on ingredients

3.1 Chemical characterisation: Substances
- CAS No. Description:
  299-11-6 5-methylphenazinium methyl sulphate
- Identification number(s):
  - EC number: 206-072-1
  - Description:
  - Empirical formula: \( \text{C}_{14}\text{H}_{14}\text{N}_{2}\text{O}_{4}\text{S} \)
  - MW: 306.34

SECTION 4: First aid measures

4.1 Description of first aid measures
- After inhalation: Supply fresh air and to be sure call for a doctor.
- After skin contact: Immediately rinse with water.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult doctor.
- 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: \( \text{CO}_2 \), 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
- In case of fire, the following can be formed, but not limited to:
  - Carbon monoxide and carbon dioxide
  - Nitrogen oxides (NOx)
  - Sulphur dioxide (SO\(_2\))

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 equipment. Keep unprotected persons away.

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.
- Dispose contaminated material as waste according to item 13.

6.4 Reference to other sections
- See Section 7 for information on safe handling
- See Section 8 for information on personal protection equipment.
SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
  Ensure good ventilation/exhaustion at the workplace.
  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: Store at +2 to +8 °C
  **Information about storage in one common storage facility:** Not required.
  **Further information about storage conditions:**
  Keep receptacle tightly sealed.
  Store in dry conditions.
  Protect from exposure to the light.

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

SECTION 8: Exposure controls/personal protection

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

- **8.1 Control parameters**
  Components with limit values that require monitoring at the workplace: Not required.

- **8.2 Exposure controls**
  Personal protective equipment
  General protective and hygienic measures
  Keep away from foodstuffs, beverages and feed.
  Immediately remove all soiled and contaminated clothing
  Wash hands before breaks and at the end of work.
  Avoid contact with the eyes and skin.

  Breathing equipment:
  Short term filter device:
  Filter P2.

  Protection of hands:
  Protective gloves.
  The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
  Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

  Material of gloves
  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.

  Penetration time of glove material
  The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

  For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:
  Natural rubber, NR
  Nitrile rubber, NBR

  Eye protection: Safety glasses

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Trade name: Phenazine-methosulfate

**SECTION 9: Physical and chemical properties**

- **9.1 Information on basic physical and chemical properties**
  - **General Information**
  - **Appearance:** Crystalline
  - **Colour:** Dark yellow
  - **Odour:** Odourless

- **Change in condition**
  - **Melting point/freezing point:** ca. 155 °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 at 20 °C:** 0.4 g/cm³

- **Solubility in / Miscibility with**
  - **Water at 20 °C:** min. 100 g/l

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

**SECTION 10: Stability and reactivity**

- **10.1 Reactivity**
  - No further relevant informations available

- **10.2 Chemical stability**
  - **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

- **10.3 Possibility of hazardous reactions**
  - No dangerous reactions known

- **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.
  - **Primary irritant effect:**
    - **Skin corrosion/irritation**
      - Causes skin irritation.
    - **Serious eye damage/irritation**
      - Causes serious eye irritation.
  - **Respiratory or skin sensitisation**
    - Based on available data, the classification criteria are not met.
  - **Acute effects (acute toxicity, irritation and corrosivity)**
    - Respiratory irritation is possible.
  - **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
  - **Germ 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**
    - May cause respiratory irritation.
  - **STOT-repeated exposure**
    - Based on available data, the classification criteria are not met.

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Trade name: Phenazine-methosulfate

* 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) (Self-assessment): 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: PBT - 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
- 14.2 UN proper shipping name
  - ADR, ADN, IMDG, IATA Void
- 14.3 Transport hazard class(es)
  - ADR, IMDG, IATA Void
  - Class Void
  - Label -
  - ADN/R Class: Void
- 14.4 Packing group
  - ADR, IMDG, IATA Void
- 14.5 Environmental hazards:
  - Marine pollutant: No
- 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.
Trade name: Phenazine-methosulfate

(Contd. of page 5)

· 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 (Self-assessment): 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)
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  Skin Irrit. 2: Skin corrosion/irritation – Category 2
  Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
  STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
· * Data compared to the previous version altered.