

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/31/2017

Reviewed on 07/31/2017

1 Identification

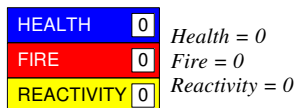
- **Product identifier**
- **Product Name:** Memory Test 2
- **Part Number:** CL-MEM-2
- **Application of the substance / the mixture** Certified Reference Material
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
SPEX CertiPrep, LLC.
203 Norcross Ave, Metuchen,
NJ 08840 USA
- **Information department:** product safety department
- **Emergency telephone number:**
Emergency Phone Number (24 hours)
CHEMTREC (800-424-9300)
Outside US: 703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture** The product is not classified according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** Not Regulated
- **Hazard pictograms** Not Regulated
- **Signal word** Not Regulated
- **Hazard statements** Not Regulated
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



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

3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Mixture of the substances listed below with nonhazardous additions.
- **Dangerous components:** Not Regulated

Chemical identification of the substance/preparation

| | | |
|------------|---|---------|
| 12125-02-9 | ammonium chloride | 0.72% |
| 7440-44-0 | Carbon from Oxalic acid | 0.2% |
| 7723-14-0 | Phosphorus from Ammonium dihydrogenorthophosphate | 0.1% |
| 7704-34-9 | Sulfur (from Dibenzothiophene) | 0.1% |
| 7664-39-3 | hydrofluoric acid | 0.005% |
| 7439-98-7 | molybdenum | 0.002% |
| 7440-32-6 | titanium | 0.002% |
| 7440-36-0 | antimony | 0.002% |
| 7732-18-5 | water, distilled, conductivity or of similar purity | 98.869% |

4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

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- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for Doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **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 disposal information.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

| | | |
|------------|---|------------------------|
| 12125-02-9 | ammonium chloride | 20 mg/m ³ |
| 7440-44-0 | Carbon from Oxalic acid | 6 mg/m ³ |
| 7723-14-0 | Phosphorus from Ammonium dihydrogenorthophosphate | 0.27 mg/m ³ |
| 7439-98-7 | molybdenum | 30 mg/m ³ |
| 7440-32-6 | titanium | 30 mg/m ³ |
| 7440-36-0 | antimony | 1.5 mg/m ³ |

· **PAC-2:**

| | | |
|------------|---|-----------------------|
| 12125-02-9 | ammonium chloride | 54 mg/m ³ |
| 7440-44-0 | Carbon from Oxalic acid | 330 mg/m ³ |
| 7723-14-0 | Phosphorus from Ammonium dihydrogenorthophosphate | 3 mg/m ³ |
| 7439-98-7 | molybdenum | 330 mg/m ³ |
| 7440-32-6 | titanium | 330 mg/m ³ |
| 7440-36-0 | antimony | 13 mg/m ³ |

· **PAC-3:**

| | | |
|------------|---|-------------------------|
| 12125-02-9 | ammonium chloride | 330 mg/m ³ |
| 7440-44-0 | Carbon from Oxalic acid | 2,000 mg/m ³ |
| 7723-14-0 | Phosphorus from Ammonium dihydrogenorthophosphate | 18 mg/m ³ |
| 7439-98-7 | molybdenum | 2,000 mg/m ³ |
| 7440-32-6 | titanium | 2,000 mg/m ³ |
| 7440-36-0 | antimony | 80 mg/m ³ |

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
No special measures required.
Follow good laboratory practices.
- **Information about protection against explosions and fires:** No special measures required.
- **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:** None.

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

8 Exposure controls/personal protection

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

· **Control parameters**

· **Components with limit 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:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:** The usual precautionary measures for handling chemicals should be followed.

· **Breathing equipment:** Not required.

· **Protection of hands:**

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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Goggles recommended during refilling.

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form: Liquid

Color: According to product specification

· **Odor:** Characteristic

· **Odour Threshold:** Not applicable.

· **pH-value:** Not applicable.

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 100 °C (212 °F)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:**

Decomposition temperature: Not applicable.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower: Not applicable.

Upper: Not applicable.

· **Vapor pressure:** Not determined.

· **Density at 20 °C (68 °F)** 1.00624 g/cm³ (8.397 lbs/gal)

· **Relative density** Not applicable.

· **Vapor density** Not applicable.

· **Evaporation rate** Not applicable.

· **Solubility in / Miscibility with**

Water: Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not applicable.

· **Viscosity:**

Dynamic: Not applicable.

Kinematic: Not applicable.

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· **Solvent content:**
Organic solvents: 0,0 %
Water: 98,9 %

· **Solids content:** 1,1 %
 · **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
 The product is not subject to classification according to internally approved calculation methods for preparations:
 When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
 Water hazard class 1 (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.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Smaller quantities can be disposed of with household waste.

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- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|--|-----------------|
| · UN-Number · DOT, ADR, IMDG, IATA | Not Regulated |
| · UN proper shipping name · DOT, ADR, IMDG, IATA | Not Regulated |
| · Transport hazard class(es) · DOT, ADR, IMDG, IATA · Class | Not Regulated |
| · Packing group · DOT, ADR, IMDG, IATA | Not Regulated |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | Not Regulated |

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· **Section 355 (extremely hazardous substances):**

| | |
|-----------|---|
| 7723-14-0 | Phosphorus from Ammonium dihydrogenorthophosphate |
| 7664-39-3 | hydrofluoric acid |

· **Section 313 (Specific toxic chemical listings):**

| | |
|-----------|---|
| 7723-14-0 | Phosphorus from Ammonium dihydrogenorthophosphate |
| 7704-34-9 | Sulfur (from Dibenzothiophene) |
| 7664-39-3 | hydrofluoric acid |
| 7440-36-0 | antimony |

· **TSCA (Toxic Substances Control Act):**

| | |
|------------|---|
| 12125-02-9 | ammonium chloride |
| 7440-44-0 | Carbon from Oxalic acid |
| 7723-14-0 | Phosphorus from Ammonium dihydrogenorthophosphate |
| 7704-34-9 | Sulfur (from Dibenzothiophene) |
| 7439-98-7 | molybdenum |
| 7440-32-6 | titanium |
| 7440-36-0 | antimony |
| 7732-18-5 | water, distilled, conductivity or of similar purity |

· **Proposition 65**· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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· **TLV (Threshold Limit Value established by ACGIH)**

7439-98-7 molybdenum

A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

- **GHS label elements** Not Regulated
- **Hazard pictograms** Not Regulated
- **Signal word** Not Regulated
- **Hazard statements** Not Regulated
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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:**

SPEX CertiPrep, LLC.

1-732-549-7144

- **Date of preparation / last revision** 07/31/2017 / -

- **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)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

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