

# SAFETY DATA SHEET

Version: 2.0  
Date of Issue: 04 May 2017  
Date of First Issue: 16 July 2012

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ACCORDING TO OSHA HCS (29 CFR 1910.1200)

## SECTION 1: IDENTIFICATION

|  |   |
|--|---|
| <b>Product identifier used on the label</b>                    | M-Prep Conditioner A  |
| <b>Other means of identification</b>                           | Not applicable.   |
| <b>Recommended use of the chemical and restrictions on use</b> |   |
| Recommended use  | PC14 Metal surface treatment products, including galvanic and electroplating products |
| Restrictions on use  | Anything other than the above.  |
| <b>Details of the supplier of the safety data sheet</b>        |   |
| Supplier   | VISHAY MEASUREMENTS GROUP, INC.   |
| Address of Supplier  | Post Office Box 27777<br>Raleigh, NC 27611<br>USA                                     |
| Telephone  | +1 919-365-3800   |
| Fax  | +1 919-365-3945   |
| E-Mail (competent person)                                      | <a href="mailto:mm.us@vishaypg.com">mm.us@vishaypg.com</a>                            |
| <b>Emergency telephone number</b>                              | 1-800-424-9300 CHEMTREC (24 hours)  |

## SECTION 2: HAZARD(S) IDENTIFICATION

|  |   |
|--|---|
| <b>Classification of the substance or mixture in accordance with paragraph (d) of 29 CFR 1910.1200</b> |   |
| Physical hazards   | Corrosive to metals, Category 1.  |
| Health hazards   | Not classified.   |
| Environmental hazards  | Not classified.   |
| <b>Hazard Symbol</b>   |    |
| <b>Signal Word(s)</b>  | Warning   |
| <b>Hazard Statement(s)</b>   | May be corrosive to metals.   |
| <b>Precautionary Statement(s)</b>  | Keep only in original container.<br>Keep container tightly closed.<br>Wash hands and exposed skin thoroughly after handling.<br>Wear protective gloves/protective clothing/eye protection/face protection.<br>Absorb spillage to prevent material damage. |
| <b>Other hazards</b>   | None known.   |
| <b>Percent of the mixture consists of ingredient(s) of unknown acute toxicity:</b>                     | 0%  |

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances Not applicable

Mixtures

| Chemical identity of the substance | %W/W | CAS No.   | EC No.    | Hazard classification   |
|------------------------------------|------|-----------|-----------|---|
| Phosphoric Acid                    | <6   | 7664-38-2 | 231-633-2 | Corrosive to metals, Category 1<br>Skin Corrosion, Category 1B (SCL: $\geq 25\%$ )<br>Eye Irritation, Category 2 (SCL: $10\% \leq C < 25\%$ )<br>Skin Irritation, Category 2 (SCL: $10\% \leq C < 25\%$ ) |

## SECTION 4: FIRST AID MEASURES



### Description of first aid measures

Self-protection of the first aider

Inhalation

Skin Contact

Eye Contact

Ingestion

### Most important symptoms and effects, both acute and delayed

### Indication of any immediate medical attention and special treatment needed

Notes to a physician:

Use personal protective equipment as required. Wear appropriate personal protective equipment, avoid direct contact. Ensure adequate ventilation. Avoid breathing vapours. Avoid contact with skin and eyes. Contaminated clothing should be laundered before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF ON SKIN: Wash skin with soap and water. If skin irritation occurs: Get medical advice/attention.

IF IN EYES: Flush eyes with water for at least 15 minutes while holding eyelids open. If eye irritation persists, get medical advice/attention.

IF SWALLOWED: Wash out mouth with water and give 200-300 ml (half a pint) of water to drink. Do not induce vomiting. If symptoms develop, obtain medical attention.

May cause irritation to eyes, skin and air passages.

Unlikely to be required but if necessary treat symptomatically.

None known.

## SECTION 5: FIRE-FIGHTING MEASURES

### Extinguishing media

Suitable Extinguishing Media

Unsuitable extinguishing Media

### Special hazards arising from the substance or mixture

### Special protective equipment and precautions for fire fighters

Extinguish with carbon dioxide, dry chemical, foam or waterspray.

Do not use water jet.

Not flammable. Reacts with metals liberating hydrogen. Reaction products may include hydrogen cyanide. May decompose in a fire giving off toxic fumes. Carbon monoxide, Carbon dioxide. May react with some metals including aluminum, magnesium, and zinc, resulting in evolution of phosphorus oxides.

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Avoid run off to waterways and sewers.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Stop leak if safe to do so. Use personal protective equipment as required. See Section: 8. Avoid breathing vapours. Avoid contact with skin and eyes.

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## Methods and material for containment and cleaning up

Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal. Cautiously neutralize remainder. Then wash away with plenty of water. Ventilate the area and wash spill site after material pick-up is complete. Dispose of this material and its container as hazardous waste

## SECTION 7: HANDLING AND STORAGE

### Precautions for safe handling

Ensure operatives are trained to minimise exposures. Ensure adequate ventilation. Avoid breathing vapours. In case of inadequate ventilation wear respiratory protection. Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product.

### Conditions for safe storage, including any incompatibilities

Storage temperature  
Incompatible materials

Keep only in original container. Store in corrosive resistant container with a resistant inner liner. Keep container tightly closed and in a well-ventilated place. <27°C  
May react with some metals including aluminum, magnesium, and zinc, resulting in evolution of phosphorus oxides.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Occupational Exposure Limits

| SUBSTANCE       | CAS No.   | LTEL (8 hr TWA ppm) | LTEL (8 hr TWA mg/m <sup>3</sup> ) | STEL (ppm) | STEL (mg/m <sup>3</sup> ) | Note  |
|-----------------|-----------|---------------------|------------------------------------|------------|---------------------------|-------|
| Phosphoric Acid | 7664-38-2 | -                   | 1                                  | -          | 3 <sup>^</sup>            | NIOSH |
|                 |           | -                   | 1                                  | -          | -                         | OSHA  |
|                 |           | -                   | 1                                  | -          | 3                         | ACGIH |

Note: OSHA PELs 1910.1000 TABLE Z-1 / NIOSH RELs / ACGIH TLVs

<sup>^</sup>NIOSH average value of 15 minutes.

### Biological Exposure Indices

Not established

### Appropriate engineering controls

Ensure operatives are trained to minimise exposures. Ensure adequate ventilation. Atmospheric levels should be controlled in compliance with the occupational exposure limit.

### Individual protection measures, such as personal protective equipment (PPE)

General hygiene measures for the handling of chemicals are applicable. Keep good industrial hygiene. Avoid contact with skin and eyes. Avoid breathing vapours. Wash hands before breaks and after work. Keep work clothes separately. Do not eat, drink or smoke at the work place.  
IF exposed: Flush with fresh water if contact with skin or eyes.

#### Eye/face protection



Wear protective eye glasses for protection against liquid splashes. Wear eye protection with side protection.

#### Skin protection



#### Hand protection:

Wear impervious gloves. Protective index 6, corresponding > 480 minutes of permeation time according to EN 374 Gloves should be changed regularly to avoid permeation problems. Breakthrough time of the glove material: refer to the information provided by the gloves' producer. Neoprene or rubber gloves are recommended.

#### Body protection:

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Wear suitable coveralls to prevent exposure to the skin.

Respiratory protection



In case of inadequate ventilation wear respiratory protection. A suitable mask with filter type A may be appropriate.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

|  |   |
|--|---|
| Appearance                                   | Clear                                   |
| Odor   | Odourless.                              |
| Odor Threshold                               | Not available.                          |
| pH   | Not available.                          |
| Melting Point/Freezing Point                 | Not available.                          |
| Initial boiling point and boiling range      | ~100°C                                  |
| Flash Point                                  | Not applicable.                         |
| Evaporation rate (Butyl acetate = 1)         | Not applicable.                         |
| Flammability (solid, gas)                    | Non-flammable.                          |
| Upper/lower flammability or explosive limits | Not applicable.                         |
| Vapour pressure                              | Not available.                          |
| Vapour density                               | Not available.                          |
| Relative density                             | ~1-1.1 (H <sub>2</sub> O = 1) (Mixture) |
| Solubility(ies)                              | Soluble in water.                       |
| Partition coefficient: n-octanol/water       | Not available.                          |
| Auto-ignition temperature                    | Not applicable.                         |
| Decomposition Temperature                    | Not available.                          |
| Viscosity                                    | Not available.                          |

### Other information

None.

## SECTION 10: STABILITY AND REACTIVITY

|   |  |
|---|--|
| <b>Reactivity</b>                         | Stable under normal conditions.  |
| <b>Chemical stability</b>                 | Stable under normal conditions.  |
| <b>Possibility of hazardous reactions</b> | May react with some metals including aluminum, magnesium, and zinc, resulting in evolution of phosphorus oxides. |
| <b>Conditions to avoid</b>                | None known.  |
| <b>Incompatible materials</b>             | Alkaline materials and materials containing chlorine.  |
| <b>Hazardous decomposition product(s)</b> | Oxides of phosphorus. Combustion or thermal decomposition will evolve toxic and irritant vapours.                |

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on toxicological effects

|                                      |   |
|--------------------------------------|---|
| <b>Acute toxicity - Ingestion</b>    | Based upon the available data, the classification criteria are not met.<br>Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 2000 mg/kg bw/day. |
| <b>Acute toxicity - Inhalation</b>   | Based upon the available data, the classification criteria are not met.<br>Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 20.0 mg/l.         |
| <b>Acute toxicity - Skin Contact</b> | Based upon the available data, the classification criteria are not met.<br>Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 2000 mg/kg bw/day. |
| <b>Skin corrosion/irritation</b>     | Based upon the available data, the classification criteria are not met.   |
| <b>Serious eye damage/irritation</b> | Based upon the available data, the classification criteria are not met.   |
| Phosphoric Acid:                     | Test Result: Corrosive (1500.41 in the Federal Register Vol. 38, No. 187, S. 26019 from 1973-09-27)   |

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|   |   |
|---|---|
| <b>Respiratory or skin sensitization</b>        | Based upon the available data, the classification criteria are not met. |
| <b>Germ cell mutagenicity</b>                   | Based upon the available data, the classification criteria are not met. |
| <b>Carcinogenicity</b>                          | Based upon the available data, the classification criteria are not met. |
| <b>Reproductive toxicity</b>                    | Based upon the available data, the classification criteria are not met. |
| <b>STOT - single exposure</b>                   | Based upon the available data, the classification criteria are not met. |
| <b>STOT - repeated exposure</b>                 | Based upon the available data, the classification criteria are not met. |
| <b>Aspiration hazard</b>                        | Based upon the available data, the classification criteria are not met. |
| <b>Information on likely routes of exposure</b> |   |
| Inhalation                                      | Possible – accidental.  |
| Ingestion                                       | Unlikely – accidental.  |
| Skin Contact                                    | Possible – accidental.  |
| Eye Contact                                     | Possible – accidental.  |
| <b>Early onset symptoms related to exposure</b> | May cause irritation to eyes, skin and air passages.                    |
| <b>Delayed health effects from exposure</b>     | None known.   |
| <b>Other information</b>                        |   |
| NTP Report on Carcinogens                       | Not listed.   |
| IARC Monographs                                 | Not listed.   |
| OSHA Designated Carcinogen                      | Not listed.   |

## SECTION 12: ECOLOGICAL INFORMATION

|                                      |  |
|--------------------------------------|--|
| <b>Ecotoxicity</b>                   | Based upon the available data, the classification criteria are not met.<br>Estimated Mixture LC50 >100 mg/l (Fish) |
| <b>Persistence and degradability</b> | Readily biodegradable.   |
| <b>Bioaccumulative potential</b>     | The product has low potential for bioaccumulation.   |
| <b>Mobility in soil</b>              | The product has high mobility in soil. Phosphoric Acid: Very soluble   |
| <b>Other adverse effects</b>         | None known.  |

## SECTION 13: DISPOSAL CONSIDERATIONS

|                                |   |
|--------------------------------|---|
| <b>Waste treatment methods</b> | Dispose of this material and its container as hazardous waste. Send after pre-treatment to a appropriate hazardous waste incinerator facility according to legislation. |
| <b>Additional Information</b>  | Dispose of contents in accordance with local, state or national legislation.  |

## SECTION 14: TRANSPORT INFORMATION

|   | <b>ADR/RID</b>                               | <b>IMDG</b>                                  | <b>IATA</b>                                  |
|---|--|--|--|
| <b>UN number</b>  | UN 1760                                      | UN 1760                                      | UN 1760                                      |
| <b>UN proper shipping name</b>  | CORROSIVE LIQUID,<br>N.O.S (Phosphoric Acid) | CORROSIVE LIQUID,<br>N.O.S (Phosphoric Acid) | CORROSIVE LIQUID,<br>N.O.S (Phosphoric Acid) |
| <b>Transport hazard class(es)</b>   | 8  | 8  | 8  |
| <b>Packing group</b>  | III  |  |  |
| <b>Environmental hazards</b>  | Not classified                               | Not classified as a Marine<br>Pollutant.     | Not classified                               |
| <b>Transport in bulk according to Annex II of MARPOL<br/>73/78 and the IBC Code</b> | Not applicable.                              |  |  |
| <b>Special precautions for user</b>   | See Section: 2                               |  |  |

## SECTION 15: REGULATORY INFORMATION

|   |   |
|---|---|
| <b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b> |   |
| <b>US Federal Regulations</b>   |   |
| TSCA (Toxic Substance Control Act)  | Phosphoric Acid – Subject to 25,000 lb reporting threshold. |

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|   |   |
|---|---|
| EPCRA/SARA Section 302 Extremely Hazardous Substances         | Not listed.   |
| EPCRA Section 313 Toxics Release Inventory (TRI) Program      | Not listed.   |
| NIOSH Occupational Carcinogen List                            | Not listed.   |
| OSHA List of highly hazardous chemicals, toxics and reactives | Not listed.   |
| NTP Report on Carcinogens (RoC) List                          | Not listed.   |
| Poison Prevention Packaging Act                               | Not listed.   |
| <b>US State Regulations</b>                                   |   |
| California State, Proposition 65 List                         | Not listed.   |
| California State, Safer Consumer Products Regulations         | Phosphoric Acid – Candidate Chemicals List.                               |
| Maine State, Toxic Chemicals in Children's Products Act       | Not listed.   |
| New Jersey State Worker and Community RTK Act                 | Phosphoric Acid – RTKHSL and SHHSL.                                       |
| Pennsylvania State, Worker and Community RTK Act              | Phosphoric Acid – Hazardous Substance List and Environmental Hazard List. |
| Rhode Island State, Hazardous Substances RTK Act              | Phosphoric Acid – Hazardous Substance List.                               |
| <b>Non-Regional</b>   |   |
| IARC Monographs, List of Classifications                      | Not listed.   |

## SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: New SDS Regulation compliant with HazCom 2012 format, all sections have been updated to include new information. Please review SDS with care.

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### References:

Existing Safety Data Sheet (SDS). EU Data: Harmonised Classification and Existing ECHA registration(s) for Phosphoric Acid (CAS No. 7664-38-2).

| GHS Classification of the substance or mixture | Classification Procedure |
|--|--------------------------|
| Corrosive to metals, Category 1                | Expert Judgement         |

### LEGEND

ACGIH: American Conference of Governmental Industrial Hygienists  
BEI: Biological Exposure Indices (ACGIH)  
IARC: International Agency for Research on Cancer  
Irr: Irritation  
NIOSH: National Institute of Occupational Safety and Health  
NTP: National Toxicology Program  
OSHA: The Occupational Safety & Health Administration  
PBT: Persistent, Bioaccumulative and Toxic  
PEL: Permissible exposure limit

REL: Recommended exposure limit  
SCL: Specific Concentration Limit  
Skin<sup>2</sup>: Risk of overexposure via dermal contact  
STEL: Short Term Exposure Limit  
TLV: Threshold Limit value  
TSCA: Toxic Substance Control Act  
TWA: Time Weighted Average  
URT: Upper respiratory tract  
vPvB: very Persistent and very Bioaccumulative

Training advice: Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

### Disclaimers

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