SECTION 1 - PRODUCT IDENTIFICATION

Trade name : CLEAN AND PREP SOLUTION 4 X 1 US GAL
Product code : 9306000001K
COMPANY : Republic Powdered Metals
2628 Pearl Road
Medina, OH  44256
Telephone : (800) 551-7081
Emergency Phone: : 1-800-551-7081
After Hours: Chemtrec 1-800-424-9300
Product use : Cleaning  Etching

SECTION 2 - HAZARDS IDENTIFICATION

Emergency Overview
Light Yellow. Liquid. May cause mucous membrane irritation.  Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention.

Acute Potential Health Effects/ Routes of Entry
Inhalation : May cause mucous membrane irritation.
Eyes : May cause irreversible damage and burns to the eyes.
Ingestion : May cause burns to lips, tongue, oral mucosa, esophagus and stomach.
Skin : May cause severe burns, blistering and skin damage.

Aggravated Medical Conditions
Pre-existing eye, skin and respiratory disorders may be aggravated by exposure.

Chronic Health Effects
Prolonged skin contact may cause irritation, burns or dermatitis.

SECTION 3 - PRODUCT COMPOSITION

<table>
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<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Weight %</th>
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<tr>
<td>Non-Hazardous Ingredients</td>
<td>NJTSRN# 51721300-5908P</td>
<td>&gt; 60.0</td>
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<tr>
<td>Phosphoric acid</td>
<td>7664-38-2</td>
<td>30.0 - 60.0</td>
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SECTION 4 - FIRST AID MEASURES

Get immediate medical attention for any significant overexposure.

Inhalation : Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention.
Material Safety Data Sheet

CLEAN AND PREP SOLUTION 4 X 1 US GAL

Eye contact: Flush with water for 15 minutes. If irritation persists, get medical attention.
Skin contact: Wash area of contact thoroughly with hand cleaner followed by soap and water. If irritation, rash or other disorders develop, get medical attention immediately.
Ingestion: Get medical attention. Do not induce vomiting.

Notes to physician: Not applicable.

SECTION 5 - FIRE FIGHTING MEASURES

Flash point: Not available.
Method: Not available.
Lower explosion limit: Not available.
Upper explosion limit: Not available.
Autoignition temperature: Not available.
Extinguishing media: This product is not expected to burn under normal conditions of use.
Protective equipment for firefighters: Use accepted fire fighting techniques. Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA).
Fire and explosion conditions: This product not expected to ignite under normal conditions of use.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Transfer to appropriate container for disposal. Stop flow. Contain spill. Keep out of water courses. Absorb spill in sand, earth or other suitable material. Transfer to appropriate container for disposal. Use appropriate protective equipment. Avoid contact with material.

SECTION 7 - HANDLING AND STORAGE

Handle in compliance with common hygienic practices. Clean hands thoroughly after handling. Keep from freezing. Do not use in confined or poorly ventilated areas. Prevent inhalation of vapor, ingestion, and contact with skin eyes and clothing. Keep container closed when not in use. Precautions also apply to emptied containers. Store in sealed containers in a dry, ventilated warehouse location above freezing.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal protection equipment
Respiratory protection: Not required under normal conditions of use. Wear appropriate, NIOSH/MSHA approved respirator with combination particulate filter and vapor/gas removing cartridge when the ventilation is not adequate or if it is necessary to abrade or grind surfaces coated with this product.
Hand protection: Use suitable impervious rubber or vinyl gloves and protective apparel to
reduce exposure.

Eye protection : Wear appropriate eye protection. Wear chemical safety goggles and/or face shield to prevent eye contact. Do not wear contact lenses. Do not touch eyes with contaminated body parts or materials. Have eye washing facilities readily available.

Skin and body protection : Prevent contact with shoes and clothing. Use rubber apron and overshoes.

Protective measures : Other equipment not normally required. Use professional judgment in the selection, care, and use.

Engineering measures : Not required under normal conditions of use. Use local exhaust when the general ventilation is inadequate.

**Exposure Limits**

No known components with exposure limits.

### SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

- **Form**: Liquid
- **Color**: Light Yellow
- **Odor**: Light
- **pH**: 1.5
- **Vapour pressure**: 1 mmHg
- **Vapor density**: Not available.
- **Melting point/range**: Not available.
- **Freezing point**: Not available.
- **Boiling point/range**: 462 °F, 239 °C
- **Water solubility**: Not available.
- **Specific Gravity**: 1.24
- **% Volatile Weight**: 62 %

### SECTION 10 - REACTIVITY / STABILITY

- **Substances to avoid**: Strong acids. Strong bases.
- **Stability**: Stable
- **Hazardous polymerization**: Will not occur.

### SECTION 11 - TOXICOLOGICAL INFORMATION

Phosphoric acid, CAS-No.: 7664-38-2
SECTION 12 - ECOLOGICAL INFORMATION

No Data Available

SECTION 13 - DISPOSAL CONSIDERATIONS

RCRA Class : D002: Reportable Quantity = 100 lbs. (Characteristic of corrosivity)
This classification applies only to the material as it was originally produced.

Disposal Method : Subject to hazardous waste treatment, storage, and disposal requirements under
RCRA. Recycle or incinerate waste at EPA approved facility or dispose of in
compliance with federal, state and local regulations.

SECTION 14 - TRANSPORTATION / SHIPPING DATA

TDG / DOT Shipping Description:
CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Contains Phosphoric acid), 8, UN3264, PG III, LIMITED
QUANTITY

SECTION 15 - REGULATORY INFORMATION

North American Inventories:
All components are listed or exempt from the TSCA inventory.
This product or its components are listed on, or exempt from the Canadian Domestic Substances List.

U.S. Federal Regulations:
SARA 313 Components : None present or none present in regulated quantities.
SARA 311/312 Hazards : Acute Health Hazard
OSHA Hazardous Components :
OSHA Status: Considered hazardous based on the following criteria:
OSHA Flammability : Not Regulated
Regulatory VOC (less water and exempt solvent) : 0 g/l
VOC Method 310 : 62 %
U.S. State Regulations:

Penn RTK Components :  Non-Hazardous Ingredients  
Phosphoric acid  
NJTSRN# 51721300-5908P  
7664-38-2

NJ RTK Components :  Non-Hazardous Ingredients  
Phosphoric acid  
NJTSRN# 51721300-5908P  
7664-38-2

WARNING! Contains chemicals known to the State of California to cause cancer, birth defects and/or other reproductive harm:
None known.

SECTION 16 - OTHER INFORMATION

HMIS Rating :

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<th>0 = Minimum</th>
<th>1 = Slight</th>
<th>2 = Moderate</th>
<th>3 = Serious</th>
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<td>PPE</td>
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Further information:

For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

Prepared by: Rich Mikol

Legend

ACGIH - American Conference of Governmental Hygienists  
NTP - National Toxicology Program  
DOT - Department of Transportation  
DSL - Domestic Substance List  
EPA - Environmental Protection Agency  
HMIS - Hazardous Materials Information System  
IARC - International Agency for Research on Cancer  
MSHA - Mine Safety Health Administration  
NDSL - Non-Domestic Substance List  
NIOSH - National Institute for Occupational Safety and Health  
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act  
OSHA - Occupational Safety and Health Administration  

PEL - Permissible Exposure Limit  
RCRA - Resource Conservation and Recovery Act  
RTK - Right To Know  
SARA - Superfund Amendments and Reauthorization Act  
STEL - Short Term Exposure Limit  
TLV - Threshold Limit Value  
TSCA - Toxic Substances Control Act  
TWA - Time Weighted Average  
V - Volume  
VOC - Volatile Organic Compound  
WHMIS - Workplace Hazardous Materials Information System