SECTION 1 - PRODUCT IDENTIFICATION

Trade name : REPUBLIC FLUORO-PRIME 4 GALS / PAIL  
Product code : 1130K05P  
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 : Coating

SECTION 2 - HAZARDS IDENTIFICATION

Emergency Overview
White. Liquid. No serious effects anticipated under normal conditions of use. Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention.

Acute Potential Health Effects/ Routes of Entry
- Inhalation : No serious effects anticipated under normal conditions of use.
- Eyes : Direct contact may cause mild irritation.
- Ingestion : May cause gastrointestinal irritation, nausea, and vomiting.
- Skin : May cause mild irritation.

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

Chronic Health Effects
Repeated and prolonged contact with n-methylpyrrolidone (NMP) has caused redness, cracking and blistering of the skin. Animal studies show that NMP can cause adverse embryo and testicular effects at very high dose levels. Fillers are encapsulated and not expected to be released from product under normal conditions of use.

SECTION 3 - PRODUCT COMPOSITION

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>&gt; 60.0</td>
</tr>
<tr>
<td>Synthetic magnesium lithium silicate</td>
<td>53320-86-8</td>
<td>3.0 - 7.0</td>
</tr>
<tr>
<td>1-Methyl-2-pyrrolidinone</td>
<td>872-50-4</td>
<td>1.0 - 5.0</td>
</tr>
<tr>
<td>Styrene Acrylic Copolymer</td>
<td>NJTSRN# 51721300-5758P</td>
<td>1.0 - 5.0</td>
</tr>
</tbody>
</table>
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.

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 applicable.
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.
Hazardous combustion products: Carbon monoxide and carbon dioxide can form. Smoke, fumes.
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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Regulation</th>
<th>Limit</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide</td>
<td>1344-28-1</td>
<td>ACGIH TWA:</td>
<td>10 mg/m3</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA PEL:</td>
<td>5 mg/m3</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA PEL:</td>
<td>15 mg/m3</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA TWA:</td>
<td>15 mg/m3</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA TWA:</td>
<td>5 mg/m3</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH TWA:</td>
<td>1 mg/m3</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td>Ammonium hydroxide</td>
<td>1336-21-6</td>
<td>ACGIH TWA:</td>
<td>25 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH STEL:</td>
<td>35 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA PEL:</td>
<td>35 mg/m3</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>pH</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Heavier than air</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
Freezing point : Not available.
Boiling point/range : Not available.
Water solubility : Soluble
Specific Gravity : 1.002
% Volatile Weight : 94 %

SECTION 10 - REACTIVITY / STABILITY

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

SECTION 11 - TOXICOLOGICAL INFORMATION

1-Methyl-2-pyrrolidinone, CAS-No.: 872-50-4
Acute oral toxicity (LD-50 oral) : 5,130 mg/kg (Mouse) 4,320 mg/kg (Rat) 3,914 mg/kg (Rat) 7,725 mg/kg (Mouse)
Acute dermal toxicity (LD-50 dermal) : 8,000 mg/kg (Rabbit)

SECTION 12 - ECOLOGICAL INFORMATION

No Data Available

SECTION 13 - DISPOSAL CONSIDERATIONS


SECTION 14 - TRANSPORTATION / SHIPPING DATA

CFR / DOT:
Not Regulated

TDG:
Not Regulated

IMDG:
SECTION 15 - REGULATORY INFORMATION

North American Inventories:
One or more components are not listed on 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 : 1-Methyl-2-pyrrolidinone 872-50-4
SARA 311/312 Hazards : Acute Health Hazard

OSHA Hazardous Components :
1-Methyl-2-pyrrolidinone 872-50-4
Sodium nitrite 7632-00-0
Aluminum oxide 1344-28-1
Ammonium hydroxide 1336-21-6

OSHA Status: Considered hazardous based on the following criteria:
OSHA Flammability : Not Regulated
Regulatory VOC (less water and exempt solvent) : 45 g/l 362 g/l
VOC Method 310 : 2 %

U.S. State Regulations:
MASS RTK Components : 1-Methyl-2-pyrrolidinone 872-50-4
Penn RTK Components : Water 7732-18-5
Synthetic magnesium lithium silicate 53320-86-8
1-Methyl-2-pyrrolidinone 872-50-4

NJ RTK Components : Water 7732-18-5
Synthetic magnesium lithium silicate 53320-86-8
1-Methyl-2-pyrrolidinone 872-50-4
Styrene Acrylic Copolymer NJTSRN# 51721300-5758P

Components under California Proposition 65:
WARNING! Contains chemicals known to the State of California to cause cancer, birth defects and/or other reproductive harm.
SECTION 16 - OTHER INFORMATION

**HMIS Rating:**

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>1</td>
<td>Maximum</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
<td>Minimum</td>
</tr>
<tr>
<td>Reactivity</td>
<td>0</td>
<td>Slight</td>
</tr>
<tr>
<td>PPE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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