# MATERIAL SAFETY DATA SHEET

**Republic Powdered Metals, Inc.**
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## I. PRODUCT IDENTIFICATION

**MSDS #301**  
**TRADE NAME:** ALUMANATION 301  
**SYNONYMS:** Aluminum roof coating  
**DOT HAZARD CLASSIFICATION:** Not subject to DOT regulations.

## II. HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT/CAS#</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>NUISANCE DUST</th>
<th>LD50</th>
<th>LC50</th>
<th>SARA 302</th>
<th>SARA 313</th>
<th>WEIGHT LESS THAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt 8052-42-4</td>
<td>5 mg/m³</td>
<td>No</td>
<td></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>35%</td>
</tr>
<tr>
<td>Mineral Spirits 8052-41-3</td>
<td>100 ppm</td>
<td>100 ppm</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>35%</td>
</tr>
<tr>
<td>Silicates 12001-26-2</td>
<td>15 mg/m³</td>
<td>10 mg/m³</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>5%</td>
</tr>
<tr>
<td>Aluminum 7429-30-5</td>
<td>15 mg/m³</td>
<td>10 mg/m³</td>
<td>Yes</td>
<td>5000 mg/kg</td>
<td>3160 mg/kg</td>
<td>No</td>
<td>No</td>
<td>20%</td>
</tr>
</tbody>
</table>

* Only a dust hazard when removing dry coating.

## III. PHYSICAL DATA

- **INITIAL BOILING POINT:** 311°F  
- **SPECIFIC GRAVITY (H₂O=1):** 1.02  
- **VAPOR DENSITY:** Heavier than air.  
- **SOLUBILITY IN WATER:** Non-soluble  
- **FREEZING POINT:** N/A  
- **pH:** N/A  
- **APPEARANCE AND ODOR:** Viscous liquid, mild petroleum odor.  
- **EVAPORATION RATE:** Slower than n-Butyl Acetate  
- **VOC:** 409 g/l

## IV. FIRE AND EXPLOSION DATA

- **FLASH POINT:** 105°F (Tag Closed Cup)  
- **FLAMMABLE LIMITS IN AIR BY VOLUME:** LOWER: 0.9%  
  UPPER: 7.0%  
- **EXTINGUISHING MEDIA:** Foam, alcohol foam, CO₂, dry chemical  
- **HAZARDOUS DECOMPOSITION OR PRODUCTS:** Fire conditions may yield carbon monoxide or carbon dioxide.  
- **SPECIAL FIRE FIGHTING PROCEDURES:** Use self-contained breathing apparatus (NIOSH-approved)  
- **UNUSUAL FIRE & EXPLOSIVE HAZARDS:** Vapor heavier than air - may accumulate in lower areas and explode. Residue in empty container may explode if ignited.  
- **SENSITIVITY TO STATIC DISCHARGE:** Possible  
- **SENSITIVITY TO IMPACT:** N/A
V. REACTIVITY DATA

STABILITY: Stable.
INCOMPATIBILITY: Strong oxidizing agents.
HAZARDOUS POLYMERIZATION: Will not occur.
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Fire conditions may yield carbon monoxide or carbon dioxide.

CONDITIONS TO AVOID: Keep from heat, sparks and open flame

VI. HEALTH HAZARD INFORMATION

EFFECTS OF OVEREXPOSURE - AVENUE OF ENTRY:
EYES: Contact with liquid or vapor may irritate eyes.
SKIN: Possible irritation and dermatitis. Prolonged contact with skin may be hazardous.
INHALATION: Possible nasal irritation, dizziness, nausea and asphyxiation.
SWALLOWING: Toxic effects possible, can cause gastrointestinal problems.

FIRST AID:
IF IN EYES: Flush eyes with copious amounts of water - get medical attention.
IF ON SKIN: Wash skin thoroughly with soap and water. Launder contaminated clothes.
IF INHALED: Move subject to fresh air. Administer artificial respiration if breathing has stopped. Get medical attention.
IF SWALLOWED: Do not induce vomiting. Vomit in lungs can cause chemical pneumonitis. Give water. Call a physician.

VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove sources of heat, flames and sparks, confine spill. For large spill, notify authorities. Add absorbent to spill area. Avoid breathing fumes. Wear appropriate respirator. Ventilate area.

WASTE DISPOSAL METHOD: Dispose at approved site under RCRA regulations for hazardous waste.

PRECAUTIONS TO TAKE IN STORAGE AND HANDLING: Store in accordance with regulations for a flammable material.

OTHER PRECAUTIONS: Keep product away from heat, sparks, and open flame. Keep container closed when not in use. Use with adequate ventilation. Avoid prolonged or repeated inhalation of mist or vapor and skin contact. Dispose of in accordance with RCRA hazardous waste disposal rules. Do not use empty containers for other purposes. Residual vapors in drum may be explosive if ignited and are hazardous. Do not use cutting torch on the "EMPTY" containers.

CAUTION: KEEP OUT OF THE REACH OF CHILDREN.

VIII. SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION: Self-contained breathing apparatus for concentrations above TLV limits.

VENTILATION: Yes, if conditions exist that permit high vapor concentration in air.

PROTECTIVE GLOVES: Oil resistant gloves.

EYE PROTECTION: Chemical splash-proof goggles recommended.

OTHER PROTECTIVE EQUIPMENT OR CLOTHING: Protective clothing and shoes recommended.

HYGIENIC PRACTICES: After using product, wash hands with soap and water.

IX. DISCLAIMER

The information accumulated herein is believed to be accurate but is not warranted to be, whether originating with Republic or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

DEFINITIONS

HMIS - Hazardous Materials Identification System
DOT - Department of Transportation
PEL - Permissible Exposure Limit
LC 50 - Lethal Concentration
RCRA - Resource Conservation & Recovery Act
T/S - Trade Secret

VOC - Volatile Organic Compound
CAS - Chemical Abstracts Service
TLV - Threshold Limit Value
LD 50 - Lethal Dose
CFR - Code of Federal Regulations
N/A - Not Available

ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety & Health Administration
NAPCA - National Paint & Coatings Association
SARA - Superfund Amendments & Reauthorization Act of 1986
NIOH - National Institute for Occupational Safety & Health
N/E - Not Established.

TRADE NAME: ALUMINATION 301
COMPANY: Republic Powdered Metals, Inc.
ADDRESS: P. O. Box 724, 2628 Pearl Road, Medina, OH 44258
REVISION DATE: October 1, 1993

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SUPERSEDES: January 1, 1993