

Safety Data Sheet

SECTION 1 - MATERIAL IDENTIFICATION

Trade Name and Synonyms: PliGlue

Product Number: 62100

 Al_2O_3 - 9.0 % SiO_2 - 0.0 %

Manufacturers Code I.D. : 62100

Chemical Name and Synonyms: $\text{Al}(\text{H}_2\text{PO}_4)_3$
Chemical/Mineral Family: Mono-Aluminum Phosphate

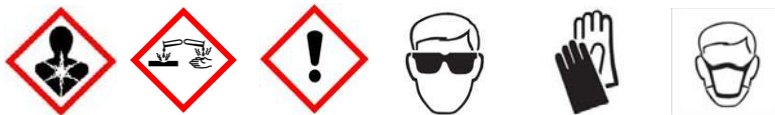
Recommended Use: Refractory/Construction/maintenance/repair material

Supplier: Plibrico Company, LLC - 1935 Techny Road - Unit 16, Northbrook, IL 60062
 Phone 312-337-9000, Fax 312-337-9003, www.plibrico.com

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Contact Person: Safety Manager, safety@plibrico.com
 EMERGENCY PHONE: 312-981-2869

SECTION 2- HAZARDOUS IDENTIFICATION


Signal Word: Danger

Hazard statement: H315: Causes skin irritation, H320: Causes eye irritation
 H335: May cause respiratory irritation H351: Suspected of causing cancer
 H373: May cause damage to lung through prolonged or repeated inhalation.

This product contains crystalline silica, a substance that has been listed by:

- 1. IARC: sufficient evidence for the carcinogenicity of crystalline silica to humans. (Group 1)
- 2. Canadian WHMIS : D2A - Materials Causing Other Toxic Effects
- 3. ACGIH: A2-Suspected Human Carcinogen.
- 4. NTP: a substance known to be a human carcinogen.
- Special Notes: *** Greater amounts of Quartz and Cristobalite may be formed after firing.
 Major portion of the crystalline silica present in the product as manufactured is not fine enough to normally be considered respirable.

Precautionary Statements:

P260+P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
 P280 - Wear eye protection/face protection
 P285 - Wear respiratory protection
 P305+P351+P338 - If in eyes: Rinse cautiously with water.
 P302+P352 - If on skin: Wash with plenty of soap and water.
 P501- Dispose of material in accordance with local regulation.

Primary Route of Entry: Inhalation, Ingestion, Skin Contact

Potential Health Effects:

Mono-aluminum phosphate is a corrosive acid which may cause burns on contact with any part of the body. Similarly, it may cause local damage if taken internally.

HMIS Rating	
Health	* 3
Flammability	0
Physical Hazard	0
Personal Protection	E

NFPA Rating <small>scale 0-4</small>	
Health	3
Flammability	0
Instability	0
Special	--

SECTION 3- HAZARDOUS INGREDIENTS

Ingredients (checked)	C.A.S. No.	Weight %	TLV ACGIH mg/m ³	OSHA PEL mg/m ³	EINECS
<input type="checkbox"/> Quartz***	14808-60-7	7.37	0.025(resp.dust)	0.05 mg/m ³ TWA	238-878-4
<input type="checkbox"/> Cristobalite***	14464-46-1		0.025(resp.dust)	0.05 mg/m ³ TWA	238-455-4
<input type="checkbox"/> Amorphous Silica***	69012-64-2		0.025(resp.dust)	15(total), 5(resp.)	273-761-1
<input type="checkbox"/> Fused Silica***	60676-86-0		0.025(resp. dust)	80 mg/m ³ /%SiO ₂	262-373-8
<input type="checkbox"/> Zirconium Silicate***	14940-68-2		10	15(total), 5(resp.)	239-019-6
<input checked="" type="checkbox"/> Aluminum Phosphate	7784-30-7	100	1	2 mg/m ³ TWA(as Al)	232-056-9
<input type="checkbox"/> Alumina	1344-28-1	-	1(resp.dust)	15(total), 5(resp.)	215-691-6
<input type="checkbox"/> Aluminosilicate(Mullite)	1302-93-8	-	2(resp.dust)	15(total), 5(resp.)	215-113-2
<input type="checkbox"/> Aluminosilicate(Kyanite)	1302-76-7	48. - 58.	2(resp.dust)	15(total), 5(resp.)	215-106-4
<input type="checkbox"/> Bauxite	1318-16-7	-	10	15(total), 5(resp.)	-----
<input type="checkbox"/> Silicon Carbide	409-21-2	-	10	15(total), 5(resp.)	206-991-8
<input type="checkbox"/> Pyrophyllite	12269-78-2	-	10	15(total), 5(resp.)	-----
<input type="checkbox"/> Spinel	1302-67-6	-	10	15(total), 5(resp.)	215-105-9
<input type="checkbox"/> Andalusite	12183-80-1	-	10	15(total), 5(resp.)	235-352-6
<input type="checkbox"/> Zirconiumdioxide	1314-23-4	-	10	15(total), 5(resp.)	215-227-2
<input type="checkbox"/> Calcium Aluminate Cement	65997-16-2	-	10	15(total), 5(resp.)	266-045-5
<input type="checkbox"/> Calcium Silicate Cement	65997-15-1	-	10	15(total), 5(resp.)	266-043-4
<input type="checkbox"/> Clay	1332-58-7	17. - 27.	2(resp.dust)	15(total), 5(resp.)	265-064-6
<input type="checkbox"/> Aluminum Sulfate	10043-01-3	-	2(resp.dust)	15(total), 5(resp.)	233-135-0
<input type="checkbox"/> Barium Sulfate	772-74-37	-	10	10(total), 5(resp.)	231-784-4
<input type="checkbox"/> Bentonite	1302-78-9	-	10	15(total), 5(resp.)	215-108-5
<input type="checkbox"/> Perlite	93763-70-3	-	10	15(total), 5(resp.)	310-127-6
<input type="checkbox"/> Sodium Silicate	1344-09-8	10. - 20.	10	15(total), 5(resp.)	215-687-4
<input type="checkbox"/> Titanium Oxide	13463-67-7	1.4	10	15(total), 5(resp.)	215-280-1
<input type="checkbox"/> Calcium Fluoride	7789-75-5	1 - 5	2.5 as F	2.5 as F	232-188-7
<input type="checkbox"/> Organic Fiber	9003-07-0	0.05 - 0.5	10(total), 3(resp.)	15(total), 5(resp.)	-----
<input type="checkbox"/> polyphosphoric acids, sodium salts	1310-73-2 68915-31-1	< 1 < 5	2 (Ceiling) 3 (resp. dust)	2 TWA 15(total), 5(resp.)	215-185-5 272-808-3

SECTION 4- FIRST AID MEASURES

Rinse affected areas with water. If symptoms persist, seek medical attention.

Eyes: Immediately flush eyes with plenty of water and get medical attention.

Skin: Wash with soap and water. Get medical attention if irritation develops or persists.

Ingestion: If swallowed, drink large amounts of water, seek medical attention.

Inhalation: Remove to fresh air. Get medical attention if irritation or discomfort persists. If not breathing, give artificial respiration. Get immediate attention.

SECTION 5- FIRE FIGHTING MEASURES

Unusual Fire and Explosive Hazards: Noncombustible. Though this material is nonflammable, it decomposes on heating, producing toxic fumes of phosphorus oxides (POx). It can react vigorously with metals to liberate hydrogen, a flammable gas.

Fire Fighting Equipment: Fire fighters should wear full protective gear and self-contained breathing apparatus-SCBA.

SECTION 6- ACCIDENTAL RELEASE MEASURES

Steps to be taken in case material is released or spilled: Follow applicable OSHA regulations (29CFR 1910.120)

Cover with dry lime, sodium carbonate or soda ash and carefully scoop up material and place in a closed container. Wash site after material pickup is complete.

Waste Disposal Method: Following cleanup, separate solids then precipitate with lime pH 11.0. Contact local sewage authority or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

SECTION 7 - HANDLING AND STORAGE

Precautions to be taken in handling and storage: Keep closed in well ventilated area and do not allow to freeze.

SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION

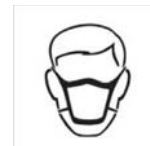
Ventilation: Local and Mechanical: follow OSHA STD 29 CFR 1910.94.

Respiratory Protection: Use in a well ventilated area with local exhaust to maintain airborne concentration below OSHA Pels. Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29.CFR1910.134) and, if necessary, wear MSHA/NIOSH approved respirator.

Protection Gloves: Acid Resistant Protective gloves recommended.

Eye Protection: Splash proof chemical safety goggles.

Other Protective Equipment: As required to meet applicable OSHA standards.



SECTION 9- PHYSICAL AND CHEMICAL PROPERTIES

Appearance, Color & Odor: Milky liquid , phosphoric acid odor. pH - 1, pH of 1 % solution , 2 - 2.5

Solubility in Water: Complete

Boiling Point (°): 1atm, > 2120F, 1000C

Vapor Pressure at 20°C: 0.029mm Hg

Specific Gravity: 1.58

% Volatile by Volume: 53% (water)

Crystallization Point: -10°F

SECTION 10- STABILITY AND REACTIVITY DATA

Stability: Stable

Incompatibility: Avoid oxidizing agents, acids, acid chlorides, acid anhydrides

Hazardous Polymerization: May not occur

Hazardous Decomposition: Decomposes on heating, producing toxic fumes of phosphorus oxides (POx)

SECTION 11 - TOXICOLOGICAL INFORMATION

Target Organs / Effects of overexposure: This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

Inhalation: Acute (Immediate): Exposure to fumes/nuisance dust may cause temporary irritation or discomfort to skin, eyes, nose, throat or lungs and may aggravate bronchial disorders. Chronic (Delayed) : Long term inhalation may cause lung injury and other respiratory disorders.

Skin: GHS Properties: Skin corrosion/Irritation: OSHA HCS 2012 , EU/CLP • Skin Corrosion 1B Acute: Causes severe skin burns. Chronic: Repeated or prolonged exposure to corrosive materials will cause dermatitis.

Eye: Acute: Corrosive. Can cause permanent damage to the cornea, blindness. Chronic: Repeated or prolonged exposure to corrosive materials or fumes may cause conjunctivitis.

Ingestion: Acute: Causes corrosion, burns to mouth and esophagus, abdominal pain, chest pain, nausea, vomiting, diarrhea, seizures. Aspiration of the swallowed or vomited product can cause severe pulmonary complications. Chronic: Repeated or prolonged exposure to corrosive materials or fumes may cause gastrointestinal disturbances.

GHS Classification for the GHS properties including Acute toxicity, Aspiration Hazard, Carcinogenicity, Germ Cell Muta-genicity, Skin sensitization, STOT-RE, STOT-SE, Toxicity for Reproduction, Respiratory sensitization, Serious eye dam-age/Irritation: OSHA HCS 2012 , EU/CLP: Data lacking or Classification criteria not met.

SECTION 12 - ECOLOGICAL INFORMATION

No ecological concerns have been identified.

12.1 Toxicity

12.2 Persistence and degradability

12.3 Bioaccumulative potential

12.4 Mobility in Soil

12.5 Results of PBT and vPvB assessment

12.6 Other adverse effects: Ecological Fate: No data found

12.7 Other Information: No specific biodegradation test data located.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Method: Following cleanup, separate solids then precipitate with lime pH 11.0.

Contact local sewage authority or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

SECTION 14 - TRANSPORT INFORMATION

Canadian Transportation of Dangerous Goods Regulation: Hazard Class & PIN: Corrosive Liquid, N.O.S., 8, UN1760
DOT Proper Shipping Name (29 CFR 172.101): Buffered Mono-Aluminum Phosphate Solution (phosphoric acid 44%)
DOT Hazard Class (29 CFR 172.101), ADR/RID/AND, IMDG, ICAO: 8 Corrosive
UN/NA Code (49 CFR 172.101), ADR/RID/AND, IMDG, ICAO: UN1805
DOT Labels Required (49 CFR 172.101), ADR/RID/AND, IMDG, ICAO : 8 Corrosive
DOT Placards Required (49 CFR 172.504), ADR/RID/AND, IMDG, ICAO : 8 Corrosive
Package group -ADR/RID/AND, IMDG, ICAO : Group III

SECTION 15 - REGULATORY INFORMATION

CANADIAN WHMIS: Classification: E ; Ingredient Disclosure List: 1% for Phosphoric acid
CANADIAN EPA: Components of this product are listed on the Domestic Substance List (DSL).
U.S. FEDERAL REGULATIONS: for Phosphoric acid 7664-38-2
U.S. OSHA Process Safety Management: Highly Hazardous Chemicals: Not Listed
U.S. OSHA Specifically Regulated Chemicals: Not Listed
U.S. CAA (Clean Air Act): 1990 Hazardous Air Pollutants: Not Listed
U.S. CAA (Clean Air Act): Class II Ozone Depletors: Not Listed
U.S. CERCLA/SARA - Hazardous Substances and their Reportable Quantities:
5000 lb final RQ; 2270 kg final RQ as listed in Appendix A to 49 CFR 172.101.
U.S. CERCLA/SARA: Radionuclides and Their Reportable Quantities: Not Listed
U.S. CERCLA/SARA: Section 302 Extremely Hazardous Substances EPCRA RQs: Not Listed
U.S. CERCLA/SARA: Section 302 Extremely Hazardous Substances TPQs: Not Listed
U.S. CERCLA/SARA: Section 313 - Emission Reporting: Not Listed
U.S. CERCLA/SARA: Section 313 - PBT Chemical Listing: Not Listed
TSCA: Components of this product are listed on the TSCA Inventory.

SECTION 16 - OTHER INFORMATION

Only Trained personel should use this material.

Abbreviations:

ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service
CERCLA: Comprehensive Environmental Response, Compensation and Liability Act
DOT: Department of Transportation
EPA: Environmental Protection Agency
IARC: International Agency for Research on Cancer
NFPA: National Fire Protection Association
NIOSH: National Institute for Occupational Safety and Health
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
SARA: Superfund Amendment and Reauthorization Act
WHMIS: Workplace Hazardous Materials Information System (Canada)

DISCLAIMER

The information presented herein is presented in good faith and believed to be accurate as of the effective date of this Safety Data Sheet. Occupational exposure limits are under constant review and may be changed at any time. Employers may use this SDS to supplement other information gathered by them in their efforts to assure the health and safety of their employees and the proper use of this product. This summary of the relevant data reflects professional judgment. Employers should note that information perceived to be less relevant has not been included in this SDS. Therefore, given the summary nature of this document, Plibrico Company, LLC, does not extend any warranty (expressed or implied), assume any responsibility or make any representation regarding the completeness of this information or its suitability for the purposes envisioned by the user. No warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use. In addition, Plibrico Company, LLC, shall not be liable for injury arising by either misuse of materials, or failure to follow safety procedures as outlined in the safety data sheet.