

SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

Manufacturer's name and address:



ARDEX Engineered Cements
400 Ardex Park Dr.
Aliquippa, PA 15001 USA

Supplier's name and address:

Refer to Manufacturer

Information Telephone No. : (888) 512-7339 or (724) 203-5000
Website Address : <http://www.ardexamericas.com>
24 Hr Emergency Telephone # : CHEM-TEL: 1-800-255-3924 OR 1-813-248-0585 (call collect)
Product Identifier : **ARDEX PC-50™**
Product ID No. : 12898001
Trade Name/Synonyms : PC-50
Material Use : Lithium Hardener Densifier for Standard Concrete
Uses Advised Against : No information available

SECTION 2 – HAZARDS IDENTIFICATION

GHS Classification per 29 CFR 1910.1200 (OSHA HCS 2012) and HPR (WHMIS 2015)

Skin corrosion/irritation; Category 2
Serious eye damage/eye irritation; Category 2A
Specific target organ Toxicity, Single Exposure, Category 3, Respiratory tract irritation

GHS Pictograms



Signal Word

Warning.

Hazard Statements

Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.

Precautionary Statements

Avoid breathing mist/vapours/spray. Use only outdoors or in a well-ventilated area. Wash hands and exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection. Take off contaminated clothing and wash before reuse. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents / container in accordance with federal, state, and local laws. Do not allow product to enter drains.

Hazards Not Otherwise Classified

None.

% with Unknown Acute Toxicity

5% of this product consists of ingredients with unknown acute toxicity.

Additional Notes

Product is alkaline.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	% (by weight)
Lithium silicate	12627-14-4	5 - 10

The exact percentages of the ingredients have been withheld by the manufacturer as trade secrets.

SECTION 4 – FIRST AID MEASURES

- General** : Call a Poison Center or doctor if you feel unwell.
- Inhalation** : If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing difficulty persists, seek medical attention/advice.
- Skin contact** : Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. If irritations or rashes develop, seek medical attention/advice.
- Eye contact** : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
- Ingestion** : Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.
- Notes for Physician** : Treat symptomatically.

Signs and symptoms of short-term (acute) exposure

- Inhalation* : Symptoms may include coughing and difficulty breathing.
- Skin* : Symptoms may include redness or itching.
- Eyes* : Symptoms may include redness, itching, or pain.
- Ingestion* : Symptoms such as gastric pain, nausea, vomiting, and diarrhea may occur.

Effects of long-term (chronic) exposure

- : None known.

Indication of need for immediate medical attention or special treatment

- : Difficulty breathing persists after removing the person to fresh air.
Any exposure to the eye which causes irritation.

SECTION 5 – FIRE FIGHTING MEASURES

- Suitable extinguishing media** : Use extinguishing media that are appropriate to the surrounding fire.
- Unsuitable extinguishing media** : None known.
- Hazardous combustion products** : Metal oxide fumes.
- Special fire-fighting procedures/equipment** : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. After fires have been extinguished, carefully clean all equipment and surfaces exposed to fumes.
- Environmental precautions** : Do not allow material to enter drains or contaminate ground water system.
- Fire hazards/conditions of flammability** : Not flammable under normal conditions of use. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.
- Flammability classification (OSHA 29 CFR 1910.1200, WHMIS 2015)** : Not flammable.
- NFPA Rating** : 0 - Minimal 1 – Slight 2 – Moderate 3 – Serious 4 – Severe
Health: 2 Flammability 0 Instability 0 Special Hazards: None

SECTION 6 – ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Restrict access to area until completion of clean-up. All persons dealing with clean-up should wear the appropriate chemically protective equipment. Product may make walkways slippery.
- Protective equipment** : Refer to Section 8 on this Safety Data Sheet, EXPOSURE CONTROLS / PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.
- Emergency Procedures** : If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8002). Outside of the U.S. call the emergency number listed in Section 1.
US CERCLA Reportable quantity (RQ): None reported.
- Methods and materials for containment and cleaning up** : Ventilate area of release. Stop spill or leak at source if safely possible. Contain product with inert absorbent material, preventing it from entering sewer lines or waterways. Gather up spilled material and place in suitable container for later disposal (see Section 13). Residual of product, while still wet, can be cleaned up with warm soapy water. Notify the appropriate authorities as required.
- Prohibited materials** : None known.
- Environmental precautions** : Do not allow product to enter drains or waterways. Do not allow material to contaminate ground water system.
- Reference to other sections** : See Section 13 for disposal information.

SECTION 7 – HANDLING AND STORAGE

- Safe handling procedures** : Wear suitable protective equipment during handling. (See Section 8.) Observe good hygiene standards. Use only with adequate ventilation. Do not eat, drink or smoke in the work area. Wash thoroughly after handling. Avoid contact with eyes, skin, or clothing. Avoid repeated or prolonged skin contact. Wear protective clothing to prevent skin contact. Promptly remove any clothing that becomes contaminated. Clean contaminated clothing before reuse. Keep container tightly closed.
- Storage requirements** : Store in a cool, dry, well-ventilated area. Store away from heat and open flame. Avoid storing in direct sunlight. Store in original container. Keep tightly closed when not in use. Do not reuse empty container without commercial cleaning or reconditioning.
- Incompatible materials** : See Section 10.
- Special packaging materials** : Always keep in containers made of the same materials as the supply container.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

- Permissible Exposure Limits** : No exposure limits have been established for the product itself. Below are exposure limits for the components in the product.

Ingredients	CAS #	ACGIH TLV		OSHA PEL	
		TWA	STEL	PEL	STEL
Lithium silicate	12627-14-4	N/Av	N/Av	N/Av	N/Av

- Engineering Controls** : Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits. Ventilation should effectively remove and prevent buildup of any vapor generated from the handling of this product.
- Personal Protection Equipment**
- Eye / face protection** : Chemical goggles or safety glasses, as appropriate for the job.
- Skin protection** : Wear gloves which are impervious to the material. Materials such as nitrile rubber or Viton (fluorocarbon rubber) are recommended. Consult with glove manufacturers regarding breakthrough time for this material.
- Body protection** : Where extensive exposure to product is possible, use resistant coveralls, apron and boots to prevent contact.

- Respiratory protection** : Under normal conditions of use with adequate ventilation, respiratory protection should not be necessary. If work process generates excessive quantities of vapor or dust, or exposures in excess of any PEL, wear an appropriate organic vapor respirator.
- Site safety equipment** : An eyewash station and safety shower should be made available in the immediate working area.
- General hygiene considerations** : Avoid contact with eyes, skin and clothing. Avoid breathing vapors/dust. Do not eat, drink or smoke when using this product. Upon completion of work, wash hands thoroughly. Remove soiled clothing and wash it thoroughly before reuse. Clean all equipment and clothing at end of each work shift.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

- | | | | |
|---|--------------------|---|-----------------|
| Physical state | : Liquid | Appearance | : Clear liquid |
| Odor | : Nearly odorless | Odor threshold | : N/Av |
| pH | : 11.0 | Specific gravity | : 1.036 |
| Boiling point | : 212°F (100°C) | Coefficient of water/oil distribution | : N/Av |
| Melting/Freezing point | : N/Av | Solubility in water | : > 99% |
| Vapor pressure (mm Hg @ 20°C / 68°F) | : N/Av | Evaporation rate (n-Butyl acetate = 1) | : < 1.0 |
| Vapor density (Air = 1) | : N/Av | Volatiles (% by weight) | : > 90 |
| Volatile organic compounds (VOCs) | : < 50 g/L SCAQMD | | |
| Particle size | : N/Av | Flammability classification | : Not flammable |
| Flash point | : >93.3°C (>200°F) | Lower flammable limit (% by vol) | : Not available |
| Flash point method | : Setflash closed | Upper flammable limit (% by vol) | : Not available |
| Auto-ignition temperature | : N/Av | Decomposition temperature | : Not available |
| Viscosity | : N/Av | Oxidizing properties | : Not available |
- Explosion data: Sensitivity to mechanical impact / static discharge**
: Not expected to be sensitive to mechanical impact or static discharge.

SECTION 10 – REACTIVITY AND STABILITY INFORMATION

- Reactivity** : Not reactive.
- Stability** : Stable under the recommended storage and handling conditions prescribed.
- Hazardous reactions** : Hazardous polymerization does not occur.
- Conditions to avoid** : Extreme heat.
- Materials to avoid and incompatibility**
: Strong oxidizing agents.
- Hazardous decomposition products**
: None known; refer to hazardous combustion products in Section 5.

SECTION 11 – TOXICOLOGICAL INFORMATION

- Routes of exposure** : *Inhalation*: YES *Skin Absorption*: NO *Skin and Eyes*: Yes *Ingestion*: YES
- Symptoms of exposure** : See Section 4.
- Calculated Acute Toxicity Estimates for the Product**
- | | |
|-------------------|-------------------|
| <i>Inhalation</i> | : N/Av |
| <i>Oral</i> | : > 50,000 mg/kg |
| <i>Dermal</i> | : > 100,000 mg/kg |
- Toxicological data** : See below for individual ingredient acute toxicity data.

Ingredients	CAS No.	LC50 (4 hr)	LD50	
		Inhalation, rat, mg/L	Oral, rat, mg/kg	Dermal, rat mg/kg
Lithium silicate	12627-14-4	N/Av	2,500	5,000

Skin corrosion or irritation : May cause irritation to skin.
Serious eye damage / eye irritation : May cause serious irritation to eyes.
Respiratory or skin sensitization : None known.
Germ cell mutagenicity : None known.
Carcinogenic status : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.
Reproductive toxicity : None known.
Specific Target Organ Toxicity, Single Exposure
: May cause respiratory irritation.
Specific Target Organ Toxicity, Repeated Exposure
: None known.
Aspiration hazard : None known.
Additional information : N/Av

SECTION 12 – ECOLOGICAL INFORMATION

Environmental effects : The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.
Ecotoxicity : No data available.
Biodegradability : No data available.
Bioaccumulative potential : No data available.
Mobility in soil : No data available.
PBT and vPvB assessment : No data available.
Other adverse effects : No data available.

SECTION 13 – DISPOSAL CONSIDERATION

Handling for disposal : Handle waste according to recommendations in Section 7.
Methods of disposal : You must test your waste using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes. Dispose in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.
Packaging : Handle contaminated packaging in the same manner as the product.
RCRA : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14 – TRANSPORTATION INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	None	This product is not regulated according to Canadian TDG regulations.	None	None	None
TDG Additional Information	None				
49 CFR/DOT	None	This product is not regulated according to US DOT regulations.	None	None	None
49 CFR/DOT Additional Information	None				

IATA : Not regulated for Air Transport

IMDG : Not regulated for Ocean Transport

SECTION 15 – REGULATORY INFORMATION

Canadian Information:

This product has been classified according to the hazard criteria of the Hazardous Products Regulations (HPR). This SDS contains all of the information required by the HPR.

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on either the Domestic Substances List (DSL) or the Non- Domestic Substances List (NDSL).

US Federal Information:

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): None reported.

SARA TITLE III: Sec. 302, Extremely Hazardous Substances, 40 CFR 355: No Extremely Hazardous Substances are present in this material.

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes:
Immediate (Acute) Health Hazard

Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This product is not subject to SARA notification requirements, since it does not contain any Toxic Chemical constituents above *de minimus* concentrations.

U.S. State Right To Know Laws

California Proposition 65: This product does not contain any chemical knowns to the State of California to cause cancer and/or reproductive toxicity.

Other State Right to Know Laws: No ingredients in this product appear on other states' Right to Know Laws..

SECTION 16 – OTHER INFORMATION

HMIS Rating : * - Chronic Hazard 0 - Minimal 1 – Slight 2 – Moderate 3 – Serious 4 – Severe
*Health: *2 Flammability 0 Physical Hazard 0 PPE: Gloves, safety glasses*

Legend : ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL: Domestic Substances List
EPA: Environmental Protection Agency
GHS: Globally Harmonized System
HPR: Hazardous Products Regulations
IARC: International Agency for Research on Cancer
Inh: Inhalation
N/Av: Not Available
N/Ap: Not Applicable
NIOSH: National Institute of Occupational Safety and Health
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible exposure limit
RCRA: Resource Conservation and Recovery Act
SARA: Superfund Amendments and Reauthorization Act
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations

TLV: Threshold Limit Values
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

Disclaimer of Liability

The Information presented herein is supplied as a guide to those who handle or use this product and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive. The manner and conditions of use and handling may involve other and additional considerations. Safe work practices must be employed when working with any materials. It is important that the end user makes a determination regarding the adequacy of the safety procedures employed during the use of this product.

No warranty of any kind is given or implied. ARDEX Engineered Cements will not be liable for any damages, losses, injuries or consequential damages which may result from the use or reliance on any information contained herein.

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Revision date: : 27-Aug-2016

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