



Sorbacal® SPS-AC – February 2, 2018
SAFETY DATA SHEET

SECTION 1	IDENTIFICATION
------------------	-----------------------

Product

Name: Sorbacal® SPS-AC

Other Names: Hydrate and Carbon; High-Calcium Hydrated Lime with Activated Carbon; Hydrated Lime and Brominated Activated Carbon

Recommended Uses: Flue Gas Treatment

Company Identification:

US Operations:

Lhoist North America, Inc.
5600 Clearfork Main St, Ste. 300
Fort Worth, TX 76109
817-732-8164

Canadian Operations:

Lhoist North America of Canada, Inc.
20303-102B Ave.
Langley, BC V1M 3H1
604-888-4333

Emergency Phone Number:

Chemtrec 1-800-424-9300

SECTION 2	HAZARDS(S) IDENTIFICATION
------------------	----------------------------------

Classification

Eye Damage – Category 1

Carcinogen – Category 1

Skin Irritation – Category 2

Specific Target Organ Toxicity Single Exposure – Category 3
(Respiratory System)

Specific Target Organ Toxicity Repeat Exposure – Category 1
(Respiratory System)

Labeling:

Pictograms:



Signal Word(s): Danger

Hazard Statements: Causes serious eye damage.

Causes skin irritation.

May cause cancer through inhalation.

May cause respiratory irritation.

Causes damage to lungs through prolonged or repeated exposure when inhaled.

Precautionary Statements:

Wear protective gloves and eye protection. Wash exposed skin thoroughly after handling. Avoid breathing dust. Use only outdoors or in a well-ventilated area. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

If on skin: wash exposed skin with plenty of water. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention immediately. If inhaled: Remove person to fresh air and keep comfortable for breathing. Seek medical attention if you feel unwell.

If exposed or concerned: Get medical advice

Dispose of contents or containers in accordance with applicable regulations.

Other Hazards: Activated carbon can remove oxygen from the air (especially when wet) which will lower the amount of oxygen within confined spaces.

Store in a clean, cool, dry, well ventilated area away from strong oxidizers, ignition sources, combustible materials and heat. Do not store near, or allow contact with, moisture or strong oxidizers.

SECTION 3	COMPOSITION/ INFORMATION ON INGREDIENTS
-----------	---

Chemical Name: Calcium hydroxide and activated carbon

Common names and synonyms: Hydrate and Carbon; High-Calcium Hydrated Lime with Activated Carbon; Hydrated Lime and Brominated activated Carbon

Chemical Identity	CAS #	Concentration, % Wt.
Calcium Hydroxide	1305-62-0	60 - 90
Activated Carbon	7440-44-0	< 30
Sodium Bromide	7647-15-6	< 2
Proprietary Additive	N/A	< 2
Sodium Carbonate	497-19-8	< 3
Sodium Hydroxide	1310-73-2	< 2
Crystalline Silica	14808-60-7	< 2

Section 4	First Aid Measures
-----------	--------------------

Eye Contact: Contact can cause severe irritation or burning of eyes, including permanent damage. Immediately flush eyes with generous amounts of water for several minutes. Pull back the eyelid to ensure that all lime dust has been washed out. Seek medical attention immediately. Do not rub eyes.

Inhalation: This product can cause severe irritation of the respiratory system. Move victim to fresh air. Seek medical attention if necessary. If breathing has stopped, give artificial respiration.

Skin Contact: Contact can cause severe irritation or burning of skin, especially in the presence of moisture. Wash exposed area with large amounts of water. Seek medical attention immediately.

Ingestion: This product can cause severe irritation or burning of gastrointestinal tract if swallowed. Do not induce vomiting. Seek medical attention immediately. Never give anything by mouth unless instructed to do so by medical personnel.

Most important symptoms and effects, both acute and delayed: Irritation of skin, eyes, gastrointestinal tract or respiratory tract. Long-term exposure by inhalation may cause permanent damage. This product contains crystalline silica, which has been classified by IARC as (Group I) carcinogenic to humans when inhaled. Inhalation of silica can also cause a chronic lung disorder, silicosis.



Sorbacal® SPS-AC – February 2, 2018

Note to Physician: Provide general supportive measures and treat symptomatically.

SECTION 5	FIREFIGHTING MEASURES
------------------	------------------------------

Extinguishing Media

Appropriate Extinguishing Media: Use dry chemical fire extinguisher

Inappropriate Extinguishing Media: Do not use halogenated compounds.

Firefighting

Fire Hazards: Sorbacal® SPS-AC is not readily combustible or flammable and does not meet the definition of a flammable solid under ‘UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Part III, sub-section 33.2.1’. However, it can slowly smolder if exposed to an ignition source which will release carbon monoxide. Sorbacal® SPS-AC is not considered to be an explosive hazard, although reaction with incompatible materials may rupture containers.

Hazardous Combustion Products: Bromine compounds; carbon monoxide

Special Protective Equipment and Fire Fighting Instructions: Keep personnel away from and upwind of fire. Wear full fire-fighting turn-out gear (full Bunker gear), and respiratory protection (SCBA).

SECTION 6	ACCIDENTAL RELEASE MEASURES
------------------	------------------------------------

Personal Precautions: Use proper protective equipment.

Environmental Precautions: For large spills, as much as possible, avoid the generation of dusts. Prevent release to sewers or waterways.

Methods and Materials for Containment and Cleaning Up:

Small Spills: Use dry methods to collect spilled materials. Avoid generating dust. Do not clean up with compressed air. Store collected materials in dry, sealed plastic or metal containers. Residue on surfaces may be water washed.

Large Spills: Use dry methods to collect spilled materials. Evacuate area downwind of clean-up operations to minimize dust exposure. Store spilled materials in dry, sealed plastic or metal containers.

SECTION 7	HANDLING AND STORAGE
------------------	-----------------------------

Precautions for Safe Handling: Keep in tightly closed containers. Protect containers from physical damage. Avoid direct skin contact with the material.

Conditions for Safe Storage, Including any Incompatibilities: Store in a cool, dry, and well-ventilated location. Do not store in direct sunshine or in high temperature environments. Do not store near incompatible materials (see Section 10 below). Keep away from moisture. Do not store or ship in aluminum containers.

SECTION 8	EXPOSURE CONTROLS/ PERSONAL PROTECTION
------------------	---

Control Parameters:

Component	CAS #	Exposure Limits
Calcium Hydroxide	1305-62-0	OSHA PEL: 15 mg/m ³ (total) 5 mg/m ³ (respirable) ACGIH TLV: 5 mg/m ³
Activated Carbon	7440-44-0	OSHA PEL: 15 mg/m ³ ACGIH TLV: 5 mg/m ³
Sodium Bromide	7647-15-6	OSHA PEL: 15 mg/m ³ ACGIH TLV: 5 mg/m ³
Sodium Carbonate	497-19-8	OSHA PEL: 15 mg/m ³ (total) 5 mg/m ³ (respirable) ACGIH TLV: 10 mg/m ³
Sodium Hydroxide	1310-73-2	OSHA PEL: 15 mg/m ³ (total) 5 mg/m ³ (respirable) ACGIH TLV: 10 mg/m ³
Crystalline Silica	14808-60-7	OSHA PEL: 0.050 mg/m ³ as an 8 hr. TWA (respirable) ACGIH TLV: 0.025 mg/m ³ (respirable)

Appropriate Engineering Controls: Provide ventilation adequate to maintain PELs.

Personal Protection

Respiratory Protection: Use NIOSH/MSHA approved respirators if airborne concentration exceeds PEL.

Eye Protection: Use safety glasses with side shields or safety goggles. Contact lenses should not be worn when working with lime products.

Skin Protection: Use appropriate gloves to prevent skin contact. Clothing should fully cover arms and legs.

Other: Eye wash fountain and emergency showers are recommended.

SECTION 9	PHYSICAL AND CHEMICAL PROPERTIES
Appearance	
Physical State:	Solid
Color:	Light to Dark Gray
Odor:	Odorless
Odor Threshold:	N/ A
pH:	12.49 @ 25° C
Melting Point:	decomposes at 580° C / 1076° F
Initial Boiling Point:	N/ A
Freezing Point:	N/ A
Flash Point:	N/ A
Evaporation Rate:	N/ A
Flammability (solid, gas):	N/ A
Explosion Limits:	N/ A
Vapor Pressure:	N/ A
Vapor Density:	N/ A
Relative Density:	0.4 – 0.7 g/ cm ³ (apparent)
Solubility(ies):	Solubility is 1.6 g/L at 25° C
Partition coefficient:	Relatively insoluble
Auto-ignition Temperature:	N/ A
Decomposition Temperature:	580° C / 1076° F
Viscosity:	N/A

SECTION 10**STABILITY AND REACTIVITY**

Reactivity:

Chemical Stability: Sorbacal® SPS-AC is chemically stable.

Possibility of Hazardous Reactions: See reactivity above

Conditions to Avoid: Do not allow Sorbacal® SPS-AC to come into contact with incompatible materials.

Incompatible Materials: Sorbacal® SPS-AC should not be mixed or stored with the following materials, due to the potential for violent reaction and release of heat:

- Acids (unless in a controlled process)
- Reactive Fluoridated Compounds
- Reactive Brominated Compounds
- Reactive Powdered Metals
- Organic Acid Anhydrides
- Nitro-Organic Compounds
- Reactive Phosphorous Compounds
- Interhalogenated Compounds

Strong oxidizers such as ozone, liquid oxygen, chlorine, permanganate, etc. may result in rapid combustion

Hazardous Decomposition Products: Bromide compounds

SECTION 11**TOXICOLOGICAL INFORMATION**

Health Effects: see First Aid discussion in Section 4

Routes of Exposure: see First Aid discussion in Section 4

Symptoms Related to Exposure: see First Aid discussion in Section 4

Carcinogen Listing: Sorbacal® SPS-AC is not listed by MSHA, OSHA, or IARC as a carcinogen, but this product contains crystalline silica, which has been classified by IARC as (Group I) carcinogenic to humans when inhaled.

SECTION 12**ECOLOGICAL INFORMATION**

Ecotoxicity: Because of the high pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems in high concentrations.

Persistence and Degradability: Reacts with atmospheric CO₂ over time to form calcium carbonate

Bioaccumulation Potential: This material shows no bioaccumulation effect or food chain concentration toxicity.



Mobility in Soil: Minimal mobility in soil. Reacts with clay portion of soil to form calcium silicates and calcium aluminates

Other Adverse Effects: This material is alkaline and if released into water or moist soil will cause an increase in pH

SECTION 13	DISPOSAL CONSIDERATIONS
------------	-------------------------

Disposal Recommendations: Dispose of in accordance with all applicable federal, state, and local environmental regulations.

Regulatory Disposal Information: If this product as supplied, and unmixed, becomes a waste, it will not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act.

SECTION 14	TRANSPORT INFORMATION
------------	-----------------------

UN Number: Not Regulated

UN Proper Shipping Name: Calcium hydroxide and activated carbon

Transport Hazard Class(es): Not Regulated

Packing Group: Not Regulated

Marine Pollutant (y/n): This material is alkaline and if released into water or moist soil will cause an increase in pH.

Special Precautions: None

SECTION 15	REGULATORY INFORMATION
------------	------------------------

National Chemical Inventory Listings:

All chemical ingredients are listed on the USEPA TSCA Inventory List.

US Regulations:

RCRA Hazardous Waste Number: not listed (40 CFR 261.33)

RCRA Hazardous Waste Classification (40 CFR 261): not classified

CERCLA Hazardous Substance (40 CFR 302.4) unlisted specific per RCRA, Sec. 3001;

CWA, Sec. 311 (b) (4); CWA, Sec. 307(a), CAA, Sec. 112

CERCLA Reportable Quantity (RQ) not listed.

SARA 311/312 Codes: not listed.

SARA Toxic Chemical (40 CFR 372.65): not listed.

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed, Threshold Planning Quantity (TPQ): not listed



Sorbacal® SPS-AC – February 2, 2018

Specific State Regulations: ⚠️ WARNING: This product can expose you to chemicals, including crystalline silica, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov

These naturally occurring impurities may also be regulated by other States.

Canadian DSL: Listed

Canadian NPRI: None of the components are listed

CEPA Toxic Substances: None of the components are listed

SECTION 16	OTHER INFORMATION
------------	-------------------

Prepared By: Lhoist North America Technical Services

Date Prepared: February 2, 2018

Revision: 2018-1

Abbreviations:

- N/A Not Available or Not Applicable
- IARC International Agency for Research on Cancer
- IATA International Air Transport Association
- ACGIH American Conference of Governmental Industrial Hygienists
- TWA Time Weighted Average
- PEL Permissible Exposure Limit
- TLV Threshold Limit Value
- REL Recommended Exposure Limit

Lhoist North America provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person. Individuals receiving this information must consult their own technical and legal advisors and/or exercise their own judgment in determining its appropriateness for a particular purpose. Lhoist North America makes no representations or warranties, either express or implied, including without limitation and warranties of merchantability or fitness for a particular purpose with respect to the Information set forth herein or the product(s) to which the information refers. Accordingly, Lhoist North America will not be responsible or liable for any claims, losses or damages resulting from the use of or reliance upon or failure to use this information.