



## SAFETY DATA SHEET

Creation Date 11-Oct-2010

Revision Date 29-Nov-2016

Revision Number 2

### 1. Identification

**Product Name** Calcium hydroxide

**Cat No. :** AC219180000; AC219180010; AC219180025; AC219180050;  
AC219180100; AC219181000; AC219185000

**Synonyms** Biocalc; Calcium dihydrate; Calcium hydrate

**Recommended Use** Laboratory chemicals.

**Uses advised against** No Information available

**Details of the supplier of the safety data sheet**

**Company**  
Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

**Entity / Business Name**  
Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

**Emergency Telephone Number**  
For information **US** call: 001-800-ACROS-01  
/ **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 /  
**Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 /  
**Europe**:001-703-527-3887

### 2. Hazard(s) identification

#### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|                                                  |            |
|--------------------------------------------------|------------|
| Skin Corrosion/irritation                        | Category 2 |
| Serious Eye Damage/Eye Irritation                | Category 1 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Target Organs - Respiratory system.              |            |

#### Label Elements

##### **Signal Word**

Danger

##### **Hazard Statements**

Causes skin irritation  
Causes serious eye damage  
May cause respiratory irritation



**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Wear protective gloves/protective clothing/eye protection/face protection  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
Call a POISON CENTER or doctor/physician if you feel unwell

**Skin**

IF ON SKIN: Wash with plenty of soap and water  
If skin irritation occurs: Get medical advice/attention  
Take off contaminated clothing and wash before reuse

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
Immediately call a POISON CENTER or doctor/physician

**Storage**

Store in a well-ventilated place. Keep container tightly closed  
Store locked up

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

### 3. Composition / information on ingredients

| Component         | CAS-No    | Weight % |
|-------------------|-----------|----------|
| Calcium hydroxide | 1305-62-0 | >95      |

### 4. First-aid measures

|                                                               |                                                                                                                    |
|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| <b>General Advice</b>                                         | If symptoms persist, call a physician.                                                                             |
| <b>Eye Contact</b>                                            | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention. |
| <b>Skin Contact</b>                                           | Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.  |
| <b>Inhalation</b>                                             | Move to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.         |
| <b>Ingestion</b>                                              | Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.              |
| <b>Most important symptoms/effects<br/>Notes to Physician</b> | None reasonably foreseeable. Causes severe eye damage.<br>Treat symptomatically                                    |

### 5. Fire-fighting measures

|                                       |                                                                          |
|---------------------------------------|--------------------------------------------------------------------------|
| <b>Suitable Extinguishing Media</b>   | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| <b>Unsuitable Extinguishing Media</b> | Carbon dioxide (CO <sub>2</sub> )                                        |
| <b>Flash Point</b>                    | No information available                                                 |
| <b>Method -</b>                       | No information available                                                 |

|                                         |                          |
|-----------------------------------------|--------------------------|
| <b>Autoignition Temperature</b>         | Not applicable           |
| <b>Explosion Limits</b>                 |                          |
| <b>Upper</b>                            | No data available        |
| <b>Lower</b>                            | No data available        |
| <b>Sensitivity to Mechanical Impact</b> | No information available |
| <b>Sensitivity to Static Discharge</b>  | No information available |

**Specific Hazards Arising from the Chemical**

Non-combustible. Contact with metals may evolve flammable hydrogen gas.

**Hazardous Combustion Products**

Calcium oxides

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**

**Health**  
3

**Flammability**  
0

**Instability**  
1

**Physical hazards**  
N/A

**6. Accidental release measures**

|                                  |                                                                                       |
|----------------------------------|---------------------------------------------------------------------------------------|
| <b>Personal Precautions</b>      | Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. |
| <b>Environmental Precautions</b> | Should not be released into the environment.                                          |

|                                             |                                                                                                                                  |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>Methods for Containment and Clean Up</b> | Sweep up or vacuum up spillage and collect in suitable container for disposal. Keep in suitable, closed containers for disposal. |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|

**7. Handling and storage**

|                 |                                                                                                                                                                     |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Handling</b> | Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                |                                                                                           |
|----------------|-------------------------------------------------------------------------------------------|
| <b>Storage</b> | Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. |
|----------------|-------------------------------------------------------------------------------------------|

**8. Exposure controls / personal protection****Exposure Guidelines**

| Component         | ACGIH TLV                | OSHA PEL                                                                                    | NIOSH IDLH               |
|-------------------|--------------------------|---------------------------------------------------------------------------------------------|--------------------------|
| Calcium hydroxide | TWA: 5 mg/m <sup>3</sup> | (Vacated) TWA: 5 mg/m <sup>3</sup><br>TWA: 15 mg/m <sup>3</sup><br>TWA: 5 mg/m <sup>3</sup> | TWA: 5 mg/m <sup>3</sup> |

| Component         | Quebec                   | Mexico OEL (TWA)         | Ontario TWAEV            |
|-------------------|--------------------------|--------------------------|--------------------------|
| Calcium hydroxide | TWA: 5 mg/m <sup>3</sup> | TWA: 5 mg/m <sup>3</sup> | TWA: 5 mg/m <sup>3</sup> |

**Legend**

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

|                             |                                                                                                                                                      |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Engineering Measures</b> | Ensure that eyewash stations and safety showers are close to the workstation location.<br>Ensure adequate ventilation, especially in confined areas. |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|

**Personal Protective Equipment****Eye/face Protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

|                                 |                                                                                                                                                                                                                                                   |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Skin and body protection</b> | Long sleeved clothing.                                                                                                                                                                                                                            |
| <b>Respiratory Protection</b>   | Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. |
| <b>Hygiene Measures</b>         | Handle in accordance with good industrial hygiene and safety practice.                                                                                                                                                                            |

## 9. Physical and chemical properties

|                                               |                          |
|-----------------------------------------------|--------------------------|
| <b>Physical State</b>                         | Solid                    |
| <b>Appearance</b>                             | Off-white                |
| <b>Odor</b>                                   | Odorless                 |
| <b>Odor Threshold</b>                         | No information available |
| <b>pH</b>                                     | 12.4 saturated solution  |
| <b>Melting Point/Range</b>                    | 580 °C / 1076 °F         |
| <b>Boiling Point/Range</b>                    | 2850 °C / 5162 °F        |
| <b>Flash Point</b>                            | No information available |
| <b>Evaporation Rate</b>                       | Not applicable           |
| <b>Flammability (solid,gas)</b>               | No information available |
| <b>Flammability or explosive limits</b>       |                          |
| Upper                                         | No data available        |
| Lower                                         | No data available        |
| <b>Vapor Pressure</b>                         | No information available |
| <b>Vapor Density</b>                          | Not applicable           |
| <b>Specific Gravity</b>                       | No information available |
| <b>Solubility</b>                             | 1.65 g/L (20°C)          |
| <b>Partition coefficient; n-octanol/water</b> | No data available        |
| <b>Autoignition Temperature</b>               | Not applicable           |
| <b>Decomposition Temperature</b>              | No information available |
| <b>Viscosity</b>                              | Not applicable           |
| <b>Molecular Formula</b>                      | H2 Ca O2                 |
| <b>Molecular Weight</b>                       | 74.09                    |

## 10. Stability and reactivity

|                                         |                                                                                                               |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------|
| <b>Reactive Hazard</b>                  | None known, based on information available                                                                    |
| <b>Stability</b>                        | Air sensitive. Moisture sensitive.                                                                            |
| <b>Conditions to Avoid</b>              | Avoid dust formation. Incompatible products. Excess heat. Exposure to air or moisture over prolonged periods. |
| <b>Incompatible Materials</b>           | Strong oxidizing agents, Metals, Reducing agents, Acids, Bases                                                |
| <b>Hazardous Decomposition Products</b> | Calcium oxides                                                                                                |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.                                                                      |
| <b>Hazardous Reactions</b>              | None under normal processing.                                                                                 |

## 11. Toxicological information

### Acute Toxicity

#### Product Information Component Information

| Component         | LD50 Oral                 | LD50 Dermal | LC50 Inhalation |
|-------------------|---------------------------|-------------|-----------------|
| Calcium hydroxide | LD50 = 7340 mg/kg ( Rat ) | Not listed  | Not listed      |

|                                    |                          |
|------------------------------------|--------------------------|
| <b>Toxicologically Synergistic</b> | No information available |
|------------------------------------|--------------------------|

**Products****Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Irritation** Causes severe eye burns, Causes skin burns, Irritating to respiratory system

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component         | CAS-No    | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|-------------------|-----------|------------|------------|------------|------------|------------|
| Calcium hydroxide | 1305-62-0 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** Respiratory system

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** No information available

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

**Ecotoxicity**

Do not empty into drains. .

| Component         | Freshwater Algae | Freshwater Fish                                | Microtox   | Water Flea |
|-------------------|------------------|------------------------------------------------|------------|------------|
| Calcium hydroxide | Not listed       | LC50 = 160 mg/L, 96h static (Gambusia affinis) | Not listed | Not listed |

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT** Not regulated

**TDG** Not regulated

**IATA** Not regulated

**IMDG/IMO** Not regulated

## 15. Regulatory information

All of the components in the product are on the following Inventory lists: X = listed

**International Inventories**

| Component         | TSCA | DSL | NDSL | EINECS    | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|-------------------|------|-----|------|-----------|--------|-----|-------|------|------|-------|------|
| Calcium hydroxide | X    | X   | -    | 215-137-3 | -      |     | X     | X    | X    | X     | X    |

**Legend:**

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

TSCA 12(b) Not applicable

SARA 313 Not applicable

**SARA 311/312 Hazard Categories**

|                                   |     |
|-----------------------------------|-----|
| Acute Health Hazard               | Yes |
| Chronic Health Hazard             | No  |
| Fire Hazard                       | No  |
| Sudden Release of Pressure Hazard | No  |
| Reactive Hazard                   | No  |

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration  
Not applicableCERCLA  
Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

| Component         | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|-------------------|---------------|------------|--------------|----------|--------------|
| Calcium hydroxide | X             | X          | X            | -        | X            |

**U.S. Department of Transportation**

|                             |   |
|-----------------------------|---|
| Reportable Quantity (RQ):   | N |
| DOT Marine Pollutant        | N |
| DOT Severe Marine Pollutant | N |

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations**

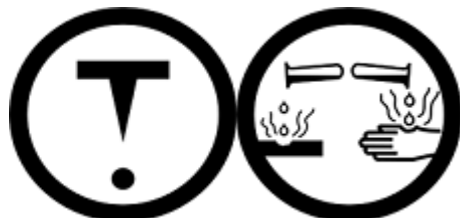
Mexico - Grade No information available

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

**WHMIS Hazard Class**

E Corrosive material  
D2B Toxic materials

**16. Other information****Prepared By**

Regulatory Affairs  
Thermo Fisher Scientific  
Email: EMSDS.RA@thermofisher.com

**Creation Date**

11-Oct-2010

**Revision Date**

29-Nov-2016

**Print Date**

29-Nov-2016

**Revision Summary**

This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**