

**SAFETY DATA SHEET**

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 06/02/2016

Version 2.0

**SECTION 1. Identification****Product identifier**

Product number	SX0355
Product name	Sodium Borate Decahydrate Crystals GR ACS
CAS-No.	1303-96-4

**Relevant identified uses of the substance or mixture and uses advised against**

Identified uses	Reagent for analysis
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**Details of the supplier of the safety data sheet**

Company	EMD Millipore Corporation   290 Concord Road, Billerica, MA 01821, United States of America   General Inquiries: +1-978-715-4321   Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)
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Emergency telephone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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**SECTION 2. Hazards identification****GHS Classification**

Eye irritation, Category 2A, H319

Reproductive toxicity, Category 1B, H360

For the full text of the H-Statements mentioned in this Section, see Section 16.

**GHS-Labeling***Hazard pictograms**Signal Word*

Danger

*Hazard Statements*

H360 May damage fertility or the unborn child.

H319 Causes serious eye irritation.

*Precautionary Statements*

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P264 Wash skin thoroughly after handling.

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P280 Wear protective gloves/ eye protection/ face protection.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P405 Store locked up.

P501 Dispose of contents/ container to an approved waste disposal plant.

## Other hazards

None known.

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## SECTION 3. Composition/information on ingredients

Formula

$\text{Na}_2\text{B}_4\text{O}_7 \cdot 10 \text{H}_2\text{O}$

$\text{B}_4\text{Na}_2\text{O}_7 \cdot 10\text{H}_2\text{O}$  (Hill)

Molar mass

381.32 g/mol

## Hazardous ingredients

*Chemical Name (Concentration)*

CAS-No.

*disodium tetraborate decahydrate (>= 90 % - <= 100 % )*

1303-96-4

Exact percentages are being withheld as a trade secret.

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## SECTION 4. First aid measures

### Description of first-aid measures

*Inhalation*

After inhalation: fresh air. Call in physician.

*Skin contact*

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

*Eye contact*

After eye contact: rinse out with plenty of water. Call in ophthalmologist.

*Ingestion*

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Never give anything by mouth to an unconscious person.

### Most important symptoms and effects, both acute and delayed

irritant effects

The following applies to boron compounds in general: resorption is followed by nausea and vomiting, agitation, spasms, CNS disorders, cardiovascular disorders.

### Indication of any immediate medical attention and special treatment needed

No information available.

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## SECTION 5. Fire-fighting measures

### Extinguishing media

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### *Suitable extinguishing media*

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### *Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

### **Special hazards arising from the substance or mixture**

Not combustible.

Ambient fire may liberate hazardous vapors.

### **Advice for firefighters**

#### *Special protective equipment for fire-fighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

#### *Further information*

Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## **SECTION 6. Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

### **Environmental precautions**

Do not empty into drains.

### **Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

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## **SECTION 7. Handling and storage**

### **Precautions for safe handling**

Work under hood. Do not inhale substance/mixture.

Observe label precautions.

### **Conditions for safe storage, including any incompatibilities**

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Store at room temperature.

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## SECTION 8. Exposure controls/personal protection

### Exposure limit(s)

#### Ingredients

Basis	Value	Threshold limits	Remarks
<i>disodium tetraborate decahydrate 1303-96-4</i>			
ACGIH	Time Weighted Average (TWA):	2 mg/m <sup>3</sup>	Form of exposure: Inhalable fraction.
	Short Term Exposure Limit (STEL):	6 mg/m <sup>3</sup>	Form of exposure: Inhalable fraction.
NIOSH/GUIDE	Recommended exposure limit (REL):	5 mg/m <sup>3</sup>	
Z1A	Time Weighted Average (TWA):	10 mg/m <sup>3</sup>	

### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

### Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

### Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

### Eye/face protection

Safety glasses

### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

### Other protective equipment:

protective clothing

### Respiratory protection

required when dusts are generated.

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## SECTION 9. Physical and chemical properties

Physical state	crystals
Color	white
Odor	odorless
Odor Threshold	Not applicable

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pH	9.2 at 47 g/l 20 °C (20 °C)
Melting point	75 °C Elimination of water of crystallization
Boiling point	No information available.
Flash point	Not applicable
Evaporation rate	No information available.
Flammability (solid, gas)	The product is not flammable.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor pressure	0.213 hPa at 20 °C (20 °C)
Relative vapor density	No information available.
Density	1.72 g/cm <sup>3</sup> at 20 °C (20 °C)
Relative density	No information available.
Water solubility	49.74 g/l at 20 °C (20 °C)
Partition coefficient: n-octanol/water	Not applicable
Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none
Ignition temperature	not combustible
Bulk density	ca.750 kg/m <sup>3</sup>

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## SECTION 10. Stability and reactivity

### Reactivity

See below

### Chemical stability

releases water of crystallization when heated.

### Possibility of hazardous reactions

Violent reactions possible with:

strong oxidizing agents, Acids, metallic salts

### Conditions to avoid

Strong heating.

### Incompatible materials

no information available

### Hazardous decomposition products

no information available

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## SECTION 11. Toxicological information

### Information on toxicological effects

#### *Likely route of exposure*

Eye contact, Skin contact, Ingestion

#### *Target Organs*

Eyes

Skin

Respiratory system

#### *Acute oral toxicity*

LD50 Rat: > 2,500 mg/kg

OECD Test Guideline 401 The value is given in analogy to the following substances: di-Sodium tetraborate

#### *Acute inhalation toxicity*

Symptoms: Irritation symptoms in the respiratory tract.

LC50 Rat: > 2.04 mg/l; 4 h ; dust/mist

OECD Test Guideline 403

The value is given in analogy to the following substances: disodium tetraborate pentahydrate

#### *Acute dermal toxicity*

LD50 Rabbit: > 2,000 mg/kg

(ECHA) The value is given in analogy to the following substances:

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## *Skin irritation*

Rabbit

Result: No irritation

(ECHA) The value is given in analogy to the following substances: disodium tetraborate pentahydrate

## *Eye irritation*

Rabbit

Result: Causes serious eye irritation.

OECD Test Guideline 405 disodium tetraborate pentahydrate

Causes serious eye irritation.

## *Sensitization*

Buehler Test Guinea pig

Result: negative

Method: OECD Test Guideline 406

The value is given in analogy to the following substances: disodium tetraborate pentahydrate

## *CMR effects*

Teratogenicity:

May damage the unborn child.

Reproductive toxicity:

May damage fertility.

## *Specific target organ systemic toxicity - single exposure*

The substance or mixture is not classified as specific target organ toxicant, single exposure.

## *Specific target organ systemic toxicity - repeated exposure*

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

## *Aspiration hazard*

Regarding the available data the classification criteria are not fulfilled.

## **Carcinogenicity**

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

## **Further information**

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Absorption via:

Gastrointestinal tract, Mucous membranes

The following applies to boron compounds in general: resorption is followed by nausea and vomiting, agitation, spasms, CNS disorders, cardiovascular disorders.

Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12. Ecological information

### Ecotoxicity

*Toxicity to fish*

LC50 *Carassius auratus* (goldfish): 630 mg/l; 72 h (IUCLID)

*Toxicity to daphnia and other aquatic invertebrates*

EC50 *Daphnia magna* (Water flea): 1,085 - 1,402 mg/l; 48 h (IUCLID)

*Toxicity to algae*

IC50 *Desmodesmus subspicatus* (green algae): 158 mg/l; 96 h (anhydrous substance) (IUCLID)

*Toxicity to bacteria*

EC0 *Pseudomonas putida*: 15.8 mg/l; 16 h (anhydrous substance) (IUCLID)

### Persistence and degradability

*Biodegradability*

The methods for determining the biological degradability are not applicable to inorganic substances.

### Bioaccumulative potential

*Partition coefficient: n-octanol/water*

Not applicable

### Mobility in soil

No information available.

*Additional ecological information*

Herbicide

Discharge into the environment must be avoided.

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## SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

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## SECTION 14. Transport information

### Land transport (DOT)

Not classified as dangerous in the meaning of transport regulations.

### Air transport (IATA)

Not classified as dangerous in the meaning of transport regulations.

### Sea transport (IMDG)



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Not classified as dangerous in the meaning of transport regulations.

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## SECTION 15. Regulatory information

### United States of America

#### SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

#### DEA List I

Not listed

#### DEA List II

Not listed

### US State Regulations

#### Massachusetts Right To Know

##### *Ingredients*

disodium tetraborate decahydrate

#### Pennsylvania Right To Know

##### *Ingredients*

disodium tetraborate decahydrate

#### New Jersey Right To Know

##### *Ingredients*

disodium tetraborate decahydrate

#### California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

### Notification status

TSCA:

All components of the product are listed in the TSCA-inventory.

DSL:

All components of this product are on the Canadian DSL

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## SECTION 16. Other information

### Training advice

Provide adequate information, instruction and training for operators.

### Labeling

*Hazard pictograms*



### *Signal Word*

Danger

### *Hazard Statements*

H319 Causes serious eye irritation.

H360 May damage fertility or the unborn child.

### *Precautionary Statements*

Prevention

P201 Obtain special instructions before use.

Response

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Restricted to professional users.

### **Full text of H-Statements referred to under sections 2 and 3.**

H319 Causes serious eye irritation.

H360 May damage fertility or the unborn child.

### **Key or legend to abbreviations and acronyms used in the safety data sheet**

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

Revision Date 06/02/2016

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The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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