SAFETY DATA SHEET

Preparation Date: 12/12/2017 **Revision Date:** 12/12/2017 **Revision Number:** G1

1. IDENTIFICATION

Product identifier

Product code: B1769
Product Name: BORON CITRATE, 5 PERCENT, POWDER

Other means of identification
Synonyms: No information available
CAS #: Mixture
RTECS # Not available
CI#: Not available

Recommended use of the chemical and restrictions on use
Recommended use: No information available.
Uses advised against No information available

Supplier:
Spectrum Chemical Mfg. Corp
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

Order Online At: https://www.spectrumchemical.com
Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

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

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Reproductive toxicity	Category 2
Combustible dust	-

Label elements

Warning

Hazard statements
Suspected of damaging fertility or the unborn child
May form combustible dust concentrations in air

Hazards not otherwise classified (HNOC)
Not Applicable

Other hazards
Causes mild skin irritation

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Keep away from all ignition sources including heat, sparks, and flame
Keep container closed and grounded
Prevent dust accumulations to minimize explosion hazard

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Maltodextrin	9050-36-6	32.7-49
Sodium Borate	1330-43-4	28.8-43.3
Sodium Citrate, Anhydrous	68-04-2	20.8-25.5

4. FIRST AID MEASURES

First aid measures

General Advice: National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops.

Eye Contact: Flush eyes with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. In case of shortness of breath, give oxygen. Get medical attention.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed

Symptoms

May cause eye/skin irritation
May cause gastrointestinal disturbances
May cause digestive (gastrointestinal) tract irritation
May cause abdominal pain, nausea, vomiting, diarrhea
May cause dehydration
May affect the liver
It may affect the kidneys
Central nervous system effects

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Carbon dioxide (CO2). Dry chemical. Water spray mist or foam.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products: No information available.

Specific hazards: May be combustible at high temperatures. Avoid generating dust. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Special Protective Actions for Firefighters

Specific Methods: No information available.

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Remove all sources of ignition. Avoid dust formation. Avoid dispersal of dust in the air. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Nonsparking tools should be used.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal. Use only non-sparking tools. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:
Provide sufficient air exchange and/or exhaust in work rooms. Minimize dust generation and accumulation. Avoid dust formation. Dry powders can build static electricity charges when subjected to friction of transfer and mixing operations. All equipment used when handling the product must be grounded. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Keep away from incompatible materials.

Safe Handling Advice
Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not ingest. Do not breathe vapors/dust. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:
Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:
Oxidizing agents
Acids
Bases

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
Maltodextrin	9050-36-6	None	None	None	None
Sodium Borate	1330-43-4	None	= 1 mg/m³ TWA	= 6 mg/m³ STEL inhalable fraction	None
Sodium Citrate,	68-04-2	None	None	None	None

Anhydrous					

Canada

Components	CAS-No.	**Canada - Alberta**	**Canada - British Columbia**	**Canada - Ontario**	**Canada - Quebec**
Maltodextrin	9050-36-6	None	None	None	None
Sodium Borate	1330-43-4	= 1 mg/m³ TWA	= 2 mg/m³ TWA inhalable	2 mg/m³ TWA inhalable Borate compounds, inorganic	1 mg/m³ TWAEV
Sodium Citrate, Anhydrous	68-04-2	None	None	None	None

Australia and Mexico

Components	CAS-No.	**Australia**	**Mexico**
Maltodextrin	9050-36-6	None	None
Sodium Borate	1330-43-4	None	= 1 mg/m³ TWA
Sodium Citrate, Anhydrous	68-04-2	None	None

Appropriate engineering controls

Engineering measures to reduce exposure: Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e. there is no leakage from the equipment) It is recommended that all dust control equipment such as local exhause ventilation and material transport systems involved in the handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Goggles or Safety glasses with side-shields

Skin and body protection: Long sleeved clothing
Chemical resistant apron
Gloves

Respiratory protection: Effective dust mask. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds) , inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid	**Appearance:** Powder.	**Color:** Off-white. Yellowish.
Odor: No information available.	**Taste** No information available.	**Formula:** No information available
Molecular/Formula weight: No information available	**Flammability:** No information available	**Flashpoint (°C/°F):** No information available.
Flash Point Tested according to: Not available	**Autoignition Temperature (°C/°F):** No information available	**Lower Explosion Limit (%):** No information available
Upper Explosion Limit (%): No information available	**Melting point/range(°C/°F):** No information available	**Decomposition temperature(°C/°F):** No information available
Boiling point/range(°C/°F): No information available	**Bulk density:** No information available	**Density (g/cm3):** No information available
Specific gravity: No information available	**pH:** No information available	**Vapor pressure @ 20°C (kPa):** No information available
Evaporation rate: No information available	**Vapor density:** No information available	**VOC content (g/L):** No information available
Odor threshold (ppm): No information available	**Partition coefficient (n-octanol/water):** No information available	**Viscosity:** No information available
Miscibility: No information available	**Solubility:** No information available	

10. STABILITY AND REACTIVITY

Reactivity
No information available

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Avoid dust formation. Dust may form explosive mixture in air. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Incompatible materials.

Incompatible Materials: Oxidizing agents
Acids
Bases

Hazardous decomposition products: No information available.

Other Information
Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Ingestion. Inhalation.

Acute Toxicity

Component Information

Maltodextrin	
CAS-No.	9050-36-6

LD50/oral/rat = No information available
LD50/oral/mouse = No information available
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50information = No information available

Sodium Borate	
CAS-No.	1330-43-4

LD50/oral/rat = 2660 mg/kg Oral LD50 Rat
LD50/oral/mouse = No information available
LD50/dermal/rabbit = 2000 mg/kg Dermal LD50Rabbit
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50information = No information available

Sodium Citrate, Anhydrous	
CAS-No.	68-04-2

LD50/oral/rat = >8000 mg/kg
6500-12100 mg/kg
LD50/oral/mouse = 7100 mg/kg
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50information = No information available

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = No information available

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat
VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: May cause skin irritation. It may cause mild skin irritation.

Eye Contact: May cause eye irritation.

Inhalation May cause irritation of respiratory tract.

Ingestion May cause gastrointestinal disturbances. May cause digestive (gastointestinal) tract irritation. May cause abdominal pain, nausea, vomiting, diarrhea. May cause dehydration. May affect liver. May affect urinary system (kidneys). May cause central nervous system effects (affect behavior).

Aspiration hazard No information available.

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

Chronic Toxicity Prolonged or repeated ingestion may affect the liver, urinary system, and metabolism. Repeated exposure may cause bronchitis to develop with cough, phlegm, and /or shortness of breath.

Sensitization: No information available.

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Maltodextrin	9050-36-6	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed
Sodium Borate	1330-43-4	Not listed	A4 Not Classifiable as a Human Carcinogen	Not listed	Not listed	Not listed	Not listed
Sodium Citrate, Anhydrous	68-04-2	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity Suspected of damaging fertility or the unborn child

Reproductive Effects: Possible risk of impaired fertility
Developmental Effects: Possible risk of harm to the unborn child
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organs: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

Sodium Borate - 1330-43-4
Freshwater Algae Data: 2.6 - 21.8 mg/L EC50 Pseudokirchneriella subcapitata 96 h
158 mg/L EC50 Desmodesmus subspicatus 96 h
Freshwater Fish Species Data: 340 mg/L LC50 Limanda limanda 96 h 1
Water Flea Data: 1085 - 1402 mg/L LC50 Daphnia magna 48 h
Sodium Citrate, Anhydrous - 68-04-2
Freshwater Algae Data: 18000 - 32000 mg/L EC50 Chlorella vulgaris 96 h
Freshwater Fish Species Data: 18000-32000 mg/L LC50 Poecilia reticulata 96 h 1
Water Flea Data: 5600 - 10000 mg/L EC50 Daphnia magna 48 h

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Maltodextrin	9050-36-6	None	None	None	None
Sodium Borate	1330-43-4	None	None	None	None
Sodium Citrate, Anhydrous	68-04-2	None	None	None	None

14. TRANSPORT INFORMATION

DOT
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Class No information available
Packing group: No information available
Emergency Response Guide Number No information available
Marine Pollutant No data available
DOT RQ (lbs): No information available
Special Provisions No Information available
Symbol(s): No information available

Description: No information available

TDG (Canada)

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant No Information available
Description: No information available

ADR

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available

IMO / IMDG

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant No information available

RID

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available

ICAO

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available

IATA

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
ERG Code: No information available
Special Provisions No information available

15. REGULATORY INFORMATION

International Inventories

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Maltodextrin	9050-36-6	Present XU	Present KE-22996	Present	Present (8)-98	Present	Present	Present 232-940-4
Sodium Borate	1330-43-4	Present	Present KE-12384	Present	Present (1)-69	Present	Present	Present 215-540-4

Sodium Citrate, Anhydrous	68-04-2	Present	Present KE-20843	Present	Present (2)-1323	Present[21209]	Present	Present 200-675-3

U.S. Regulations

Maltodextrin

FDA - Food Additives Generally Recognized as Safe (GRAS): 21 CFR 184.1444

FDA - 21 CFR - Total Food Additives 184.1444

Sodium Borate

Massachusetts RTK: Present

Pennsylvania RTK: Present

Minnesota - Hazardous Substance List: Present

California Directors List of Hazardous Substances: Present

FDA - 21 CFR - Total Food Additives Present

Sodium Citrate, Anhydrous

FDA - Food Additives Generally Recognized as Safe (GRAS): 21 CFR 184.1751

FDA - 21 CFR - Total Food Additives 131.111 131.112 131.160 131.185 133.169 133.173 133.179 150.141 150.161 175.300 179.45 181.29 184.1751

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Maltodextrin	9050-36-6	Not Listed	Not Listed	Not Listed	Not Listed
Sodium Borate	1330-43-4	Not Listed	Not Listed	Not Listed	Not Listed
Sodium Citrate, Anhydrous	68-04-2	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Maltodextrin	9050-36-6	None	None	None	None	None
Sodium Borate	1330-43-4	None	None	None	None	None
Sodium Citrate, Anhydrous	68-04-2	None	None	None	None	None

U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Maltodextrin	9050-36-6	Not Applicable	Not Applicable
Sodium Borate	1330-43-4	Not Applicable	Not Applicable
Sodium Citrate, Anhydrous	68-04-2	Not Applicable	Not Applicable

Canada

WHIMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information: The WHMIS 2015 classification of this product has not been validated or reviewed yet.

Component	WHMIS 2015 Hazard Classification
Sodium Borate 1330-43-4 (28.8-43.3)	Serious Eye Damage/Eye Irritation - Category 2: H319 Causes serious eye irritation.; Reproductive Toxicity - Category 1: H360

Sodium Citrate, Anhydrous
68-04-2 (20.8-25.5)

May damage fertility or the unborn child.
Combustible Dust - Category 1: May form combustible dust concentrations in air (factors such as combustibility and explosiveness of dusts including composition and shape and size of particles could cause substance to belong to 'Combustible dust' hazard class)

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

WHMIS 1988 Hazard Class
The classification of this product has not been validated yet

Components

Sodium Citrate, Anhydrous

WHMIS 1988
Uncontrolled product according to WHMIS classification criteria anhydrous

Canada Controlled Products Regulation:
This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	**WHMIS Ingredient Disclosure List -**
Sodium Borate	1 %

Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Maltodextrin	9050-36-6	Present	Not Listed
Sodium Borate	1330-43-4	Present	Not Listed
Sodium Citrate, Anhydrous	68-04-2	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Maltodextrin	9050-36-6	Not listed
Sodium Borate	1330-43-4	Not listed
Sodium Citrate, Anhydrous	68-04-2	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Maltodextrin	9050-36-6	Not listed
Sodium Borate	1330-43-4	Not listed
Sodium Citrate, Anhydrous	68-04-2	Not listed

EU Classification

EU GHS - SV - CLP 1272/2008

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Maltodextrin	9050-36-6	
Sodium Borate	1330-43-4	
Sodium Citrate, Anhydrous	68-04-2	

EU - CLP (1272/2008)

R-phrase(s)
Not determined

S -phrase(s)
none

Components	CAS-No.	**Classification**	**Concentration Limits:**	**Safety Phrases**
Maltodextrin	9050-36-6		No information	
Sodium Borate	1330-43-4	Repr.Cat.2; R60-61	No information	S53 S45

Sodium Citrate, Anhydrous	68-04-2		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:
not determined

16. OTHER INFORMATION

Preparation Date: 12/12/2017
Revision Date: 12/12/2017
Prepared by: Sonia Owen

Disclaimer: All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet