SAFETY DATA SHEET

According to 29 CFR 1910.1200

PENTAHYDRATED BORAX

Date of issue: July 25, 2009 **Revision date:** Juliy 28, 2017 **Version.** 4.1

SECTION 1.- IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product form White granules

Substance name Pentahydrated Borax

CAS No. *12179-04-3*

Formula $Na_2B_4O_7 \cdot 5H_2O$

Synonyms Sodium tetraborate pentahydrate; salt buffer pH 9.18; borax pentahydrate; sodium borate pentahydrate, bórax 5 mol.

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

Use of the substance/mixture According to the technical sheet of the product.

1.3 Details of the supplier of the safety data sheet

Pima Chemicals & Fertilizers, LLC
1370 Nogales, Az.
Tel. 011 52 (662) 182-0559
rgutierrez@quimicapima.com
www.quimicapima.com

Química Pima, S.A. de C.V.
Del Cobre 20, Parque Industrial Hermosillo.
Hermosillo, Sonora, México. C.P. 83297
Tel. 011 (662) 251-0010 ventas@quimicapima.com

1.4 Emergency telephone number

Emergency number CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

SECTION 2.- HAZARD IDENTIFICATION

2.1. GHS-US classification

Causes serious eye damage, 2A H319

Reproductive toxicity 1B H360

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US)

Signal word (GHS-US): Danger

Hazard statement (GHS-US): H319 Causes serious eye damage.

H360 It can impair fertility or harm the fetus.

Precautionary statements (GHS-US): P201 Seek instructions before use.
P202 Do not manipulate before you have read and understood all the safety precautions.
P264 Wash hands carefully after handling.
P280 Wear gloves / protective clothing / protective equipment for the face and eyes.
P305+351+338 IN CASE EYES: Rinse thoroughly with water for several minutes.

Remove contact lenses when they are present and can be done easily. Continue washing.
P308 + P313 IN CASE OF PROVEN OR PROPOSED EXPOSURE: Consult a physician
P337 + P313 If eye irritation persists, see a doctor.

P405 Store locked up.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P501 Dispose of contents/container in accordance with local/regional/national/ international regulations.

2.3. Other hazards N.D.

2.4 Unknown acute toxicity (GHS-US) Not applicable.

SECTION 3.- COMPOSICION / INFORMATION OF INGREDIENTS

3.1 Mixture Not applicable

3.2 Substance Substance (The product contains more than 99.9 percent (%) of borax pentahydrate ($Na_2B_4O_7 \cdot 5H_2O$))

Name	*Product identifier*	*%*	*GHS-US classification*
Bórax Pentahidratado	(CAS No.) *12179-04-3*	> 99.9	2A H319 1B H360

SECTION 4.- FIRST AID MEASURE

4.1. Description of first air measure

First-aid measures general If medical advice is needed, have product container or label at hand.

First-aid measures after eye contact Rinse thoroughly with plenty of water, also under the eyelids. Remove contact lenses when they are present and can be done easily. Do not rub the affected part. Consult a doctor if irritation persists for more than 30 minutes.

First-aid measures after skin contact As a precautionary measure, thoroughly wash the exposed area for at least 15 minutes. Remove contaminated clothing. Wash contaminated clothing before reuse. Consult a doctor if any adverse reaction to the product occurs.

First-aid measures after inhalation If symptoms such as irritation of the nose or throat are observed, take the person to fresh air. See a doctor if the situation does not improve.

First-aid measures after ingestion If large amounts are ingested (that is to say a teaspoon), give two glasses of water or milk to drink and seek medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation Occasional mild irritation to the nose and throat may occur.

Symptoms/injuries after skin contact Borax pentahydrate does not irritate the skin.

Symptoms/injuries after eye contact Borax pentahydrate is not irritating to the eyes.

Symptoms/injuries after ingestion If you eat more than a teaspoon, you can cause gastrointestinal problems.

Chronic symptoms Not applicable

4.3. Indications of any immediate medical attention and special treatment needed Not applicable

SECTION 5.- FIREFIGHTING MEASURES

5.1. Extinguishing media Product is not flammable. Use appropriate media for adjacent fire. Cool unopened containers with water

Suitable extinguishing media	Any means of firefighting can be used in nearby fires.
Unsuitable extinguishing media	Not applicable

5.2. Special hazard arising from the substance or mixture

Fire hazard	No inflammable.
Explosion hazard	No explosive.
Reactivity	Not applicable

5.3. Advice for firefighters

Protective equipment	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Emergency procedures	In the event of fire, cool tanks with water spray.Cool containers exposed to flames with water until well after the fire is out

SECTION 6. - ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions	
Protective equipment	Avoid dust formation. In the event of prolonged exposure and / or high concentrations of dust in the air, use a half-face or full-face respirator in accordance with applicable regulations
Emergency procedure.	

6.1.2. For emergency responders

Protective equipment	Do not attempt to take action without suitable protective equipment. For further information refer to section 8 Exposure controls/personal protection"
Emergency procedures	Ventilate area.

6.2. Environmental precautions

Borax pentahydrate are water soluble white granules / powders that can, at high concentrations, damage trees or vegetation by root absorption (see section 12).

6.3. Methods and material for containment and cleaning up.

Spills on ground	Vacuum, shovel, or sweep borax pentahydrate and place it in containers for disposal in accordance with applicable local regulations. Avoid contamination of bodies of water during cleaning and disposal. No personal protective equipment is needed to clean up spills on the floor.
Spills in water	When possible, remove intact containers from water. Advise the local authority that none of the affected waters should be used for irrigation or for the extraction of drinking water until natural dilution returns the boron value to its normal environmental level (see sections 12, 13 and 15).
Other information	Dispose of materials or solid residues at an authorized site.

6.4 Reference to other sections

For further information refer to section 8: Exposure-controls/personal protection.

SECTION 7.- HANDLING AND STORAGE

7.1. Precautions for safe handling

Precautions for safe handling	To maintain the integrity of the container and minimize the agglomeration of the product, the bags must be handled according to the FIFO (First in, first out) method of inventory. Good cleaning and prevention procedures must be followed to minimize dust generation and accumulation. Your provider can advise you on safe handling, contact the provider.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	No special handling precautions are required, but indoor dry storage is recommended. There are no specific requirements. Provide proper ventilation and store bags such as to prevent any accidental damage.
Incompatible products	The product should be kept away from strong reducing agents.

7.3 Specific end use(s) No additional information available.

SECTION 8.- EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Name	*ACGIH TLV*	*OSHA PEL*	*Europa (WELS/EH40)*
Borax Pentahydrate 12179-04-3	10 mg/m3	10 mg/m^3	ND

8.2. Exposure controls

Appropriate engineering controls	Establishments that store or use this material should be equipped with eyewash equipment and safety showers. Avoid the accumulation of dust in the air.
Hand protection	Gloves. Recommended: nitrile, neoprene or PVC.
Eye protection	Wear protective glasses. Wear tight-fitting glasses in dusty areas to reduce eye exposure
Skin and body protection	Wear suitable protective gloves to avoid skin exposure. Wear suitable protective clothing to minimize skin contact. NRB (nitrile rubber) is recommended. Do not use materials made from natural fibers.
Respiratory protection	Use a NIOSH / MSHA approved P2 filter dust mask if exposure limits are exceeded or if irritation or other symptoms are experienced.
Environmental exposure controls	Avoid release to the environment.

SECTION 9.- PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state:	Solid.	**Appearance:**	Solid.
Odor:	Odorless.	**Color:**	White
Molecular mass		291.35 g/mol	
Odor threshold		No data available.	
pH at 20 °C		9.3	
pH solution		No data available.	
Relative evaporation rate (butyl acetate=1)		No data available.	
Melting point		741°C (1365.8°F)	
Freezing point		No data available.	
Boiling point		1575 °C (2867°F)	
Flash point		Not applicable.	

Self ignition temperature	Not applicable.
Decomposition temperature	H_2O @ 120°C
Flammability (solid, gas)	Non flammable
Vapor pressure	No data available.
Relative density	No data available.
Density at 20°C	1.81 g/cm^3
Apparent Density	55-56 lbs/ft^3
Solubility	3.7% @ 20°C; 51.2% @ 100°C
Log Pow	No data available.
Log Kow	No data available.
Viscosity, kinematic	No data available.
Viscosity, dynamic	No data available.
Explosive properties	Non explosive.
Oxidizing properties	No data available.
Explosive limits	No data available.

9.2 Other information No additional information available.

SECTION 10.- STABILITY AND REACTIVITY

10.1 Reactivity	This material is not reactive under normal environmental conditions.
10.2 Chemical stability	Borax pentahydrate is a stable product, but when heated it loses water, eventually forming anhydrous borax ($Na_2B_4O_7$).
10.3 Possibility of hazardous reactions	Reaction with strong reducing agents such as metal hydrides, acetic anhydride, or alkali metals will generate hydrogen gas that could create an explosive hazard.
10.4 Conditions to avoid	Not applicable
10.5 Incompatible materials	Avoid contact with strong reducing agents such as metal hydrides, acetic anhydride, or alkali metals.
10.6 Hazardous decomposition products	Not applicable

SECTION 11.-TOXICOLOGICAL INFORMATION

11. 1. Information on toxicological effects

Name	LD_{50} oral	LD_{50} dermal	LC_{50} inhalation
Borax pentahydrate	3,200-3,500 mg/kg (rat)	> 2,000 mg/kg (rabbit)	>2.00 mg/l (4h) (rat)

Skin corrosion/irritation	Frequent and continuous contact with the skin can cause skin irritation.
Serious eye damage/irritation	Borax Pentahydrate is a serious eye irritant.
Respiratory or skin sensitization	After inhaling dust, the respiratory tract can become irritated.
Ingestión	Gastrointestinal symptoms.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenic effects	It is not classified as mutagenic.
Reproductive toxicity	It can impair fertility or harm the fetus for people pregnant.

Specific target toxicity (single exposure)	May cause respiratory irritation.
Specific target toxicity (repeat exposure)	Not classified.
Aspiration hazard	Not classified.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Boron is the 5 mol borax element used by convention to report the ecological effects of the borate product. It occurs naturally in seawater at an average concentration of 5 mg B / L and generally occurs in freshwater at a concentration of up to 1 mg B / L. In dilute aqueous solutions, the predominant species of boron present is undissociated boric acid.
Phytotoxicity: Boron is an essential micronutrient for healthy plant growth, however it can be harmful to boron sensitive plants in large amounts. Care must be taken to minimize the amount of boron released into the environment.
Algal toxicity: Green algae. *Scenedesmus subspicatus* 96 h EC10 = 24 mg B / L
Invertebrate toxicity: *Daphnies, Daphnia magna straus* 24 h EC50 = 242 mg B / L
Fish toxicity: sea water: *Dab, limanda limanda* 96 h CL50 = 74 mg B / L
Freshwater: rainbow trout,*S. gairdneri* (embryonic stage) CL50 de 24 days = 88 mg B / L LC50 of 32 days = 54 mg B / L
Goldfish, *Carassius auratus* (embryonic stage) CL50 of 7 days = 65 mg B / L CL50 of 3 days = 71 mh B/L

12.2 Persistence and degradability

Boron is natural and ubiquitous in the environment.

12.3 Bioaccumulative potential

In aqueous solution, the anhydrous borax was converted to substantially dissociated boric acid.

12.4 Mobility in soil

The product is soluble in water and is leachable through normal soil.

12.5 Other adverse effects

Other information There is no available data.

SECTION 13.- DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste treatment methods	Usually small amounts of borax pentahydrate can be discharged into the sewer. No special treatment is required; however, local authorities should be consulted about any specific local requirements. It is not recommended to send large quantities (> 1 ton) of products to the sewer. Such a product should be used, if possible, for a suitable application.
Waste disposal recommendations	Dispose of waste material in accordance with local, regional, national, and international regulations.

SECTION 14.- TRANSPORT INFORMATION

14.1.UN number	Not regulated
14.2. UN proper shipping name	Not regulated

14.3. Additional information

Other information	No supplementary information available.
Overland transport	No additional information available.
Transport by sea	No additional information available.
Air transport	No additional information available.

SECTION 15.- REGULATORY INFORMATION

15.1 US Federal regulations

Borax pentahydrate
TSCA – Inventory Act for the Control of Toxic Substances in the United States Section 8 (b).
DSL/NDSL - Canadian National Substances List / Non-Domestic Substances List. This product does not contain chemicals that are subject to the information requirements of Act and Title 40 of the Code of Federal Regulations, Part 372 Categories SARA 311/312.

15.2 International regulations

Applicable international standards: Food and Agricultural Organization Regulations, CEE DIRECTIVES, Director 76/116/EEC
Borax pentahydrate

15.3. Applicable Mexican standards:

Borax pentahydrate
Mexican Official Standard NOM-003-STPS-1999, Agricultural activities - Use of phytosanitary supplies or pesticides and supplies of plant nutrition or fertilizers - Safety and hygiene conditions. Mexican Official Standard NOM-182-SSA1-2010, Plant nutrient labeling. Mexican Official Standard NOM-002-SCT/2011List of the most commonly transported hazardous substances and materials.

SECTION 16.- OTHER INFORMATION

NFPA	NFPA health hazard	1	NFPA fire hazard	0	NFPA instability hazard	0	NFPA Special hazard	-
HMIS III	Health	1	Flammability	0	Physical	0	Personal Protection	E

E Splash goggles, Gloves, Synthetic apron, Vapor respirator



Made for: Quimica Pima, S.A. de C.V. Del Cobre No. 20 Parque Industrial. Hermosillo, Sonora, México. 83297.

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Revision note: In this last revision, the provisions of NOM-018-STPS-2015, a harmonized system for the identification and communication of hazards and risks due to dangerous chemicals in the workplace, were updated. The identification and communication of hazards and risks and minimum information from various sections were reclassified.

IMPORTANT NOTE: Information in this SDS is from available published sources and is believed to be accurate, but is not exhaustive and will be used only as a guide, which is based on current knowledge of the chemical substance or mixture and apply to the appropriate product for safety precautions. No warranty, express or implied, is made and Pima Chemicals & Fertilizers, LLC and Quimica Pima, S.A. de C.V. assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his application.

End of Safety Data Sheet