

Borate Wood Preservatives

Armor-Guard®

Soluble Borate Powder

Armor Guard is a borate powder that is dissolved in water for use. Add *Armor-Guard* to water in pail or bucket, stir until the solution is clear and apply with a low pressure sprayer. *Armor-Guard* protects un-infested wood from wood decay and wood destroying insects.

Like all borate treatments, exterior surfaces should be protected with one of our *Lifeline* exterior finish systems. *Armor-Guard* stays near the surface and we recommend that it be reapplied if the finish system is physically or chemically removed.



Surface Preparation:
Must be applied to clean and dry bare wood.

Application Rates:
Approx. 200 sq.ft. per gallon of mixed solution. A 17 lb. pail covers approx. 3400 sq.ft.

Application Temperature:
40° F to 90° F

Application Methods:
Low pressure sprayer. Drill and inject.

of Coats:
1 coat application. Mix 1 pound (4 cups or 2 of the enclosed scoops) of powder with one gallon water for use.

Drying Time:
1 to 3 days.

Clean up:
Soap and water.

Packaging:
1 lb. bag.
17 lb. pail.

Storage/Shelf Life:
Keep dry.
5 years.

Shell-Guard® Concentrate

Borate Wood Preservative Concentrate

Shell-Guard Concentrate is a combination of glycols and borate that must be mixed an equal volume of water for use. The diluted solution is applied to bare wood and impregnates the wood fibers with the active borate ingredient eliminating and providing protection against wood decay fungi and wood consuming insects.

Like all borate-based wood preservatives the diluted *Shell-Guard* solution must be applied to unfinished bare wood. One application of diluted *Shell-Guard Concentrate* is permanent when exterior wood surfaces remain protected with one of our *Lifeline* exterior finish systems.

Surface Preparation:
Must be applied to clean and dry bare wood.

Application Rates:
1 gallon of diluted solution to 108 sq.ft. of wood surface area.
1 gallon of concentrate covers 215 sq.ft. of wood surface.

Application Temperature:
40° F to 90° F

Application Methods:
Low pressure sprayer. Drill and inject.

of Coats:
1 coat application.
Mix 1:1 with water for use.

Drying Time:
2 to 3 weeks. Wash surface with *Log Wash* before applying finish.

Clean up:
Soap and water.

Packaging:
1 gallon container.
2.5 gallon container.
5 gallon carton.

Storage/Shelf Life:
Freeze/thaw stable.
5 years.



Cobra™ Rods

Cobra Rods are a way to spot treat decay prone areas such as log ends that are already coated with a finish. Once inserted into damp or wet wood the borate/copper complex in Cobra Rods dissolves spreading the active ingredients into areas surrounding the rod. This eliminates active decay fungi and helps prevent rot for 8 to 10 years.



Cobra Rods are 7/16" in diameter and two inches long. A 1/2" diameter drill bit is used for installation. The installation holes may be plugged with the accompanying plastic plugs and hidden with Energy Seal. A typical six to eight inch round log end will require two 2" long Cobra Rods inserted within 4 inches of the butt end.

Cobra™ Rods are a trademark of Genics Inc., Canada

Washington 1-800-548-1231; Tennessee 1-800-548-3554; Montana 1-800-479-7090;
Minnesota 1-877-244-6548; Colorado 1-800-433-8781

www.permachink.com

**PERMA-CHINK
SYSTEMS, INC.**



Wood Preservative / Insect Control

Preservative for protection against decay fungi, and wood-destroying insects

ACTIVE INGREDIENT:

Disodium Octaborate Tetrahydrate ----- 98% by weight
(Na₂B₈O₁₃ • 4H₂O)

INERT INGREDIENTS: ----- 2% by weight

(Product contains 2% H₂O-absorbed moisture)

EPA Reg. No. 59905-9

CAUTION

KEEP OUT OF REACH OF CHILDREN

NOT FOR FOOD OR DRUG USE

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION:

Harmful if swallowed. Avoid contact with eyes. Wash thoroughly after handling. Avoid contamination of food and feed. Do not leave container where children or animals may gain access.

ENVIRONMENTAL HAZARDS

Armor-Guard or Armor-Guard solutions carelessly spilled or applied to cropland or growing plants, including trees and shrubs, may kill or seriously retard plant growth. This pesticide is toxic to fish and wildlife. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

Personal Protective Equipment (PPE)

Mixers/loaders, applicators and other handlers must wear: Long sleeve shirt and long pants, shoes plus socks, protective eyewear, chemical resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride or Viton) and, in confined spaces, a respirator with an organic removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge with any N, R, P or HE prefilter.

USER SAFETY RECOMMENDATIONS

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Users should remove personal protection equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible wash thoroughly.

FIRST AID

IF SWALLOWED	Immediately call a poison control center or doctor for treatment advice. Have person drink 1 to 2 glasses of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
IF IN EYES	Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
IF ON SKIN	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 - 20 minutes. Call a poison control center for treatment advice.
IF INHALED	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

In case of emergency, have the product container or label with you when calling a Poison Control Center or doctor or going for treatment.

See back page for Directions for Use.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Storage: Store in a dry place. Do not store where children or animals may gain access.

Pesticide disposal: Wastes resulting from the use of this product may be disposed of on site or at approved waste disposal facility.

Container disposal: Do not reuse empty container. Consult Federal, State, or Local authorities for approved disposal procedures.

Manufactured by:

Perma-Chink Systems, Inc.

1605 Prosser Road, Knoxville, TN 37914
1-800-548-3554

Material Safety Data Sheet



IDENTITY (As Used on Label and List)
ARMOR-GUARD

Section I

Manufacture's Name Perma-Chink Systems, Inc.	Emergency Telephone Number: CHEMTREC 1-800-424-9300
Address (Number, Street, City, State, and ZIP code) 1605 Prosser Road	Telephone Number for Information: 865-524-7343
Knoxville, TN 37914	Date of Preparation 1/02/07
Preparer's Name Sean Gahan	Signature of Preparer (optional)

Section II – Hazardous Ingredients/Identity Information

Hazardous Component (Specific Chemical Identity, Common Name(s))	CAS #	OSHA / PEL	ACGIH TLV	Other Limit Recommended	% (optional)
Disodium Octaborate Tetrahydrate	12280-03-4	5 mg/m ³ (respirable dust) 15 mg/m ³ (total dust)	10 mg/m ³		

Section III – Physical/Chemical Characteristics

Boiling Point: N/A	Specific Gravity (H ₂ O = 1) 2.25
Vapor Pressure (mm Hg.) N/A	Melting Point: 815°C % Volatile (Volume) N/A
Vapor Density (Air = 1) N/A	Evaporation Rate (Butyl Acetate = 1) N/A
Solubility in Water 9.7 % @ 20°C	
Appearance and Odor White, odorless, crystalline solid	

Section IV – Fire and Explosion Hazard Data

Flash Point (Method Used) N/A	Flammable Limitations N/A	LEL N/A	UEL N/A
Extinguishing Media Any fire extinguishing media may be used on nearby fires.	N/A		
Special Fire Fighting Procedures	NFPA Rating: Health = 1, Flammability = 0, Reactivity = 1		
Unusual Fire and Explosion Hazards Product itself is a flame retardant.	Reactions with strong reducing agents such as metal hydrides or alkali metals will generate hydrogen gas, which could create an explosive hazard.		

Section V – Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	✓	None Known
Incompatibility (Materials to Avoid)	Reactions with strong reducing agents such as metal hydrides or alkali metals will generate hydrogen gas, which could create an explosive hazard.		
Hazardous Decomposition or Byproducts	None known		
Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	✓	None Known

Section VI – Health Hazard Data

Routes of Entry Inhalation Yes Skin Yes Ingestion Yes Eye Contact Yes

Health Hazards (Acute and Chronic)

Carcinogenicity NO NTP NO IARC Monographs NO OSHA Regulated NO

Signs and Symptoms of Exposure:

Symptoms of accidental exposure might include nausea, vomiting, diarrhea, delayed skin redness and peeling.

Medical Conditions: Generally aggravated by exposure.

Emergency and First Aid Procedures:

Eye contact: Flush with clean water for at least 15 minutes; seek medical attention.

Ingestion: Small amounts (one teaspoon) will cause no harm to healthy adults. If larger quantity are ingested, give two glasses of water and seek medical attention.

Skin : Non-irritating.

Inhalation: Remove to fresh air.

Section VII – Precautions for Safe Handling and Use

Steps to be taken in Case Material is Released or Spilled

Vacuum, shovel, or sweep up and dispose in accordance with applicable Federal, State, and Local regulations.

Waste Disposal Method

Small quantities can usually be disposed of at landfill sites; however, dispose of material in accordance with all applicable Federal, State, and Local regulations.

Precautions to be taken in Handling and Storing

No special precautions. Store in a dry indoor location.

Other Precautions

Section VIII – Control Measures

Respiratory Protection (Specify Type)

None if below PEL limits

Ventilation	Local Exhaust Yes	Special
	Mechanical (general)	Other
Protective Gloves	None required for normal use	Eye Protection Goggles if extremely dusty.

Other Protective Clothing or Equipment

None required for normal use

Work/Hygenic Practices

The information contained herein is, to the best of Perma-Chink Systems, Inc. knowledge, accurate as of the data indicated. Since the information contained herein may be applied under conditions beyond our control and with which we may be unfamiliar, and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume responsibility for the results of its use. This information is furnished on the condition that the person receiving it shall make his own determination as to the suitability of the material for his particular purpose and on the condition that he assumes the risk of his use thereof.