MATERIAL SAFETY DATA SHEET

Date of Issue: May 23, 2002

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION:

Product Name: PRO-JOE-S Roach Bait / Gel Formula 15
Grade: Boric Acid - Manufacture Grade (MG)
Product Use: Insecticide formulation for cockroaches
Chemical Formula: H_3BO_3 @ 15% & Inerts @ 85%
A chemical name/ synonyms: Boric Acid, Orthoboric Acid, , Boracic Acid Boric Acid MG, Boric Acid Insecticide
Chemical Family: Inorganic Borates
CAS Registry number: 10043-35-3 (11113-50-1)
U.S.A. EPA Pesticide Reg. Number: 54452-6

Manufacturer:
Blue Diamond Ext. & Mfg. Co., Inc.
Mooresburg, TN 37811

Factory Sales and Distribution:
Blue Diamond Distribution, LLC
PO Box 953
Rogersville, TN 37847
Phone: 1-423-272-9670
Fax: 1-423-921-8530
Toll Free Fax: 1-888-ANT-AWAY

2. COMPOSITION / INFORMATION ON INGREDIENTS:

This product contains 15 percent (%) Boric Acid (H_3BO_3), which is hazardous under the OSHA Hazard Communication Standard and under the Canadian Controlled Products Act (WHMIS), based on animal chronic toxicity studies. Refer to Sections 3 and 11 for details on hazards.

3. HAZARD IDENTIFICATION:

Emergency Overview: PRO-JOE-S Roach Bait / Gel Formula 15 is a beige in color, odorless Gel substance that is not flammable, combustible, or explosive and has low acute oral and dermal toxicity.

Potential Ecological Effects: Large amounts of Boric Acid can be harmful to plants and other species. Therefore, releases to the environment should be minimized. Since **PRO-JOE-S Roach Bait / Gel Formula 15** is not a dust, releases into the environment in regards to a dust factor, is not a concern.

Potential Health Effects:
Routes of Exposure: Inhalation is not a route of exposure with **PRO-JOE-S Roach Bait / Gel Formula 15** because of its zero (0) rating. Dermal exposure is not usually a concern because Boric Acid, the Technical Chemical of **PRO-JOE-S Roach Bait / Gel Formula 15**, is poorly absorbed through intact skin.
Inhalation: None
Eye Contact: May cause slight, reversible conjunctivitis.
Skin Contact: Not an irritant to intact skin. May cause slight irritation on damaged skin. There is no evidence of tissue damage.
Ingestion: Products containing Boric Acid are NOT intended for ingestion**. PRO-JOE-S Roach Bait / Gel Formula 15** has a low acute toxicity. Small amounts (e.g., a teaspoonful) of Boric Acid at greater than 99 percent (%) swallowed accidentally are not likely to cause effects; swallowing amounts larger than that may cause gastrointestinal symptoms.
Cancer: Boric Acid, the technical chemical of **PRO-JOE-S Roach Bait / Gel Formula 15**, is not a known carcinogen.
Reproductive/ Developmental: None applicable since **PRO-JOE-S Roach Bait / Gel Formula 15** is not in a powder or dust form, hence no exposure.
Target Organs: None
Signs and Symptoms of Exposure: Symptoms of accidental over-exposure to Boric Acid have been associated with ingestion or absorption through large areas of damaged skin. These may include nausea, vomiting and diarrhea, with delayed effects of skin redness and peeling. Since **PRO-JOE-S Roach Bait / Gel Formula 15** is in the form of a Gel Composition and not a dust, this would not be a concern. Refer to Section 11 for details on Toxicological data.

4. First Aid Measures:

Inhalation: None - there is no harm from breathing. **PRO-JOE-S Roach Bait / Gel Formula 15** is not a powder or dust.
Eye Contact: Flush eyes with plenty of water. Call a physician if irritation persists for more than 30 minutes.
Skin Contact: Wash with plenty of water.
Ingestion: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. If person is unconscious, do not give anything by mouth and do not induce vomiting.
Note to Physicians: Observation is only required for adult ingestion in the range of 4 - 8 grams of Boric Acid at greater than 99 percent (%). Since **PRO-JOE-S Roach Bait / Gel Formula 15** is formulated at 15 percent (%) of Boric Acid, the observation range for adults would be the range of about 12 - 24 grams of **PRO-JOE-S Roach Bait / Gel Formula 15**. For ingestion of larger amounts, maintain adequate kidney function and force fluids. Gastric lavage is recommended for symptomatic patients only. Hemodialysis should be reserved for massive acute ingestion or patients with renal failure. Boron analysis of urine or blood is only useful for documenting exposure and should not be used to evaluate the severity of poisoning or to guide treatment. Refer to Section 11 for Details.

5. Fire Fighting Measures:

General Hazard: None, because **PRO-JOE-S Roach Bait / Gel Formula 15** is formulated from Boric Acid which is not flammable, combustible or explosive. Boric Acid is itself a flame retardant.
Extinguishing Media: Any fire extinguishing media may be used on nearby fires.
Flammability Classification (29 CFR 1910.1200): Non-flammable solid.

6. Accidental Release Measures:

General: PRO-JOE-S Roach Bait / Gel Formula 15 is a water soluble beige colored Gel Composition that may, at high concentrations, cause damage to trees or vegetation by root absorption. (Refer to Ecological information, Section 12, for specific information.)
Land Spill: Vacuum, shovel or sweep up **PRO-JOE-S Roach Bait / Gel Formula 15** and place in containers for disposal in accordance with applicable local regulations. Avoid contamination of water bodies during cleanup and disposal. No personal protective equipment is needed to cleanup land spills.
Spillage Into Water: Wherever possible, remove any intact containers from the water. Advise local water authority that none of the affected water should be used for irrigation or for the abstraction of potable water until natural dilution returns the boron value to its normal environmental background level. (Refer to Sections 12, 13 and 15 for additional information.) **PRO-JOE-S Roach Bait / Gel Formula 15** is a non-hazardous waste when spilled or disposed of, as defined in the Resource Conservation and Recovery Act (RCRA) regulations (40 CFR 261). (Refer to Regulatory information, Section 15, for additional references.)

7. Handling and Storage:

General: No special handling precautions are required, but dry, indoor storage is recommended. To maintain package integrity, the product should be handled on a first-in, first-out basis.
Storage: Ambient
Storage pressure: Atmospheric
Special Sensitivity: None

8. Exposure Controls / Personal Protection:

Engineering Controls: None **PRO-JOE-S Roach Bait / Gel Formula 15** is not a Nuisance Dust.
Personal Protection: None Required
Occupational Exposure Limits: None

9. Physical and Chemical Properties:

Appearance: Light Beige, Odorless Gel Composition **PH @ 5.2 as is**
Specific Gravity: 10.81 lbs. / Gal.
Melting Point: N/A
Heat of Solution: N/A
Solubility in Water: Partially soluble in water with suspended and settled ingredients.

10. Physical and Chemical Properties:

General: PRO-JOE-S Roach Bait / Gel Formula 15 is a product of Boric Acid which is stable, but when heated it loses water, first forming metaboric acid (HBO_2), and on further heating it is converted into boric oxide (B_2O_3).
Incompatible Materials and Conditions to Avoid: PRO-JOE-S Roach Bait / Gel Formula 15 is a product of Boric Acid, of which the Boric Acid reacts as a weak acid which may cause corrosion of base metals. Reaction with strong reducing agents, such as metal hydrides or alkali metals, will generate hydrogen gas, which could create an explosive hazard.
Hazardous Decomposition: None

11. Toxicological Information:

Acute Toxicity:
Ingestion: Low acute oral toxicity; the acute oral toxicity for **PRO-JOE-S Roach Bait / Gel Formula 15** is between 10,500 and 12,300 mg/kg of body weight, classifying **PRO-JOE-S Roach Bait / Gel Formula 15** in toxicity Category IV Core Minimum for ingestion.
Skin / Dermal: Low acute dermal toxicity; the dermal toxicity in rabbits is greater than 6,000 mg/kg of body weight, classifying **PRO-JOE-S Roach Bait / Gel Formula 15** in Toxicity Category IV Minimum for Skin/ Dermal. **PRO-JOE-S Roach Bait / Gel Formula 15** is poorly absorbed through intact skin.
Inhalation: NONE APPLICABLE
PRO-JOE-S Roach Bait / Gel Formula 15 is in the form of a compound and not in a powder or dust form. Therefore, **PRO-JOE-S Roach Bait / Gel Formula 15** cannot be inhaled, classifying **PRO-JOE-S Roach Bait / Gel Formula 15** as zero (0) rating for inhalation.
Skin Irritation: Application of **PRO-JOE-S Roach Bait / Gel Formula 15** to unabraded skin of rabbits produced a primary skin irritation score of 2.13, classifying **PRO-JOE-S Roach Bait / Gel Formula 15** in Toxicity Category IV Core Minimum for skin effects.
Eye Irritation: Installation of **PRO-JOE-S Roach Bait / Gel Formula 15** into the eyes of rabbits produced a maximum mean irritation score of 4.7/ 110.0 in unwashed eyes, classifying **PRO-JOE-S Roach Bait/ Gel Formula 15** in Toxicity Category IV Core Minimum for eye irritation.
Sensitization: PRO-JOE-S Roach Bait / Gel Formula 15 is not a skin sensitizer.

OTHER:
Reproductive / Developmental: None Applicable. **PRO-JOE-S Roach Bait / Gel Formula 15** is not meant for consumption and is not a dust; there are no exposures to cause reproductive and developmental problems.
Carcinogenicity / Mutagenicity: None Applicable. There are no exposures relative to **PRO-JOE-S Roach Bait / Gel Formula 15.**
Human Data: None Applicable. There are no dust exposures relative to **PRO-JOE-S Roach Bait / Gel Formula 15.**

12. Ecological Information:
General: PRO-JOE-S Roach Bait / Gel Formula 15 is a 15 percent (%) Boric Acid product. However, it is reformulated into a moist Gel Composition that contains no dust particles that can be released into the environment. The ecological information in Section 12 is the Ecotoxicity data on Boric Acid, Manufactures Grade MG at greater than 99 percent (%).
In case of accidental spills of **PRO-JOE-S Roach Bait / Gel Formula 15** into the environment, the calculations in this section should be multiplied by 6.66 to determine the Ecotoxicity on **PRO-JOE-S Roach Bait / Gel Formula 15.**

ECOTOXICITY DATA:

General: Boron (B) is the element in Boric Acid which is used by convention to report borate product ecological effects. It occurs naturally in seawater at an average concentration of 5 mg B/L and generally occurs in freshwater at concentrations up to 1 mg B/L. In dilute aqueous solutions the predominant boron species present is undissociated Boric Acid. To convert Boric Acid into equivalents Boron (B) content, multiply by 0.1748.

Phytoxicity: Boron is an essential micronutrient for healthy growth of plants; however, it can be harmful to born sensitive plants in high quantities. Care should be taken to minimize the amount of Boric Acid released to the environment.

Algal Toxicity: Green algae, Scenedesmus subspicatus
96 - hr EC10 = 24 mg B/L +

Invertebrate Toxicity 8:
Damphnids, Daphnia magna straus
48 - hr LC 50 = 133 mg B/L
21 - day NOEC - Loec = 6-13 mg B/L

Test Substance: + Sodium Tetraborate
+ Boric Acid
+

Fish Toxicity:
Seawater 9:
Dab, Limanda limanda
96-hr LC 50 = 74 mg B/L +

Freshwater 10:
Rainbow trout, S. gairdneri (embryo-larval stage)
24 - day LC 50 = 150 mg B/L ++
32 - day LC 50 = 100 mg B/L ++

Goldfish, Carassius auratus (embryo-larval stage)
7 - day LC 50 = 46 mg B/L ++
3 - day LC 50 = 178 mg B/L ++

Environmental Fate Data
Persistence/ Degradation: Boron is naturally occurring and ubiquitous in the environment. Boric Acid and decomposes in the environment to natural borate.

Octanol / water partition coefficient:
Log Pow: 0.7570 at 25 degrees C

Soil Mobility: Boric Acid is soluble in water and is leachable through normal soil

13.) Disposal Considerations:

Disposal Guidance:

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

Container Disposal: Do not reuse empty container. Securely wrap in newspaper and discard in trash.

RCRA (40 CFR 261) PRO-JOE-S Roach Bait/ Gel Formula 15 is not listed under any sections of the Federal Resource Conservation and Recovery Act (RCRA)

NPRI 9Canada: PRO-JOE-S Roach Bait / Gel Formula 15 is not listed on the Canadian National Pollutant Release Inventory

Refer to Section 15 for additional regulatory information.

14. Transport Information:

Hazardous Classification: Pro-Joe-S Roach Bait / Gel Formula 15 is not regulated by the US Department of Transportation (DOT) and is therefore not considered a hazardous material/ substance.

International Transportation: PRO-JOE-S Roach Bait / Gel 15 has no DOT UN number, and is not regulated under international rail, road, water or air transport regulations.

TDG Canadian Transportation: PRO-JOE-S Roach Bait / Gel Formula 15 is not regulated under transportation of Dangerous Goods (TDG).

15. Regulatory Information:

OSHA / CalOSHA: This MSDS document meets the requirements of both OSHA (29 CFR 1910. 1200) and CalOSHA (Title 8 CCR 5194 (g) hazard communication standards. Refer to Section 8 for regulatory exposure limits.

WHMIS Classification: PRO-JOE-S Roach Bait / Gel Formula 15 is a formulation of 15 percent (%) Boric Acid MG of which is classified as Class D - Division 2 A under Canadian WHMIS guidelines.

FIFRA: PRO-JOE-S Roach Bait / Gel Formula 15 is registered with the EPA (EPA Reg. No. 54452-6), in accordance with Section 3 of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as a pesticide product. Refer to EPA approved product label for additional product hazard and precautionary information.

Chemical Inventory Listing: PRO-JOE-S Roach Bait / Gel Formula 15 is a product of 15 percent (%) Boric Acid MG (10043-35-3) which appears on several chemical inventory lists (including the EPA TSCA inventory, Canadian DSL, European EINECS, Japanese MITI, Australian and Korean lists) under the CAS No. Representing the anhydrous form of this inorganic salt.

U.S. EPA TSCA Inventory	**10043-35-3**
Canadian DSL	**10043-35-3**
EINECS	**233-139-2**
South Korea	**(1)-63**

RCRA: PRO-JOE-S Roach Bait / Gel Formula 15 is not listed as a hazardous waste under any sections of the Resource Conservation and Recovery Act (RCRA) or regulations 40 CFR 261 *et seq.*

Superfund: CERCLA / SARA. **PRO-JOE-S Roach Bait / Gel Formula 15** is not listed under CERCLA (Comprehensive Environmental Response Compensation and Liability Act) or its 1986 amendments, SARA (Superfund Amendments and Reauthorization Act), including substances listed under Section 313 of SARA, Toxic Chemicals, 42 USC 11023, 40 CFR 372.65, Section 302 of SARA, Extremely Hazardous Substances list, 42 USC 9604, 40 CFR 302.

Safe Drinking Water Act (SDWA): PRO-JOE-S Roach Bait / Gel Formula 15 is not regulated under the SDWA, 42 USC 300 g - 1, 40 CFR 141 *et seq*. Consult state and local regulations for possible water quality advisories regarding boron compounds.

Clean Water Act (CWA) (Federal Water Pollution Control Act): 33 USC 1251 *et seq.*

a) **PRO-JOE-S Roach Bait / Gel Formula 15** is not itself a discharge covered by any water quality criteria of Section 304 of the CWA, 33 USC 1314.

b) It is not on the Section 307 List of Priority Pollutants, 33 USC 1317, 40 CFR 129.

c) It is not on the Section 311 List of Hazardous Substances, 33 USC 1321, 40 CFR 116.

Canadian Drinking Water Guideline: An " Interim Maximum Acceptable Concentration" (IMAC) for boron is currently set at 5 mg B/L.

IARC: The International Agency for Research on Cancer (IARC) (a unit of the World Health Organization) does not list or categorize Boric Acid (the technical chemical of **PRO-JOE-S Roach Bait / Gel Formula 15**) as a carcinogen.

NTP Biennial Report on Carcinogens: PRO-JOE-S Roach Bait / Gel Formula 15 or Boric Acid is not listed.

OSHA Carcinogen: PRO-JOE-S Roach Bait / Gel Formula 15, or Boric Acid, is not listed.

California Proposition 65: PRO-JOE-S Roach Bait / Gel Formula 15 or Boric Acid is not listed on the Proposition 65 list of carcinogens or reproductive toxicant.

Clean Air Act (Montreal Protocol): Boric Acid, the technical chemical of **PRO-JOE-S Roach Bait / Gel Formula 15**, was not manufactured with and does not contain any Class I or Class II ozone depleting substances.

16. OTHER INFORMATION:

References on Inorganic Borates: Refer to Material Safety Data Sheet of 20 Mule Team Boric Acid - Manufacture Grade.

Product Label Text Hazard Information: Refer to EPA product specimen label for additional product hazard and precautionary information.