



# Safety Data Sheet

Issue Date: 19-Aug-2013

Revision Date: 04-Sept-2015

Version 2

## 1. IDENTIFICATION

### Product Identifier

Product Name

**BORRADA**

### Other means of identification

SDS #

ADAMA-021

Registration Number(s)

EPA Reg. No. 66222-191

UN/ID No

UN2902

### Recommended use of the chemical and restrictions on use

Recommended Use

EPA registered pesticide.

### Details of the supplier of the safety data sheet

#### Manufacturer Address

Makhteshim Agan of North America, Inc. (d/b/a ADAMA)  
3120 Highwoods Blvd., Suite 100  
Raleigh, NC 27604  
1-919-256-9300

### Emergency Telephone Number

Emergency Telephone (24 hr)

For fire, spill and/or leak contact INFOTRAC:  
1-800-535-5053 (North America) 1-352-323-3500 (International)  
For medical emergencies and health/safety inquiries, contact PROSAR:  
1-877-250-9291

## 2. HAZARDS IDENTIFICATION

This chemical is a product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-EPA registered chemicals. Please see Section 15 for additional EPA information.

**Appearance** Yellow liquid

**Physical State** Liquid

**Odor** Pungent

### Classification

Acute toxicity – Inhalation (Dusts/Mists)	Category 4
Acute toxicity - Oral	Category 4
Carcinogenicity	Category 1B
Reproductive toxicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 1
Skin sensitization	Category 1

### Hazards Not Otherwise Classified (HNOC)

Causes mild skin irritation

### Signal Word

**Danger**

**Hazard Statements**

Harmful if inhaled  
 Harmful if swallowed  
 May cause cancer  
 May damage fertility or the unborn child  
 Causes damage to organs through prolonged or repeated exposure  
 May cause an allergic skin reaction

**Precautionary Statements - Prevention**

Obtain special instructions before use  
 Do not handle until all safety precautions have been read and understood  
 Use personal protective equipment as required  
 Wash face, hands and any exposed skin thoroughly after handling  
 Do not eat, drink or smoke when using this product  
 Use only outdoors or in a well-ventilated area  
 Do not breathe dust/fume/gas/mist/vapors/spray  
 Contaminated clothing must not be allowed out of the workplace

**Precautionary Statements - Response**

If exposed or concerned: Get medical advice/attention  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/ attention.  
 Wash contaminated clothing before reuse.

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other Hazards**

Very toxic to aquatic life

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Abamectin	71751-41-2	1.8-2.0
Proprietary Solvent	Proprietary	<10
Proprietary Additive	Proprietary	<1

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.\*\*

### 4. FIRST-AID MEASURES

**First Aid Measures****General Advice**

If exposed or concerned: Get medical advice/attention. When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

<b>Eye Contact</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Skin Contact</b>	IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/ attention. Take off contaminated clothing and wash it before reuse.
<b>Inhalation</b>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Give oxygen if breathing is difficult. If breathing has stopped, call 911, give artificial respiration. Call a POISON CENTER or doctor/physician.
<b>Ingestion</b>	IF SWALLOWED: call a poison control center or physician immediately. Rinse mouth. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

### **Most important symptoms and effects**

<b>Symptoms</b>	Causes mild skin irritation. May cause eye damage if direct contact occurs. May cause respiratory irritation. May cause gastrointestinal disturbance. Nausea. Vomiting.
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### **Indication of any immediate medical attention and special treatment needed**

<b>Notes to Physician</b>	Treat symptomatically.
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## **5. FIRE-FIGHTING MEASURES**

### **Suitable Extinguishing Media**

Foam. Carbon dioxide (CO2). Dry chemical.

**Unsuitable Extinguishing Media** Not determined.

### **Specific Hazards Arising from the Chemical**

Not determined.

**Hazardous Combustion Products** Combustion products include but are not limited to carbon monoxide and carbon dioxide. Low molecular weight hydrocarbons. Alcohols.

### **Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Prevent human exposure to fire, fumes, smoke and products of combustion. Evacuate non-essential personnel.

## **6. ACCIDENTAL RELEASE MEASURES**

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

<b>Personal Precautions</b>	Use personal protection recommended in Section 8. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.
<b>Environmental Precautions</b>	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

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

<b>Methods for Containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for Clean-Up</b>	Contain and collect with an inert absorbent and place into an appropriate container for disposal. Clean the floor with detergent and water. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### **Advice on Safe Handling**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Do not contaminate water, food or feed by storage, disposal or by cleaning equipment.

### Conditions for safe storage, including any incompatibilities

#### **Storage Conditions**

Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep/store only in original container. Store at ambient conditions. Store locked up.

#### **Incompatible Materials**

None known based on information supplied.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Proprietary Additive	TWA: 2 mg/m <sup>3</sup> inhalable fraction and vapor	(vacated) TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>

### Appropriate engineering controls

#### **Engineering Controls**

Please refer to the product label. Use only with adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

### Individual protection measures, such as personal protective equipment

#### **Eye/Face Protection**

Protective eyewear (e.g. goggles or full-face shield).

#### **Skin and Body Protection**

Chemical resistant, impermeable gloves. Coveralls over long- or short-sleeved shirt and long pants, chemical-resistant footwear plus socks and head covering (for overhead exposure). Chemical-resistant apron when cleaning equipment, mixing or loading.

#### **Respiratory Protection**

Ensure adequate ventilation, especially in confined areas. In case of inadequate ventilation wear respiratory protection.

#### **General Hygiene Considerations**

Wash face, hands and any exposed skin thoroughly after handling. Take off all contaminated clothing and wash it before reuse.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

**Physical State**  
**Appearance**  
**Color**

Liquid  
Yellow liquid  
Yellow

**Odor**  
**Odor Threshold**

Pungent  
Not determined

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	4.26	
Melting Point/Freezing Point	Not available	
Boiling Point/Boiling Range	Not available	
Flash Point	96.7 °C / 206 °F	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Liquid-not applicable	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	
Vapor Density	Not determined	
Specific Gravity	Not determined	
Water Solubility	Not determined	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	42.5 centipoise @ 23°C	
	21.5 centipoise @40°C	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	
Density	0.946 g/cc @ 23°C	
	0.942 g/cc @ 40°C	

## 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions.

### Chemical Stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

#### **Hazardous Polymerization**

Hazardous polymerization does not occur.

### Conditions to Avoid

Keep out of reach of children.

### Incompatible Materials

None known based on information supplied.

### Hazardous Decomposition Products

Thermal decomposition may produce the following: Carbon monoxide and carbon dioxide. Low molecular weight hydrocarbons. Alcohols.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Eye Contact</b>	Avoid contact with eyes.
<b>Skin Contact</b>	Causes mild skin irritation. May cause an allergic skin reaction.
<b>Inhalation</b>	Harmful if inhaled.
<b>Ingestion</b>	Harmful if swallowed.

### Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Proprietary Solvent	= 3598 mg/kg ( Rat )	= 8 g/kg ( Rabbit )	= 3.1 mg/L ( Rat ) 4 h
Abamectin 71751-41-2	28.47 mg/kg	200-2000 mg/kg	0.055-0.21 mg/l
Proprietary Additive	= 890 mg/kg ( Rat )	-	-

### Information on physical, chemical and toxicological effects

**Symptoms** Please see section 4 of this SDS for symptoms.

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

**Carcinogenicity** May cause cancer.

Chemical Name	ACGIH	IARC	NTP	OSHA
Abamectin 71751-41-2		Group 2A		X
Proprietary Additive		Group 3		

#### Legend

**IARC (International Agency for Research on Cancer)**

Group 2A - Probably Carcinogenic to Humans

Group 3 IARC components are "not classifiable as human carcinogens"

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

X - Present

**Reproductive toxicity** May damage fertility or the unborn child.

**STOT - repeated exposure** Causes damage to organs through prolonged or repeated exposure.

### Product Information (Numerical measures of toxicity)

**Acute Oral LD50 (Rat):** 310.2 mg/kg

**Acute Dermal LD50 (Rabbit):** >2,000 mg/kg

**Acute Inhalation LC50 (Rat):** >2.01 mg/L (4-hr)

**Eye Irritation:** Mildly irritating.

**Dermal Irritation:** Moderately irritating.

**Dermal Sensitization:** A contact skin sensitizer.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Harmful to aquatic life with long lasting effects. Very toxic to aquatic life. This pesticide is toxic to fish and wildlife. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from target areas. Do not contaminate water when disposing of equipment wash water or rinsate. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. Use of this product may pose a risk to threatened and endangered species of fish, amphibians, crustaceans (including fresh water shrimp), and insects. All use of this product in the State of California must comply with the directions of the California Endangered Species Project. Before using this product in California, consult with your county agriculture commissioner to determine use limitations that apply in your area. This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a medium potential for reaching both surface water and aquatic sediment via runoff for several weeks to months after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of abamectin from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

### Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Proprietary Solvent	500: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50	832: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 1072: 96 h <i>Pimephales promelas</i> mg/L LC50 static 1400: 96 h <i>Poecilia reticulata</i> mg/L LC50 static		4897: 48 h <i>Daphnia magna</i> mg/L EC50
Abamectin 71751-41-2		Rainbow Trout LC50: 4.3 µg/l		<i>Daphnia Magna</i> LC50: 0.47 µg/l
Proprietary Additive	6: 72 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 0.42: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50	5: 48 h <i>Oryzias latipes</i> mg/L LC50		

### Persistence/Degradability

Not determined.

### Bioaccumulation

Not determined.

### Mobility

Chemical Name	Partition Coefficient
Proprietary Solvent	-0.46
Proprietary Additive	4.17

### Other Adverse Effects

Not determined

## 13. DISPOSAL CONSIDERATIONS

### Waste Treatment Methods

#### **Disposal of Wastes**

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

#### **Contaminated Packaging**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**California Hazardous Waste Status**

Chemical Name	California Hazardous Waste Status
Abamectin 71751-41-2	Toxic

**14. TRANSPORT INFORMATION****DOT**

Note: Packages with inner packaging not over 5 liters (1.3 gallons) each may be reclassified as Limited Quantity.

Inner packages greater than 5L/ 1.3 gal:

**UN/ID No** UN2902  
**Proper Shipping Name** Pesticides, liquid, toxic, N.O.S. (abamectin)  
**Hazard Class** 6.1  
**Packing Group** III

**IATA**

**UN/ID No** UN2902  
**Proper Shipping Name** Pesticides, liquid, toxic, N.O.S. (abamectin)  
**Hazard Class** 6.1  
**Packing Group** III  
**Marine Pollutant** Yes

**IMDG**

**UN/ID No** UN2902  
**Proper Shipping Name** Pesticides, liquid, toxic, N.O.S. (abamectin)  
**Hazard Class** 6.1  
**Packing Group** III  
**Marine Pollutant** Yes

**15. REGULATORY INFORMATION****International Inventories**

**TSCA** All ingredients are listed or exempt from listing on Chemical Substance Inventory

**Legend:**

*TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*

**US Federal Regulations****SARA 311/312 Hazard Categories**

**Acute Health Hazard** Yes  
**Chronic Health Hazard** Yes  
**Fire Hazard** No  
**Sudden Release of Pressure Hazard** No  
**Reactive Hazard** No

**SARA 313**

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Proprietary Solvent	Proprietary	9.21-9.78	1.0
Abamectin - 71751-41-2	71751-41-2	1.8-2.0	1.0



**US State Regulations****California Proposition 65**

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Proprietary Solvent	Developmental
Abamectin - 71751-41-2	Developmental

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Proprietary Solvent	X	X	X
Abamectin 71751-41-2	X		
Proprietary Additive	X	X	X

**EPA Pesticide Registration Number** 66222-191**EPA Statement**

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

**EPA Pesticide Label**

Signal Word: Warning

May be fatal if swallowed. Causes moderate eye injury. Harmful if inhaled or absorbed through skin. Avoid contact with eyes, skin or clothing. Avoid breathing spray mist. Prolonged or frequently repeated exposure may cause allergic skin reactions in some individuals.

**Difference between SDS and EPA pesticide label**

	EPA	OSHA
<b>Signal Word</b>	Warning	Danger
Acute toxicity - Oral	Fatal if swallowed	Harmful if swallowed
Acute toxicity - Dermal	Harmful if absorbed through skin	N/A
Acute toxicity - Inhalation	Harmful if inhaled	Harmful if inhaled
Skin corrosion/irritation	N/A	Causes mild skin irritation
Serious eye damage/eye irritation	Causes moderate eye injury	
Skin sensitization	Prolonged or frequently repeated exposure may cause allergic skin reactions in some individuals	May cause an allergic skin reaction
Carcinogenicity	N/A	May cause cancer
Reproductive toxicity	N/A	May damage fertility or the unborn child
STOT - repeated exposure	N/A	Causes damage to organs through prolonged or repeated exposure

**16. OTHER INFORMATION**

<b><u>NFPA</u></b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Instability</b>	<b>Special Hazards</b>
	2	1	0	None
<b><u>HMIS</u></b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Physical Hazards</b>	<b>Personal Protection</b>
	2	1	0	See section 8

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**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**