



# Bonide Captain Jack's Deadbug Brew Concentrate

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date:01/19/2024

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product name : Bonide Captain Jack's Deadbug Brew Concentrate  
Product code : 4471

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

Use of the substance/mixture : Insecticide

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

Bonide Products, LLC  
6301 Sutliff Road  
Oriskany, NY 13424

Telephone Number: (315) 736-8231

Comment: Bonide hours of operation are 8:00 a.m. to 4:30 p.m EST.

Website: [www.bonide.com](http://www.bonide.com)

Email address: [sales@bonide.com](mailto:sales@bonide.com)

#### 1.4. Emergency telephone numbers (24 hour)

Medical : SafetyCall - (833) 972-1101  
Spills : CHEMTREC - 1 (800) 424-9300 and/or 1 (703) 527-3887

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS-US)

Eye Irritation 2A H319

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) : Warning  
Hazard statements (GHS-US) : H319 - Causes serious eye irritation  
Precautionary statements (GHS-US) : P264 - Wash hands and face thoroughly after handling  
P280 - Use personal protective equipment as required  
P337+P317 - If eye irritation persists: Get medical help.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### SECTION 3: Composition/information on ingredients

#### Mixture

Name	Product identifier (CAS No)	%
Spinosad A & D	Not Assigned	0.5
Propylene glycol	57-55-6	>= 10 - < 20
Polyethoxylated dodecyl alcohol	9002-92-0	>= 1 - < 3
Balance	Not Assigned	> 70

Actual concentration is withheld as a trade secret.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).  
First-aid measures after inhalation : Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.

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First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	: Hold eyes 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 eyes. Call a poison control center or doctor for treatment advice. Suitable emergency eye wash facility should be available in work area.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. No emergency medical treatment necessary.

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

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

### 4.3. Indication of any immediate medical attention and special treatment needed

No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor or going for treatment.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.  
Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide. This material will not burn until the water has evaporated. Residue can burn.

### 5.3. Advice for firefighters

Firefighting instructions : Keep people away. Isolate fire and deny unnecessary entry. To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage.  
Protection during firefighting : Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

## SECTION 7: Handling and storage

### 7.1. Advice on safe handling

Do not breathe vapors/dust. Do not smoke. Handle in accordance with good industrial hygiene and safety practice. Smoking, eating and drinking should be prohibited in the application area. Do not get in eyes. Avoid contact with skin and eyes. Avoid prolonged or repeated contact with skin. Take care to prevent spills, waste and minimize release to the environment. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a closed container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in properly labeled containers. Store in accordance with the particular national regulations.  
Materials to avoid (incompatibilities) : Strong oxidizing agents

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Exposure limits are listed below, if they exist.

Component Regulation	Type of listing	Value/Notation
Propylene glycol (CAS#57-55-6)	US WEEL TWA	10 mg/m <sup>3</sup>

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

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### 8.2. Exposure controls

Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Wear protective gloves.
Eye protection	: Chemical goggles.
Respiratory protection	: Wear approved mask.
Other information	: When using, do not eat, drink or smoke.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Tan liquid
Color	: Light brown
Odor	: Musty
Odor threshold	: No data available
pH	: 9.19 pH Electrode (77.2 °F / 25.1 °C)
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 212 °F (> 100 °C) closed cup
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 1.017 at 20 °C (68 °F) / 4 °C Digital Density Meter (Oscillating Coil)
Density	: 1.09 g/ml
Solubility	: Disperses in water.
Viscosity	: No data available
Explosive properties	: No
Oxidizing properties	: No significant increase (>5C) in temperature

Note: The physical data presented above are typical values and should not be construed as a specification.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No data available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Active ingredient decomposes at elevated temperatures.

### 10.5. Incompatible materials

Acids

### 10.6. Hazardous decomposition products

Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Toxicological information appears in this section when such data is available.

#### Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: Single dose oral LD50 has not been determined. Based on information for component(s): Estimated. LD50, Rat, > 5,000 mg/kg

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### Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined. Based on information for component(s): Estimated.

LD50, Rabbit, > 5,000 mg/kg

### Acute inhalation toxicity

No adverse effects are anticipated from single exposure to mist. Excessive exposure may cause irritation to upper respiratory tract (nose and throat).

As product: The LC50 has not been determined.

### Skin corrosion/irritation

Essentially non irritating to skin. Repeated contact may cause flaking and softening of skin.

### Serious eye damage/eye irritation

May cause eye irritation. May cause slight corneal injury.

### Sensitization

For the active ingredient(s): Did not cause allergic skin reactions when tested in guinea pigs.

### For respiratory sensitization:

No relevant data found.

### Specific Target Organ Systemic Toxicity (Single Exposure)

Available data are inadequate to determine single exposure specific target organ toxicity.

### Specific Target Organ Systemic Toxicity (Repeated Exposure)

For the active ingredient(s): In animals, Spinosad has been shown to cause vacuolization of cells in various tissues. Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use.

### Carcinogenicity

For the active ingredient(s): and for the minor component(s): Did not cause cancer in laboratory animals.

### Teratogenicity

For the active ingredient(s): Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother. For the minor component(s): Did not cause birth defects or any other fetal effects in laboratory animals.

### Reproductive toxicity

For the active ingredient(s): In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. For the minor component(s): In animal studies, did not interfere with reproduction.

### Mutagenicity

For the active ingredient(s): For the minor component(s): In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

### Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

## 11.2. Components influencing toxicology

### Spinosad A & D

Acute inhalation toxicity: Vapors are unlikely due to physical properties. No adverse effects are anticipated from single exposure to dust. Based on the available data, respiratory irritation was not observed. LC50, Rat, 4 Hour, > 5.18 mg/l

### Propylene glycol

Acute inhalation toxicity: Mist may cause irritation of upper respiratory tract (nose and throat). LC50, Rabbit, 2 Hour, Aerosol, 317.042 mg/l No deaths occurred at this concentration.

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Spinosad A & D

Acute toxicity to fish: Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested). LC50, *Lepomis macrochirus* (Bluegill sunfish), 96 Hour, 5.9 mg/l

Acute toxicity to aquatic invertebrates

EC50, *Daphnia magna* (Water flea), 48 Hour, 1.5 mg/l, OECD Test Guideline 202 or Equivalent

EC50, eastern oyster (*Crassostrea virginica*), 0.295 mg/l

Acute toxicity to algae/aquatic plants

EbC50, diatom *Navicula* sp., 5 d, Biomass, 0.107 mg/l

EbC50, *Pseudokirchneriella subcapitata* (green algae), 7 d, 39 mg/l

EC50, *Lemna gibba*, 14 d, 10.6 mg/l

Toxicity to bacteria - Bacteria, > 100 mg/l

Chronic toxicity to fish

NOEC, *Oncorhynchus mykiss* (rainbow trout), flow-through test, mortality, 0.5 mg/l

Chronic toxicity to aquatic invertebrates - NOEC, *Daphnia magna* (Water flea), 0.0012 mg/l

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### Toxicity to Above Ground Organisms

Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).

Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).

oral LD50, *Colinus virginianus* (Bobwhite quail), > 2000mg/kg bodyweight.

dietary LC50, *Colinus virginianus* (Bobwhite quail), 5 d, > 5253mg/kg diet.

oral LD50, *Apis mellifera* (bees), 48 Hour, 0.06micrograms/bee

contact LD50, *Apis mellifera* (bees), 48 Hour, 0.05micrograms/bee

### Toxicity to soil-dwelling organisms

LC50, *Eisenia fetida* (earthworms), 14 d, > 970 mg/kg

### Propylene glycol

Acute toxicity to fish: Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested). LC50, *Oncorhynchus mykiss* (rainbow trout), static test, 96 Hour, 40,613 mg/l, OECD Test Guideline 203

### Acute toxicity to aquatic invertebrates

LC50, *Ceriodaphnia dubia* (water flea), static test, 48 Hour, 18,340 mg/l, OECD Test Guideline 202

### Acute toxicity to algae/aquatic plants

ErC50, *Pseudokirchneriella subcapitata* (green algae), 96 Hour, Growth rate inhibition, 19,000 mg/l, OECD Test Guideline 201

### Toxicity to bacteria

NOEC, *Pseudomonas putida*, 18 Hour, > 20,000 mg/l

### Chronic toxicity to aquatic invertebrates

NOEC, *Ceriodaphnia dubia* (water flea), semi-static test, 7 d, number of offspring, 13,020 mg/l

## 12.2. Persistence and degradability

### Spinosad A & D

Biodegradability: Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%). Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

10-day Window: Fail, Biodegradation: < 1 %, Exposure time: 28 d, Method: OECD Test Guideline 301B or Equivalent

### Biological oxygen demand (BOD)

Incubation Time	BOD
5 d	66.000 %
10 d	68.000 %
20 d	76.000 %
28 d	77.000 %

### Stability in Water (1/2-life)

, pH 7, Half-life Temperature 25 °C, Stable

, half-life, 200 - 259 d, pH 9, Half-life Temperature 25 °C

, half-life, 0.84 - 0.96 d, pH 7

, pH 5, Half-life Temperature 25 °C, Stable

### Propylene glycol

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).

10-day Window: Pass, Biodegradation: 81 %, Exposure time: 28 d, Method: OECD Test Guideline 301F or Equivalent, 10-day Window: Not applicable

## 12.3. Bioaccumulative potential

### Spinosad A & D

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). Partition coefficient: n-octanol/water (log Pow): 4.01 Bioconcentration factor (BCF): 33 Fish. 28 d Measured

### Propylene glycol

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Partition coefficient: n-octanol/water(log Pow): -1.07 Measured Bioconcentration factor (BCF): 0.09 Estimated.

## 12.4. Mobility in soil

### Spinosad A & D

Potential for mobility in soil is low (Koc between 500 and 2000). Partition coefficient(Koc): 701 Measured

Stability in soil: Dissipation time of 8.68 – 9.44 d using method Photolysis.

### Propylene glycol

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Potential for mobility in soil is very high (Koc between 0 and 50). Partition coefficient(Koc): < 1 Estimated.

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### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Waste from residues: If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

### SECTION 14: Transport information

#### IATA-DGR

UN/ID No. : UN 3082

Proper shipping name : Environmentally hazardous substance, liquid, n.o.s. (spinosad)

Class : 9

Packing group : III

Labels : Miscellaneous

Packing instruction (cargo aircraft): 964

Packing instruction (passenger aircraft): 964

#### IMDG-Code

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (spinosad)

Class : 9

Packing group : III

Labels : 9

EmS Code : F-A, S-F

Marine pollutant : yes

Remarks : Stowage category A

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable for product as supplied.

Domestic regulation, 49 CFR: Not regulated as a dangerous good (DOT)

#### Further information

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5L or less for liquids or having a net mass per single or inner packaging of 5 KG or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code, IATA Special provision A197, and ADR/RID special provision 375.

#### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

### SECTION 15: Regulatory information

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:

Keep Out of Reach of Children

SARA 311/312 Hazards : Serious eye damage or eye irritation

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Pennsylvania Right To Know

Propylene glycol 57-55-6

California Prop. 65

WARNING: This product can expose you to chemicals including Kaolin, Quartz, Quartz, formaldehyde, which is/are known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

The ingredients of this product are reported in the following inventories:

TSCA : Product contains substance(s) not listed on TSCA inventory.

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

### SECTION 16: Other information

Other information : None.

SDS US (GHS HazCom 2012) – Pesticides

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*