

Safety Data Sheet

EMERGENCY CALL: 1-800-424-9300 (CHEMTREC)

1. IDENTIFICATION: CHEMICAL PRODUCT AND COMPANY

PRODUCT NAME: Arroz® 80

EPA REGISTRATION NUMBER: 89799-2

PRODUCT DESCRIPTION: Herbicide

Arroz® is a registered trademark of Raymat Materials Inc.

COMPANY IDENTIFICATION:

Raymat Crop Science, Inc.

440 Boulder Court, Suite 300

Pleasanton, CA 94566

2. HAZARDS IDENTIFICATION



Toxic to aquatic life with long lasting effects (H411)

GHS Toxicity Classifications

Hazardous to the aquatic environment, long-term hazard Cat. 2

For EPA FIFRA-specific information, refer to Section 15 of this SDS.

Prevention

Avoid release to the environment. (P273)

Read entire product label prior to use. Refer to Section 7 of this SDS for specific handling instructions.

Response

Collect spillage. (P391)

Refer to Section 4 of this SDS for specific First Aid measures.

Storage

Refer to Section 7 of this SDS for specific storage instructions.

Disposal

Dispose of contents/container to an approved waste disposal facility. (P501)

Refer to Section 13 of this SDS for specific disposal considerations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Chemical Name | CAS Number | Weight/ Percent |
|----------------------|-------------|-----------------|
| Bispyribac Sodium | 125401-92-5 | 77-83 |
| Otherwise Classified | No CAS# | 17-23 |

Other ingredients, which may be maintained as trade secrets, are any substances other than an active ingredient contained in this product. Some of these may be hazardous, but their identities are withheld because they are considered trade secrets. The hazards associated with the other ingredients are addressed in this document. Specific information on other ingredients for the management of exposures, spills, or safety assessments can be obtained by a treating physician or nurse by calling **(925) 249-9988**.

4. FIRST AID MEASURES

EMERGENCY NUMBER: (925) 249-9988 or 1-800-424-9300 (CHEMTREC)

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. DO NOT induce vomiting unless told to do so by the 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 OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor 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.

5. FIRE FIGHTING MEASURES

Flash point °F Not applicable

EXTINGUISHING MEDIA: Water fog, carbon dioxide, foam, dry chemical

FLAMMABLE LIMITS IN AIR - LOWER (%): Not applicable

FLAMMABLE LIMITS IN AIR - UPPER (%): Not applicable

NFPA RATING: Health – 1 / Flammability – 1 / Reactivity – 0 / Special – None

(Least-0, Slight-1, Moderate-2, High-3, Extreme-4). These values are obtained using professional judgement. Values were not available in the guidelines or published evaluations prepared by the National Fire Protection Association, NFPA.

FIRE AND EXPLOSION HAZARDS: Products of combustion from fires involving this material may be toxic.

FIRE FIGHTING EQUIPMENT: Firefighters should be equipped with self-contained positive pressure breathing apparatus and full bunker gear.

FIRE FIGHTING INSTRUCTIONS: Products of combustion from fires involving this material may be toxic. Avoid breathing smoke and mists. Avoid personnel and equipment contact with fallout and runoff. Minimize the amount of water used for firefighting. Do not enter any enclosed area without full protective equipment, including self-contained breathing equipment. Contain and isolate runoff and debris for proper disposal. Decontaminate personal protective equipment and firefighting equipment before reuse.

HAZARDOUS DECOMPOSITION PRODUCTS: Normal combustion forms carbon dioxide, water vapor and may produce: Oxides of nitrogen. Incomplete combustion can produce carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

EMERGENCY PHONE NUMBER: (925) 249-9988

OBSERVE PRECAUTIONS IN SECTION 8: PERSONAL PROTECTION

Stop the source of the spill if safe to do so. Contain the spill to prevent further contamination of the soil, surface water, or ground water. For additional spill response information refer to the North American Emergency Response Guidebook.

FOR SPILLS ON LAND:

Emergency Telephone: (925) 249-988

CONTAINMENT: Reduce airborne dust. Avoid runoff into storm sewers or other bodies of water.

CLEANUP: Clean up spill immediately. Vacuum or sweep up material and place in a chemical waste container. Wash area with soap and water. Pick up wash liquid with additional absorbent and place in a chemical waste container.

FOR SPILLS IN WATER:

CONTAINMENT: This material will disperse or dissolve in water. Stop the source of the release. Contain and isolate to prevent further release into soil, surface water and ground water.

CLEANUP: Clean up spill immediately. Absorb spill with inert material. Remove contaminated water for treatment or disposal.

7. HANDLING AND STORAGE

END USER MUST READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.

HANDLING: Avoid contact with eyes, skin or clothing. Users should wash hands thoroughly with soap and water before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of the gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

STORAGE: Keep pesticide in original container only. Keep container closed when not in use. Do not put concentrate into food or drink containers. Do not dilute concentrate in food or drink containers. Store in a cool, dry place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

END USER MUST READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.

EYES & FACE: Do not get this material in your eyes. Eye contact can be avoided by wearing protective eyewear.

RESPIRATORY PROTECTION: Use this material only in well ventilated areas. If ventilation is not adequate to keep airborne concentrations below recommended exposure standards, approved respiratory protection should be worn.

SKIN & HAND PROTECTION: Avoid contact with skin or clothing. Applicators and other handlers must wear: long-sleeved shirt and long pants; chemical resistant gloves such as Barrier Laminate or Butyl Rubber ≥14 mils or Nitrile Rubber ≥14 mils or Viton Rubber ≥14 mils; and shoes plus socks.

EXPOSURE LIMITS

| Chemical Name | ACGIH Exposure Limits | OSHA Exposure Limits |
|----------------------|--|---|
| Others | 10 mg/m ³ (inhalable particles) 3mg/m ³ TWA (respirable fraction) | 15 mg/m ³ TWA (total dust) 5mg/m ³ TWA (respirable fraction) |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-----------------------|--------------------------------|
| Physical state | Solid |
| Appearance | Powder |
| Odor | Odorless |
| Color | Gray |
| pH | 8.8 @ 22°C 1% solution |
| Melting point | 220°C |
| Bulk density | 21.3 lb/cubic foot |
| Solubility | 6.75g/100 ml water (technical) |

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended use and storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Extremes of temperature and direct sunlight.

Incompatible materials

Oxidizing agents.

Hazardous Decomposition Products

None known based on information supplied.

Hazardous Polymerization

Will not occur.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

| | | |
|----------------------------------|-------------------------------|----------------------|
| Oral Toxicity | No data available | EPA Tox Category III |
| Dermal Toxicity | No data available | EPA Tox Category III |
| Inhalation Toxicity | No data available | EPA Tox Category IV |
| Eye Irritation (rabbits) | Brief and/or minor irritation | EPA Tox Category III |
| Skin Irritation (rabbits) | Brief and/or minor irritation | EPA Tox Category IV |
| Skin Sensitization (guinea pigs) | Non-sensitizer | NA |

TOXICITY OF BISPYRIBAC SODIUM TECHNICAL

SUBCHRONIC: Bispyribac-sodium technical was tested in rats at dose levels of 0,100,1000,10000, and 20000 ppm for 13 weeks. The NOEL was 100 ppm (7.2mg/kg/day) in males and 1000 ppm(79.9 mg/kg/day) in female rats. Effects observed at higher doses included histopathological changes in the liver, urinary bladder and the bile duct; increased serum GOT, GPT and ALP; and reduced body weight gain. Bispyribac-sodium technical was also tested in dogs for 13 weeks at dosed of 0,30,100,and 600 mg/kg/day. The NOEL was 100 mg/kg/day. Vomiting, salivation and loose stools were observed in animals exposed to 600 mg/kg/day. Histopathological changes in the liver were also noted in males at 600 mg/kg/day.

11. TOXICOLOGICAL INFORMATION (CONT.)

CHRONIC/CARCINOGENICITY: Bispyribac-sodium technical was tested in rats for 2 years at doses of 0, 20, 200, 3500 and 7000 ppm in males and 0, 20, 200, 5000 and 10000 ppm in females. The NOEL was 20 ppm (male 1.1 mg/kg/day, female 1.4 mg/kg/day). Effects observed at higher doses included decreased body weight gain; changes in hematological and blood biochemistry values; and histopathological lesions of the liver and bile duct. No neoplastic lesions were observed. Bispyribac-sodium technical was tested in mice for 18 months at doses of 0, 10, 100, 2500 and 5000 ppm. The NOEL was 100 ppm (14.1 mg/kg/day) in males and 10 ppm (17.1 mg/kg/day) in females. Effects observed at higher doses included reduced body weight gain; decreased liver weight; increased kidney weight; and histopathological changes in the liver. No neoplastic lesions were observed. A 52-week chronic toxicity study of bispyribac-sodium technical was conducted in dogs at doses of 0, 10, 100 and 750 mg/kg/day. The NOEL was 10 mg/kg/day. Effects observed at higher doses included salivation, vomiting and loose stools; increased liver weight; and histopathological changes in the bile duct.

DEVELOPMENTAL TOXICITY: Bispyribac-sodium technical was tested in a developmental toxicity study with rabbits at doses of 0, 30, 100, and 300 mg/kg/day. The NOEL for maternal toxicity was 100 mg/kg/day; and for developmental toxicity the NOEL was 300 mg/kg/day. Maternal toxicity included one death and premature delivery and slight depression of body weight gain.

Bispyribac-sodium technical was tested in a developmental toxicity study in rats at dose levels of 0, 100, 300 and 1000 mg/kg/day. The maternal NOEL was 300 mg/kg/day and the developmental NOEL was 1000 mg/kg/day. The maternal toxicity observed at 1000 mg/kg/day consisted of anogenital staining.

REPRODUCTION: A two-generation rat reproduction study was conducted with bispyribac-sodium technical at doses of 0, 20, 1000 and 1000 ppm. The NOELs for systemic adult toxicity, offspring developmental parameters and reproductive toxicity were 20, 1000, and 1000 ppm, respectively. Systemic adult toxicity included decreased body weight gain and food consumption; increased liver weight; and histopathological changes in the liver and bile duct. The growth of the F1 and F2 offspring was inhibited at 1000 ppm.

MUTAGENICITY: Bispyribac-sodium technical was negative in the following assays; reverse mutation (Ames); CHO, chromosomal aberration (*in vitro*); unscheduled DNA synthesis; and micronucleus in mice (*in vivo*)

For a summary of the potential for adverse health effects from exposure to this product, refer to Section 2. For information regarding regulations pertaining to this product, refer to Section 15.

12. ECOLOGICAL INFORMATION

This product is toxic to non-target plants. Bispyribac-sodium is moderately persistent and mobile and will likely move into surface and ground water through runoff and leaching.

The following information is for the active ingredient, bispyribac-sodium:

AQUATIC TOXICITY

Rainbow Trout (96-hour LC₅₀): > 100 ppm
Bluegill (96-hour LC₅₀): > 100 ppm
Daphnia (48-hour LC₅₀): > 100 ppm
Mysid shrimp (96-hr LC₅₀): > 100 ppm
Algae (72-hr LC₅₀): 1.7 mg/L
Algae (NOEC): 0.625 mg/L

AVIAN TOXICITY

Bobwhite quail (Oral LD₅₀): > 2250 mg/kg
Mallard Duck (Dietary LC₅₀): > 5620 mg/kg
Bobwhite quail (Dietary LC₅₀): > 5620 mg/kg

OTHER TOXICITY

Earthworms (LC₅₀): > 1000 ppm

13. DISPOSAL CONSIDERATIONS

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

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Refer to the product label for specific container disposal instructions.

14. TRANSPORT INFORMATION

US DOT (shipped by land):

Containers ≤ 882 lbs. (400 kg): Not regulated

Containers > 882 lbs. (400 kg):

DOT Shipping Name: UN3077, Environmentally Hazardous Substance, Solid, N.O.S. (Bispyribac-sodium), 9, PG III

Emergency Response Guide: 171

Marine Pollutant: Yes

IMDG (shipped by vessel):

UN3077, Environmentally Hazardous Substance, Solid, N.O.S. (Bispyribac-sodium), 9, PG III, Marine Pollutant

IATA (shipped by air):

UN3077, Environmentally Hazardous Substance, Solid, N.O.S. (Bispyribac-sodium), 9, PG III, Marine Pollutant

15. REGULATORY INFORMATION

FIFRA –

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. The following is the hazard information as required on the pesticide label:

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION. Causes moderate eye irritation. Harmful if swallowed or absorbed through the skin. Avoid contact with eyes, skin, or clothing. Avoid breathing dust or spray mist.

ENVIRONMENTAL HAZARDS

This product is toxic to non-target plants. For terrestrial uses, do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water cleaning of equipment or disposal of equipment washwaters.

PHYSICAL OR CHEMICAL HAZARDS

Do not mix or allow coming in contact with oxidizing agent. Hazardous chemical reaction may occur.

15. REGULATORY INFORMATION (CONT.)

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide. This product is excluded from listing requirements under EPA/TSCA.

SARA Title III – Section 302 Extremely Hazardous Substances

Not listed

SARA Title III – Section 311/312 Hazard Categories

Immediate, Delayed

SARA Title III – Section 312 Threshold Planning Quantity

The threshold planning quantity (TPQ) for this product treated as a mixture is 10,000 lbs. This product contains no ingredients with a TPQ of less than 10,000 lbs.

SARA Title III – Section 313 Reportable Ingredients

Not listed

CERCLA Reportable Quantity (RQ) –

Not listed

CALIFORNIA PROP 65 STATUS –

This product does not contain any ingredients known to the state of California to cause cancer or reproductive harm.

CANADA –

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

16. OTHER INFORMATION

EPA REGISTRATION NUMBER: 89799-2

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products is regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling. All necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

SDS Version: 1.0

Effective Date: 11/08/2017