



## SAFETY DATA SHEET

SDS NUMBER: 000909-17-LPI

SDS REVISIONS: SEC. 2, 9

DATE OF ISSUE: 04/03/17

**RADIATE®**  
SUPERSEDES: 05/08/15

**FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300**

### 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

- 1.1 **PRODUCT IDENTIFIER:** EPA REGISTRATION NO. 34704-909  
**TRADE NAME:** RADIATE®
- 1.2 **RECOMMENDED USE:** PLANT GROWTH REGULATOR
- 1.3 **SUPPLIER DETAILS:**  
LOVELAND PRODUCTS, INC.  
P.O. Box 1286 • Greeley, CO 80632-1286
- 1.4 **24 Hour Emergency Phone:** 1-800-424-9300 - **Medical Emergencies:** 1-866-944-8565 - **Product Information:** 1-888-574-2878 (LPI-CUST)  
**U.S. Coast Guard National Response Center:** 1-800-424-8802

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

Classification according to 29 CFR 1910.1200

Eye Damage/Irritation  
Combustible Liquid

Category 2B  
Category 4

H320  
H227

#### 2.2 Label elements None

Signal word: WARNING  
Hazard Statement: H320 – Causes eye irritation.  
H227 – Combustible Liquid

Precautionary Statement: (Prevention)  
P264 – Wash thoroughly after handling.  
P210 – Keep away from flames and hot surfaces. – No smoking.  
P280 – Wear protective gloves / eye protection / face protection.

Precautionary Statement: (Response):  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.  
P337+P313 – If eye irritation persists: Get medical advice/attention.  
P370+P378 – In case of fire: Use dry chemical, carbon dioxide (CO<sub>2</sub>), alcohol foam, foam, water spray or fog to extinguish.

Precautionary Statement: (Storage):  
P403+P235 – Store in a well ventilated place. Keep cool.

Precautionary Statement: (Disposal):  
P501 – Dispose on contents/container to licensed facility in accordance with local, state and federal requirements.

#### 2.3 Other hazards None known



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### 3. COMPOSITION, INFORMATION ON INGREDIENTS

#### 3.1 Substances

#### 3.2 Mixtures

##### Classification according to 29 CFR 1910.1200

Chemical Name:	CAS No.	Concentration [%]
3-Indolebutyric Acid	133-32-4	0.85
Kinetin	525-79-1	0.15
*Other ingredients		99.00

\*Ingredients not specifically listed are non-hazardous or are to be considered proprietary or confidential business information per 29 CFR 1910.1200(i)

### 4. FIRST AID MEASURES

#### 4.1 Description of First Aid Measures

General Advice: Get medical attention if symptoms occur.

**Eye contact:** 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.

#### 4.2 Most Important Symptoms and Effects, Acute and Delayed

Symptoms: Eyes: Causes moderate eye irritation.

#### 4.3 Immediate Medical Attention and Special Treatment

Treatment: Treat symptomatically. Symptoms may be delayed.

**FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565**

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

**NOTES TO PHYSICIAN:** Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

### 5. FIRE FIGHTING MEASURES

#### 5.1 EXTINGUISHING MEDIA:

Suitable Extinguishing Media: Dry chemical, carbon dioxide (CO<sub>2</sub>), alcohol foam, foam, water spray or fog. Do not use water jet as this will spread the fire.

#### 5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

Specific Hazards During Firefighting: During a fire, hazardous by-products can be released.

#### 5.3 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS

Special Protective Equipment for Firefighters: Self-contained breathing apparatus and full protective gear should be worn in fighting large fires involving chemicals. Use water spray to keep fire exposed containers cool. Keep people away. Isolate fire and deny unnecessary entry.



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### 6. ACCIDENTAL RELEASE MEASURES

#### 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Personal Precautions: Avoid inhalation of vapors and spray mist and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing.

#### 6.2 ENVIRONMENTAL PRECAUTIONS

Environmental Precautions: 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 when disposing of equipment washwaters or rinsate.

#### 6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

Methods for Clean-Up: Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. After removal flush contaminated area thoroughly with water.  
Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to Remove residual contamination.  
Never return spills to original containers for re-use.

### 7. HANDLING AND STORAGE

#### 7.1 PRECAUTIONS FOR SAFE HANDLING:

Advice on Safe Handling: Avoid inhalation of mists, vapors / spray and contact with eyes, skin and clothing. Do not breathe mists or vapor. Wear personal protective equipment. Do not use in areas without adequate ventilation. Avoid prolonged exposure. Wash thoroughly after handling. Do not empty into drains. Handle and open container with care. Use care in handling/storage. Wash before eating, drinking and/or smoking.

#### 7.2 CONDITIONS FOR SAFE STORAGE:

Requirements for Storage Areas and Containers: Store in original container in a cool, dry, locked place out of the reach of children. Protect from sunlight. Do not contaminate water, food or feed by storage or disposal.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### 8.1 CONTROL PARAMETERS: OCCUPATIONAL EXPOSURE LIMITS

##### U.S. Workplace Exposure Level (ACGIH) TLVs

Components	Type	Value
No data available.		

##### U.S. Workplace Exposure Level (OSHA) PELs

Components	Type	Value
No data available.		

#### Biological limit values

##### ACGIH Biological Exposure Indices

Components	Value	Specimen
No listings		



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### 8.2 EXPOSURE CONTROLS:

#### Engineering Measures

Provide adequate general and local exhaust ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors and spray mists. Provide eyewash station and safety shower.

#### Individual Protection Measures:

Eye / Face Protection: Goggles or shielded safety glasses are recommended.

Skin Protection: Coveralls worn over long-sleeved shirt and long pants. Chemical-resistant gloves. Chemical-resistant footwear plus socks.

Respiratory Protection: In case of inadequate ventilation or risk of inhalation of mists or vapors, use suitable respiratory equipment such as MSHA/NIOSH TC-21C or NIOSH approved respirator with N, R, P or HE filter. Wear respiratory protection during operations where spraying or misting occurs. If respirators are used, a program should be in place to assure compliance with 29 CFR 1910.134, the OSHA Respiratory Protection standard. Wear air supplied respiratory protection if exposure concentrations are unknown.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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9.1 APPEARANCE :	Liquid
ODOR:	Strong.
ODOR THRESHOLD:	No data available.
COLOR:	Yellow.
pH:	3.1 – 3.7
MELTING POINT / FREEZING POINT:	Freezing point: < 32°F (0 °C)
BOILING POINT:	212 °F (100 °C)
FLASH POINT:	> 212 °F (> 100 °C).
FLAMMABILITY (solid, gas):	No data available.
UPPER / LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:	No data available.
VAPOR PRESSURE:	No data available.
SOLUBILITY:	Soluble
PARTITION CO-EFFICIENT, n-OCTANOL / WATER:	No data available.
AUTO-IGNITION TEMPERATURE:	No data available.
DECOMPOSITION TEMPERATURE:	No data available
VISCOSITY: (kinematic):	3.28 mm <sup>2</sup> /second @ 20°C
SPECIFIC GRAVITY (Water = 1):	1.04 g/ml
DENSITY:	8.68 lbs./gal / 1.04 kg/L

Note: These physical data are typical values based on material tested but may vary from sample to sample.  
Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

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## 10. STABILITY AND REACTIVITY

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### 10.1 REACTIVITY

Stable

### 10.2 CHEMICAL STABILITY

Stable under normal temperature conditions

### 10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No data available. Will not polymerize.

### 10.4 CONDITIONS TO AVOID

No data available.

### 10.5 INCOMPATIBLE MATERIALS

No data available.

### 10.6 HAZARDOUS DECOMPOSITION PRODUCTS

No data available.



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### 11 TOXICOLOGICAL INFORMATION

#### 11.3 LIKELY ROUTES OF EXPOSURE

Eye contact. Skin contact.

**LC<sub>50</sub> (rat):** >2.09 mg/L (Kinetin technical)

**LD<sub>50</sub> Oral (rat):** > 5,000 mg/kg (Kinetin technical)

**LD<sub>50</sub> Dermal (rat):** > 2,000 mg/kg (Kinetin technical)

**Acute Toxicity Estimates:** No data available

**Skin Irritation (rabbit):** No data available.

**Eye Irritation (rabbit):** Causes moderate eye irritation

**Specific Target Organ Toxicity:** Single exposure: No data available.

**Aspiration:** No data available

**Skin Sensitization (guinea pig):** Not a sensitizer

**Carcinogenicity:** No data available

**Germ Cell Mutagenicity:** No data available

**Interactive Effects:** None known

### 12 ECOLOGICAL INFORMATION

#### 12.3 ECOTOXICITY

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. This product is not intended for use in aquatic settings.

##### Ecotoxicological Data

Species	Test Results
No data available.	
Drift or runoff may adversely affect non-target plants.	
Do not apply directly to water.	
Do not contaminate water when disposing of equipment wash water.	
Do not apply when weather conditions favor drift from target area.	

#### 12.2 PERSISTENCE AND DEGRADABILITY

Biodegradability: No data available

#### 12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: No data available.

#### 12.4 MOBILITY IN SOIL

No data available.

#### 12.5 OTHER ADVERSE EFFECTS

Assessment: No data available.

### 13 DISPOSAL CONSIDERATIONS

#### 13.1 WASTE TREATMENT METHODS

Wastes may be disposed of on site or at an approved waste disposal facility. Triple rinse (or equivalent), adding rinse water to spray tank. Offer container for recycling or dispose of in a sanitary landfill or by other procedures approved by appropriate authorities. Recycling decontaminated containers is the best option of container disposal. The Agricultural Container Recycling Council (ACRC) operates the national recycling program. To contact your state and local ACRC recycler visit the ACRC web page at <http://www.acrecycle.org/>. Do not contaminate water, food or feed by storage or disposal.

### 14 TRANSPORT INFORMATION

#### 14.3 LAND TRANSPORT

**DOT Shipping Description:** NOT REGULATED BY USDOT

**U.S. Surface Freight Classification:** INHIBITORS, MODIFIERS OR REGULATORS, PLANT GROWTH (NMFC 101685; CLASS: 65)



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### 15 REGULATORY INFORMATION

#### 15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS

##### NFPA & HMIS Hazard Ratings:

##### NFPA

1	Health	0	Least
0	Flammability	1	Slight
0	Instability	2	Moderate
		3	High
		4	Severe

##### HMIS

1	Health
0	Flammability
0	Reactivity
B	PPE

##### SARA Hazard Notification/Reporting

SARA Title III Hazard Category:	Immediate	<u>Y</u>	Fire	<u>N</u>	Sudden Release of Pressure	<u>N</u>
	Delayed	<u>N</u>	Reactive	<u>N</u>		

Reportable Quantity (RQ) under U.S. CERCLA: Not listed.

SARA, Title III, Section 313: Not listed.

RCRA Waste Code: Not listed.

CA Proposition 65: Not applicable

This chemical is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

#### CAUTION

Causes moderate eye irritation.

Avoid contact with eyes, skin, or clothing.

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

### 16 OTHER INFORMATION

SDS STATUS: Sections 2 and 9 revised.

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental Health and Safety

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