



SAFETY DATA SHEET

Issue Date 27-Jun-2021

Revision Date 27-Jun-2021

Version 1

1. IDENTIFICATION

Product identifier

Product Name Joya™

Other means of identification

Product Code 83100-60-83979

Synonyms None

Registration Number(s) 83100-60-83979

Recommended use of the chemical and restrictions on use

Recommended Use Herbicide

Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address

Rotam North America, Inc.
4900 Koger Blvd., Suite #220
Greensboro, NC 27407
Tel: 866-927-6826
Website: msds@rotam.com

Emergency telephone number

Company Phone Number 1-866-927-6826 (toll free)

1-336-346-8802

Emergency Telephone

CHEMTREC: 800-424-9300

CHEMTREC: 703-527-3887

POISON CONTROL CENTER: 800-222-1222

NPIC: 1-800-858-7378

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Reproductive toxicity	Category 1B

Label elements

Emergency Overview

Danger

Hazard statements

Harmful if inhaled

May damage fertility or the unborn child

**Appearance** dry, free flowing granules**Physical state** Solid**Odor** Slight Pungent**Precautionary Statements - Prevention**

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Wear protective gloves/protective clothing/eye protection/face protection
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area

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

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

Mild eye irritation. May be harmful if swallowed. Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

Unknown acute toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

Chemical Name	CAS No	Weight-%
Flumioxazin	103361-09-7	51
Other ingredients *	Proprietary	10 - 30
Silicon dioxide *	7631-86-9	10 - 30
Aluminum oxide *	1344-28-1	7 - 13

*The exact percentage (concentration) of composition has been withheld as a trade secret. If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures**General advice**

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

Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison control center or doctor for treatment advice.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation persists, call a physician. Call a poison control center or doctor for treatment advice.
Inhalation	Move victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician or poison control center immediately. Call a poison control center or doctor for treatment advice.
Ingestion	Call a physician or poison control center immediately. Drink 1 or 2 glasses of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms May cause redness and tearing of the eyes.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Dry chemical, CO₂, water spray or regular foam. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal. Water spray, fog or regular foam.

Unsuitable extinguishing media None.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Hazardous combustion products Carbon oxides. Nitrogen oxides (NO_x). Oxides of sulfur.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

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. Cool containers / tanks with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Avoid creating dust.

For emergency responders Use personal protection recommended in Section 8. Ventilate the area.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Prevent dust cloud. Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Avoid creating dust. Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust. Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE**Precautions for safe handling**

Advice on safe handling Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feeding stuffs. Keep in properly labeled containers.

Packaging materials Do not reuse container.

Incompatible materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters****Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Silicon dioxide 7631-86-9	-	TWA: 50 µg/m ³ excludes construction work, agricultural operations, and exposures that result from the processing of sorptive clays TWA: 20 mppcf : (80)/(% SiO ₂) mg/m ³ TWA	IDLH: 3000 mg/m ³ TWA: 6 mg/m ³
Aluminum oxide 1344-28-1	TWA: 1 mg/m ³ respirable particulate matter	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction	-

NIOSH IDLH *Immediately Dangerous to Life or Health*

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas. And. Showers. Eyewash stations. Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear suitable protective clothing. Wear protective butyl rubber gloves. Protective shoes or boots.

Respiratory protection Ensure adequate ventilation, especially in confined areas. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid	Odor	Slight Pungent
Appearance	dry, free flowing granules	Odor threshold	No information available
Color	Off-white		
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>	
pH	8.81	solution (1 %)	
Melting point / freezing point	No information available		
Boiling point / boiling range	No information available		
Flash point	Not applicable		
Evaporation rate	No information available		
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	0 mmHg	@ 25 °C	
Vapor density	No information available		
Relative density	0.636 g/cm ³		
Water solubility	dispersible		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	No information available		
Explosive properties	Not an explosive		
Oxidizing properties	Not applicable		
<u>Other Information</u>			
Softening point	No information available		
Molecular weight	No information available		
VOC Content (%)	No information available		
Density	No information available		
Bulk density	No information available		

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Elevated Temperature. Storage near to reactive materials.

Incompatible materials

Strong oxidizing agents.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Nitrogen oxides (NOx). Carbon oxides.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Product Information	Acute Oral LD50 (rat): >2000 mg/kg Acute Dermal LD50 (rabbit): > 2000 mg/kg Eye Irritation (rabbit): Not an irritant. Skin Irritation (rabbit): Not an irritant. Inhalation LC50 (rat): >1.82 mg/L (4 HR) Skin Sensitization (guinea pig): Not a sensitizer
Inhalation	Harmful by inhalation.
Eye contact	Based on available data, the classification criteria are not met. May cause slight irritation.
Skin contact	Based on available data, the classification criteria are not met.
Ingestion	Based on available data, the classification criteria are not met.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Flumioxazin 103361-09-7	> 5000 mg/kg (Rat)	-	> 3930 mg/m ³ (Rat) 4 h
Other ingredients	= 2840 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Silicon dioxide 7631-86-9	= 7900 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 2.2 mg/L (Rat) 1 h
Aluminum oxide 1344-28-1	> 5000 mg/kg (Rat)	-	-

Information on toxicological effects

Symptoms May cause redness and tearing of the eyes.

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

Sensitization Based on available data, the classification criteria are not met.
Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity Based on available data, the classification criteria are not met.

Chemical Name	ACGIH	IARC	NTP	OSHA
Silicon dioxide 7631-86-9	-	Group 3	-	-

IARC (International Agency for Research on Cancer)

Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive toxicity Based on available data, the classification criteria are not met.
STOT - single exposure Based on available data, the classification criteria are not met.
STOT - repeated exposure Based on available data, the classification criteria are not met.
Aspiration hazard Based on available data, the classification criteria are not met.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

Refer to product information above.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Other ingredients	-	250: 96 h Brachydanio rerio mg/L LC50 18: 96 h Cyprinus carpio mg/L LC50 123 - 128: 96 h Poecilia reticulata mg/L LC50 semi-static 460 - 1000: 96 h Leuciscus idus mg/L LC50 static 100: 96 h Pimephales promelas mg/L LC50 126: 96 h Poecilia reticulata mg/L LC50 480: 96 h Brachydanio rerio mg/L LC50 flow-through 420: 96 h Brachydanio rerio mg/L LC50 semi- static	14: 48 h Daphnia magna mg/L LC50 423: 24 h Daphnia magna mg/L EC50
Silicon dioxide 7631-86-9	440: 72 h Pseudokirchneriella subcapitata mg/L EC50	5000: 96 h Brachydanio rerio mg/L LC50 static	7600: 48 h Ceriodaphnia dubia mg/L EC50

Persistence and degradability

Not readily biodegradable.

Bioaccumulation

Not likely to bioaccumulate.

Chemical Name	Partition coefficient
Other ingredients	-5.1

Other adverse effects

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes

Pesticide wastes may be acutely hazardous. Improper disposal is a violation of federal law. Disposal should be in accordance with applicable regional, national and local laws and regulations. Contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance on proper disposal of waste product.

Contaminated packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations. Consult product label for additional information. Do not reuse container.

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

IATA

UN/ID no	UN3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Hazard Class	9
Packing Group	III
ERG Code	9L
Special Provisions	A158, A179, A97, A197
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (Flumioxazin), 9, III

IMDG

UN/ID no	UN3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Hazard Class	9
Packing Group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 966, 967
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (Flumioxazin), 9, III

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Other ingredients -	1.0
Aluminum oxide - 1344-28-1	1.0

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

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Other ingredients	-	X	X
Silicon dioxide 7631-86-9	-	X	X
Aluminum oxide 1344-28-1	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number 83100-60

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:

Difference between SDS and EPA Pesticide label

CAUTION: Harmful if absorbed through the skin or inhaled. Avoid contact with skin, eyes, or clothing. Causes moderate eye irritation. Avoid breathing dust and spray mist. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

<u>NFPA</u>	Health hazards 2	Flammability 1	Instability 0	Physical and Chemical Properties -
<u>HMIS</u>	Health hazards 2*	Flammability 1	Physical hazards 0	Personal protection X
<i>Chronic Hazard Star Legend</i>	* = Chronic Health Hazard			

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Revision Note

No information available

Disclaimer

The information provided in this Material 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