



Safety Data Sheet

Issue Date: 11/18/15

Revision Date: N/a

Version: 1

1. Identification of the Substance/Preparation and of the Company/Undertaking

Product Identifier

Product Name: Regalstar G

Other means of identification

EPA Pesticide Registration Number: 48234-15

Recommended use of the chemical and restrictions on use

Recommended use: Herbicide

Details of the supplier of the safety data sheet

Supplier

Regal Chemical Company
600 Branch Dr.
Alpharetta, GA 30004
USA

Telephone: (770) 475-4837

Emergency Telephone - CHEMTREC: 1-800-424-9300

2. Hazardous Identification

Classification:

Inhalation: Category 4

Skin Sensitizer: Category 1B

Specific Target Organ Toxicity: Repeated Category 2

Specific Target Organ Toxicity: Respiratory Irritation Category 3

Eye Damage/Irritation: Category 2B

Carcinogenicity: Category 1A

OSHA Regulatory Status

Signal Word: Danger

Hazard statements:

May cause an allergic skin reaction

Causes eye irritation

Harmful if inhaled

May cause respiratory irritation

May cause cancer

May cause damage to organs through prolonged or repeated exposure.



Safety Data Sheet

Issue Date: 11/18/15

Revision Date: N/a

Version: 1

Hazard Symbols:



Precautionary Statements:

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Do not breathe the dust.
- Wash hands and face thoroughly after handling.
- Use only outdoors or in a well-ventilated area.
- Contaminated work clothing must not be allowed out of the workplace.
- Wear protective gloves, protective clothing, and eye protection.
- If on skin: Wash with plenty of soap and water.
- If skin irritation or rash occurs: Get medical advice.
- If inhaled: Remove person to fresh air and keep comfortable for breathing.
- 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.
- If exposed or concerned: Get medical advice/attention.
- Call a poison center or doctor if you feel unwell.
- See Section 4 First Aid Measures.
- Wash contaminated clothing before reuse.
- Store locked up.
- Dispose of contents and container in accordance with local regulations.

Other Hazard Statements: May form combustible dust concentrations in air.

3. Composition/Information on Ingredients

Chemical Name	Common Name	CAS Number	Concentration
2-tert-butyl-4-(2,4-dichloro-5-isopropoxyphenyl)-delta2-1,3,4-oxadiazolin-5-one	Oxadiazon	19666-30-9	2.00%
N3, N3-Di-n-propyl-2,4-dinitro-6-(trifluoromethyl)-m-phenylenediamine	Prodiamine	29091-21-2	0.20%

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

4. First Aid Measures

First aid measures: Have the product container, label or Safety Data Sheet with you when calling a poison control center or doctor or going for treatment.



Safety Data Sheet

Issue Date: 11/18/15

Revision Date: N/a

Version: 1

Ingestion: If swallowed. Call a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so after calling CHEMTREC (1-800-424-9300) or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Eye Contact: If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present 5 minutes, then continue rinsing eye. Call CHEMTREC (1-800-424-9300), a poison control center, or doctor for treatment advice.

Skin Contact: If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call CHEMTREC (1-800-424-9300), a poison control center, or doctor for treatment advice.

Inhalation: If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call CHEMTREC (1-800-424-9300), a poison control center, or doctor for further treatment advice.

Most Important systems/effects:

Eye irritation
Allergic skin reaction
Respiratory irritation

Indication of any immediate medical attention and special treatment needed:

There is no specific antidote if this product is ingested.
Treat symptomatically.
Person suffering a temporary allergic reaction may respond to treatment with antihistamines or steroid creams and/or systemic steroids.

5. Fire-Fighting Measures

Suitable extinguishing media: Use dry chemical, foam or CO2 extinguishing media. If water is used to fight fire, dike and collect runoff.

Specific hazards arising from the chemical:

This material is considered explosion class (Kst) 2.
Fire will spread by burning with flame.
During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.
See also Sec. 7.

Special protective equipment and precautions for firefighters:

Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion.



Safety Data Sheet

Issue Date: 11/18/15

Revision Date: N/a

Version: 1

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Follow exposure controls/personal protection outlined in Section 8.

Methods and material for containment and cleaning up

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage draining systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Sweep up material and place in a compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. Handling and Storage

Precautions for safe handling:

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Conditions for safe storage, including any incompatibilities:

Store locked up.

8. Exposure Controls/Personal Protection

The following recommendations for exposure control/personal protection are intended for the manufacture, formulation and packaging of this product. For commercial applications and/or on-farm applications consult the product label.

Occupational Exposure Limits:

Chemical Name	OSHA PEL	ACGIH TLV	Other	Source
Oxadiazon	Not established	Not Established	0.28 mg/m ³	Regal
Prodiamine	Not established	Not established	5 mg/m ³ TWA	Regal

Appropriate engineering controls:

Engineering Controls: Use effective engineering controls to comply with occupational exposure limits (if applicable).

Individual protection measures, such as personal protective equipment

Ingestion: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Eye contact: Where eye contact is likely, use dust-proof chemical goggles.



Safety Data Sheet

Issue Date: 11/18/15

Revision Date: N/a

Version: 1

Skin Contact: Where contact is likely, wear chemical-resistant gloves (such as a barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride, [PVC] or Viton), coveralls, socks and chemical-resistant footwear.

Inhalation: A particulate filter respirator may be necessary until effective engineering controls are installed to comply with occupational exposure limits. Use NIOSH certified respirator with any N, R, P or HE filter. Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance: Yellow green granules

Odor: Slight

Odor Threshold: N/a

<u>Property</u>	<u>Values</u>
pH	8.0-8.5 (5% in deionized water)
Melting point / Freezing Point	N/a
Boiling Point / Boiling Range	N/a
Flash Point (Test method)	N/a
Flammability (solid, gas)	Inflammable
Flammable Limits (% in Air)	N/a
Vapor Pressure	Prodiamine $<5.6 \times 10^{-6}$ mmHg @ 68°F (20° C) Oxadiazon: No data available
Vapor Density	N/a
Solubility(ies)	Prodiamine 0.013 ppm @ 77°F (25°C) Oxadiazon: insoluble
Partition Coefficient	n-octanol/water: N/a
Autoignition Temperature	N/a
Decomposition Temperature	N/a
Viscosity	N/a
Other	None

10. Stability and Reactivity

Reactivity: Not reactive.

Chemical Stability: Stable under normal use and storage conditions.



Safety Data Sheet

Issue Date: 11/18/15

Revision Date: N/a

Version: 1

Possibility of Hazardous Reactions: Will not occur.

Conditions to Avoid: Thermal, mechanical and electrical ignition sources.

Incompatible Materials: Strong bases, Strong acids, Strong oxidizing agents

Hazardous Decomposition Products: None known.

11. Toxicological Information

Health effects information:

Information on likely routes of exposure: Dermal, Inhalation, Eye Contact, Ingestion

Symptoms of exposure: Eye irritation, Respiratory irritation, redness of skin.

Delayed, immediate and chronic effects of exposure: Possible carcinogenicity, Eye irritation, Allergic skin reaction, Respiratory irritation.

Numerical measures of toxicity (acute toxicity/irritation studies (finished product))

Ingestion:	Oral (LD50 Rat):	>5000 mg/kg body weight
Dermal:	Dermal (LD50 Rat):	>2000 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat):	1.81 mg/l air – 4 hours
Eye Contact:	Mildly Irritating (Rabbit)	
Skin Contact:	Moderate skin irritation (Rabbit)	
Skin Sensitization:	Sensitizing (Guinea Pig)	

Reproductive/Developmental Effects:

Prodiamine: Fetal toxicity at high dose levels (rats); developmental and maternal toxicity observed at 1g/kg/day.

Oxadiazon caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Oxadiazon is related to parental toxicity.

Chronic/Subchronic Toxicity Studies:

Prodiamine: Liver (alteration and enlargement) and thyroid effects (hormone imbalances) at high dose levels (rats); decreased body weight gains.

Oxadiazon caused specific target organ toxicity in experimental animal studies in the following organ(s): liver, blood. The observed effects do not appear to be relevant for humans.

Carcinogenicity:

Prodiamine: Possible human carcinogen based on limited animal evidence in the absence of human data.



Safety Data Sheet

Issue Date: 11/18/15

Revision Date: N/a

Version: 1

Oxadiazon caused at high dose levels an increased incidence of tumours in in the following organ(s): liver. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.

Chemical Name	NTP/IARC/OSHA Carcinogen
2-tert-butyl-4-(2,4-dichloro-5-isopropoxyphenyl)-delta2-1,3,4-oxadiazolin-5-one	NO
N3, N3-Di-n-propyl-2,4-dinitro-6(trifluoromethyl)-m-phenylenediamine	NO

Other Toxicity Information: None

Toxicity of Other Components:

N/A

Target Organs:

Active Ingredients:

Prodiamine: Liver, thyroid
Oxadiazon: Liver

Inert Ingredients:

Non-Toxic

12. Ecological Information

Ecotoxicity

Prodiamine

Fish (Bluegill Sunfish) 96-hour LC50 > 552 ppb
Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 > 83 ppb
Bird (Bobwhite Quail) 14-day LD50 > 2250 mg/kg

Oxadiazon:

Fish (Rainbow Trout) 96- hour LC50 >1.2 mg/l
Invertebrate (Water Flea) 48-hour EC50 > 2.4 mg/l
Aquatic Plants (Skeletonema costatum) 120-hour EC50 > 0.0056 mg/l

Environmental Fate

Prodiamine

The information presented here is for the active ingredient, prodiamine.
Does not bioaccumulate. Persistent in soil. Stable in water. Immobile in soil. Sinks in water (after 24 h).

Oxadiazon:

The information presented here is for the active ingredient, oxadiazon.
Does not bioaccumulate. Not rapidly biodegradable. Slightly mobile in soil



Safety Data Sheet

Issue Date: 11/18/15

Revision Date: N/a

Version: 1

13. Disposal Considerations

Disposal: Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state and federal health and environmental regulations.

Characteristic Waste: Not applicable

Listed Waste: Not applicable

14. Transport Information

DOT Classification:

Ground Transport: NAFTA

Not regulated

Comments

Water transport – international

Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Prodiamine, Oxadizon), Marine Pollutant

Hazard Class: Class 9

Identification Number: UN 3077

Packing Group: PG III

Air Transport

Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Prodiamine, Oxadizon)

Hazard Class: Class 9

Identification Number: UN 3077

Packing Group: PG III

15. Regulatory Information

Pesticide Registration:

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.

Caution: Harmful if inhaled or absorbed through the skin. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

EPA Pesticide Registration Number(s): 60063-26-48234

EPCRA SARA Title III Classification:



Safety Data Sheet

Issue Date: 11/18/15

Revision Date: N/a

Version: 1

Section 311/312 Hazard Classes:

Acute Health Hazard
Fire Hazard

Chronic Health Hazard
Reactive Hazard

Section 313 Toxic Chemicals:

Oxadiazon 19666-30-9 25,000lbs

California Proposition 65: This product contains trace amounts of chemicals known to the State of California to cause cancer as unintended impurities resulting from other entities' manufacturing or processing operations which Regal cannot control.

This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

CERCLA/SARA 304 Reportable Quantity (RQ): Not applicable

RCRA Hazardous Waste Classification (40 CFR 261): Not applicable

TSCA Status: Exempt from TSCA, subject to FIFRA

16. Other Information

NFPA:

Health Hazards 2
Flammability 1
Instability 1

HMIS

Health hazards 2
Flammability 1
Physical hazards 1

- 0 – Minimal
- 1 – Slight
- 2 – Moderate
- 3 – Serious
- 4 – Extreme
- 5 - Chronic

Disclaimer: Regal Chemical Company believes that the information and recommendations contained herein (including data and statements) are accurate as of the date thereof. No warranty of fitness for any particular purpose, warranty of merchantability, or any other warranty, express or implied, is made concerning the information provided herein. The information provided herein relates to the specific product designated and may not be valid where such product is used in combination with any other materials or in any process. Further, since the conditions and methods of use of the product and of the information referred to herein are beyond the control of Regal Chemical Company, Regal Chemical Company expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.