



**RONSTAR® G HERBICIDE**

Version 3.0 / USA  
102000004005

1/12  
Revision Date: 03/10/2014  
Print Date: 02/09/2015

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**Product identifier**

**Trade name** RONSTAR® G HERBICIDE

**Product code (UVP)** 05950651

**SDS Number** 102000004005

**EPA Registration No.** 432-886

**Relevant identified uses of the substance or mixture and uses advised against**

**Use** Herbicide

**Restrictions on use** See product label for restrictions.

**Information on manufacturer**

Bayer Environmental Science  
2 T.W. Alexander Drive  
Research Triangle PK, NC 27709  
United States

**Emergency Telephone Number (24hr/ 7 days)** 1-800-334-7577 (24 hours/day)

**Product Information Telephone Number** 1-800-331-2867

**SDS Information or Request** SDSINFO.BCS-NA@bayer.com

**SECTION 2: HAZARDS IDENTIFICATION**

**Classification in accordance with regulation HCS 29CFR §1910.1200**

Eye irritation : Category 2B

**Signal word:** Warning

**Hazard statements**

Causes eye irritation.

**Precautionary statements**

Wash thoroughly after handling.

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/attention.

**Other hazards**

No other hazards known.



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### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Average % by Weight
Oxadiazon	19666-30-9	2.00
Titanium dioxide	13463-67-7	0.92
Naphthalene	91-20-3	0.42

### SECTION 4: FIRST AID MEASURES

#### Description of first aid measures

<b>General advice</b>	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
<b>Inhalation</b>	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.
<b>Skin contact</b>	Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.
<b>Eye contact</b>	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 physician or poison control center immediately.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

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

**Symptoms** To date no symptoms are known.

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

**Risks** Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

**Treatment** Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

### SECTION 5: FIREFIGHTING MEASURES

#### Extinguishing media

**Suitable** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Unsuitable** None known.



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<b>Special hazards arising from the substance or mixture</b>	Dangerous gases are evolved in the event of a fire.
<b>Advice for firefighters</b>	
<b>Special protective equipment for fire-fighters</b>	Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
<b>Further information</b>	Use appropriate extinguishing media for material that is supplying fuel. Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.
<b>Flash point</b>	not applicable
<b>Autoignition temperature</b>	no data available
<b>Lower explosion limit</b>	not applicable
<b>Upper explosion limit</b>	not applicable
<b>Explosivity</b>	no data available

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Precautions** Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

### Methods and materials for containment and cleaning up

**Methods for cleaning up** Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations. Decontaminate tools and equipment following cleanup.

**Additional advice** Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants.

**Reference to other sections** Information regarding safe handling, see section 7.  
Information regarding personal protective equipment, see section 8.  
Information regarding waste disposal, see section 13.

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## SECTION 7: HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation. Handle and open container in a manner as to prevent spillage.

**Advice on protection** Take measures to prevent the build up of electrostatic charge.



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**against fire and explosion**

**Hygiene measures**

Keep away from food, drink and animal feedingstuffs.  
Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.  
Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

**Conditions for safe storage, including any incompatibilities**

**Requirements for storage areas and containers**

Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Naphthalene	91-20-3	10 ppm (TWA)		OES BCS*
Naphthalene	91-20-3	10 ppm (TWA)	02 2012	ACGIH
Naphthalene	91-20-3	15 ppm (STEL)	02 2012	ACGIH
Naphthalene	91-20-3	10 ppm (TWA)	02 2013	ACGIH NIC
Naphthalene	91-20-3	50 mg/m3/10 ppm (REL)	2010	NIOSH
Naphthalene	91-20-3	75 mg/m3/15 ppm (STEL)	2010	NIOSH
Naphthalene	91-20-3	50 mg/m3/10 ppm (PEL)	02 2006	OSHA Z1
Naphthalene	91-20-3	75 mg/m3/15 ppm (STEL)	1989	OSHA Z1A
Naphthalene	91-20-3	50 mg/m3/10 ppm (TWA)	1989	OSHA Z1A
Naphthalene	91-20-3	75 mg/m3/15 ppm (STEL)	06 2008	TN OEL
Naphthalene	91-20-3	50 mg/m3/10 ppm (TWA)	06 2008	TN OEL
Naphthalene	91-20-3	10ppb (AN ESL)	07 2011	TX ESL
Naphthalene	91-20-3	38ppb (ST ESL)	02 2013	TX ESL
Naphthalene	91-20-3	50ug/m3 (AN ESL)	07 2011	TX ESL



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Naphthalene	91-20-3	200ug/m3 (ST ESL)	02 2013	TX ESL
Naphthalene	91-20-3	75 mg/m3/15 ppm (STEL)	08 2010	US CA OEL
Naphthalene	91-20-3	50 mg/m3/10 ppm (TWA PEL)	08 2010	US CA OEL
Cellulose	9004-34-6	10 mg/m3 (TWA)	02 2012	ACGIH
Cellulose (Total)	9004-34-6	10 mg/m3 (REL)	2010	NIOSH
Cellulose (Respirable.)	9004-34-6	5 mg/m3 (REL)	2010	NIOSH
Cellulose (Total dust.)	9004-34-6	15 mg/m3 (PEL)	02 2006	OSHA Z1
Cellulose (Respirable fraction.)	9004-34-6	5 mg/m3 (PEL)	02 2006	OSHA Z1
Cellulose (Total dust.)	9004-34-6	15 mg/m3 (TWA)	1989	OSHA Z1A
Cellulose (Respirable fraction.)	9004-34-6	5 mg/m3 (TWA)	1989	OSHA Z1A
Cellulose (Respirable fraction.)	9004-34-6	5 mg/m3 (TWA)	06 2008	TN OEL
Cellulose (Total dust.)	9004-34-6	15 mg/m3 (TWA)	06 2008	TN OEL
Cellulose (Particulate.)	9004-34-6	50ug/m3 (ST ESL)	02 2013	TX ESL
Cellulose (Particulate.)	9004-34-6	5ug/m3 (AN ESL)	02 2013	TX ESL
Kaolin (Respirable fraction.)	1332-58-7	2 mg/m3 (TWA)	02 2012	ACGIH
Kaolin (Total)	1332-58-7	10 mg/m3 (REL)	2010	NIOSH
Kaolin (Respirable.)	1332-58-7	5 mg/m3 (REL)	2010	NIOSH
Kaolin (Total dust.)	1332-58-7	15 mg/m3 (PEL)	02 2006	OSHA Z1
Kaolin (Respirable fraction.)	1332-58-7	5 mg/m3 (PEL)	02 2006	OSHA Z1
Kaolin (Total dust.)	1332-58-7	10 mg/m3 (TWA)	1989	OSHA Z1A
Kaolin (Respirable fraction.)	1332-58-7	5 mg/m3 (TWA)	1989	OSHA Z1A
Kaolin (Total dust.)	1332-58-7	10 mg/m3 (TWA)	06 2008	TN OEL
Kaolin (Respirable fraction.)	1332-58-7	5 mg/m3 (TWA)	06 2008	TN OEL
Kaolin (Particulate.)	1332-58-7	20ug/m3 (ST ESL)	02 2013	TX ESL
Kaolin	1332-58-7	2ug/m3	02 2013	TX ESL



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(Particulate.)		(AN ESL)		
Kaolin (Respirable dust.)	1332-58-7	2 mg/m3 (TWA PEL)	08 2010	US CA OEL
Calcium carbonate (Respirable.)	471-34-1	5 mg/m3 (REL)	2010	NIOSH
Calcium carbonate (Total)	471-34-1	10 mg/m3 (REL)	2010	NIOSH
Calcium carbonate	471-34-1	50ug/m3 (ST ESL)	07 2011	TX ESL
Calcium carbonate	471-34-1	5ug/m3 (AN ESL)	07 2011	TX ESL
Titanium dioxide	13463-67-7	10 mg/m3 (TWA)	02 2012	ACGIH
Titanium dioxide (Respirable fraction.)	13463-67-7	1 mg/m3 (TWA)	02 2013	ACGIH NIC
Titanium dioxide (Total dust.)	13463-67-7	15 mg/m3 (PEL)	02 2006	OSHA Z1
Titanium dioxide (Total dust.)	13463-67-7	10 mg/m3 (TWA)	1989	OSHA Z1A
Titanium dioxide (Total dust.)	13463-67-7	10 mg/m3 (TWA)	06 2008	TN OEL
Titanium dioxide (Respirable particles.)	13463-67-7	50ug/m3 (ST ESL)	02 2013	TX ESL
Titanium dioxide (Respirable particles.)	13463-67-7	5ug/m3 (AN ESL)	02 2013	TX ESL
Oxadiazon	19666-30-9	0.28 mg/m3 (TWA)		OES BCS*
Oxadiazon	19666-30-9	5ug/m3 (AN ESL)	07 2011	TX ESL
Oxadiazon	19666-30-9	50ug/m3 (ST ESL)	07 2011	TX ESL

\*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

**Exposure controls**

**Personal protective equipment**

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

**Respiratory protection**

When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Under conditions immediately dangerous to life or health, or emergency conditions with unknown concentrations, use a full-face positive pressure air-supplied respirator equipped with an emergency escape air supply unit or use a self-contained breathing apparatus unit.



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<b>Hand protection</b>	Chemical resistant nitrile rubber gloves
<b>Eye protection</b>	Tightly fitting safety goggles
<b>Skin and body protection</b>	Wear long-sleeved shirt and long pants and shoes plus socks.
<b>General protective measures</b>	Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	grey to tan
<b>Physical State</b>	granular
<b>Odor</b>	slight
<b>Odour Threshold</b>	no data available
<b>pH</b>	no data available
<b>Vapor Pressure</b>	no data available
<b>Vapor Density (Air = 1)</b>	no data available
<b>Bulk density</b>	44.0 - 50.0 lb/ft <sup>3</sup> (loose)
<b>Evaporation rate</b>	no data available
<b>Boiling Point</b>	not applicable
<b>Melting / Freezing Point</b>	not applicable
<b>Water solubility</b>	insoluble
<b>Minimum Ignition Energy</b>	no data available
<b>Decomposition temperature</b>	no data available
<b>Partition coefficient: n-octanol/water</b>	no data available
<b>Viscosity</b>	not applicable
<b>Flash point</b>	not applicable
<b>Autoignition temperature</b>	no data available
<b>Lower explosion limit</b>	not applicable
<b>Upper explosion limit</b>	not applicable
<b>Explosivity</b>	no data available

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### SECTION 10: STABILITY AND REACTIVITY

#### Reactivity

<b>Thermal decomposition</b>	no data available
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No hazardous reactions when stored and handled according to prescribed instructions.
<b>Conditions to avoid</b>	no data available
<b>Incompatible materials</b>	Strong bases, Strong acids, Strong oxidizing agents
<b>Hazardous decomposition products</b>	No decomposition products expected under normal conditions of use.

### SECTION 11: TOXICOLOGICAL INFORMATION

<b>Exposure routes</b>	Inhalation, Eye contact, Skin contact, Ingestion
<b>Immediate Effects</b>	
<b>Eye</b>	Causes redness, irritation, tearing.
<b>Skin</b>	Causes irritation, redness, swelling.
<b>Ingestion</b>	Harmful if swallowed.
<b>Inhalation</b>	May cause upper respiratory tract irritation. Harmful if inhaled.
<b>Information on toxicological effects</b>	
<b>Acute oral toxicity</b>	LD50 (rat) > 5,000 mg/kg
<b>Acute inhalation toxicity</b>	LC50 (rat) > 200 mg/l Exposure time: 1 h Determined in the form of dust.
<b>Acute dermal toxicity</b>	LD50 (rabbit) > 2,000 mg/kg
<b>Skin irritation</b>	Moderate skin irritation. (rabbit)
<b>Eye irritation</b>	Moderate eye irritation. (rabbit)
<b>Sensitisation</b>	Non-sensitizing. (guinea pig)

#### Assessment repeated dose toxicity

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.

#### Assessment Mutagenicity

Oxadiazon was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

#### Assessment Carcinogenicity

Oxadiazon caused at high dose levels an increased incidence of tumours in the following organ(s):





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liver. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.

**ACGIH**

Titanium dioxide	13463-67-7	Group A4
Naphthalene	91-20-3	Group A4

**NTP**

Naphthalene	91-20-3
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**IARC**

Titanium dioxide	13463-67-7	Overall evaluation: 2B
Naphthalene	91-20-3	Overall evaluation: 2B

**OSHA**

None.

**Assessment toxicity to reproduction**

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.

**Assessment developmental toxicity**

Oxadiazon caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Oxadiazon are related to maternal toxicity.

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**SECTION 12: ECOLOGICAL INFORMATION**

<b>Toxicity to fish</b>	LC50 (Oncorhynchus mykiss (rainbow trout)) 1.2 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient oxadiazon.
<b>Toxicity to aquatic invertebrates</b>	EC50 (Water flea (Daphnia magna)) > 2.4 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient oxadiazon.
<b>Toxicity to aquatic plants</b>	EC50 (Skeletonema costatum) 0.0056 mg/l Exposure time: 120 h The value mentioned relates to the active ingredient oxadiazon.
<b>Biodegradability</b>	Oxadiazon: ; not rapidly biodegradable
<b>Koc</b>	Oxadiazon: Koc: 1294
<b>Bioaccumulation</b>	Oxadiazon: Bioconcentration factor (BCF) 243; Does not bioaccumulate.
<b>Mobility in soil</b>	Oxadiazon: Slightly mobile in soils
<b>Environmental precautions</b>	Do not allow to get into surface water, drains and ground water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.

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### SECTION 13: DISPOSAL CONSIDERATIONS

#### Waste treatment methods

<b>Product</b>	Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility.
<b>Contaminated packaging</b>	Do not re-use empty containers. Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities. If burned, stay out of smoke.
<b>RCRA Information</b>	Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

### SECTION 14: TRANSPORT INFORMATION

#### 49CFR

UN number	<b>3077</b>
Class	9
Packaging group	III
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (NAPHTHALENE)
RQ	Reportable Quantity is reached with 23,809 lb of product.

#### IMDG

UN number	<b>3077</b>
Class	9
Packaging group	III
Marine pollutant	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (OXADIAZON MIXTURE)

#### IATA

UN number	<b>3077</b>
Class	9
Packaging group	III
Environm. Hazardous Mark	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (OXADIAZON MIXTURE )

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.



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Freight Classification: COMPOUNDS, TREE OR WEEDKILLING, N.O.I., other than poison; HAVING A DENSITY OF GREATER THAN 20 LBS. PER CUBIC FOOT

**SECTION 15: REGULATORY INFORMATION**

**EPA Registration No.** 432-886

**US Federal Regulations**

**TSCA list**

Titanium dioxide 13463-67-7  
Naphthalene 91-20-3

**US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)**

None.

**SARA Title III - Section 302 - Notification and Information**

None.

**SARA Title III - Section 313 - Toxic Chemical Release Reporting**

Oxadiazon 19666-30-9 25,000lbs  
Naphthalene 91-20-3 0.1%

**US States Regulatory Reporting**

**CA Prop65**

This product contains a chemical known to the State of California to cause cancer.

Oxadiazon 19666-30-9  
Titanium dioxide 13463-67-7  
Naphthalene 91-20-3

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

Oxadiazon 19666-30-9 Developmental toxin.

**US State Right-To-Know Ingredients**

Oxadiazon 19666-30-9 NJ  
Titanium dioxide 13463-67-7 MN  
Naphthalene 91-20-3 CA, CT, MN, NJ

**Canadian Regulations**

**Canadian Domestic Substance List**

Titanium dioxide 13463-67-7  
Naphthalene 91-20-3

**Environmental**

**CERCLA**

Naphthalene 91-20-3 100 lbs

**Clean Water Section 307 Priority Pollutants**

None.

**Safe Drinking Water Act Maximum Contaminant Levels**

None.

**International Regulations**

**European Inventory of Existing Commercial Substances (EINECS)**



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Oxadiazon 19666-30-9  
Titanium dioxide 13463-67-7  
Naphthalene 91-20-3

**EPA/FIFRA 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 required on the pesticide label:

**Signal word:** Warning!

**Hazard statements:** Causes eye irritation.  
Causes skin irritation.  
Harmful if inhaled.  
Do not get in eyes, on skin, or on clothing.  
Avoid breathing dust.  
Wash thoroughly with soap and water after handling.

**SECTION 16: OTHER INFORMATION**

**NFPA 704 (National Fire Protection Association):**

Health - 2      Flammability - 1      Instability - 0      Others - none

**HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)**

Health - 2      Flammability - 1      Physical Hazard - 0      PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

**Reason for Revision:** Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200)

**Revision Date:** 03/10/2014

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