



RONSTAR® 50% INTERMEDIATE HERBICIDE

Version 3.0 / USA
102000002159

1/12
Revision Date: 06/03/2015
Print Date: 08/19/2015

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

Product identifier

Trade name RONSTAR® 50% INTERMEDIATE HERBICIDE

Product code (UVP) 05931355

SDS Number 102000002159

EPA Registration No. 432-1406

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

Use Herbicide

Restrictions on use See product label for restrictions.

Information on supplier

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

Responsible Department Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.

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

Product Information Telephone Number 1-800-331-2867

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200

Eye irritation : Category 2A

Skin irritation : Category 2

Acute toxicity (Inhalation): Category 4



Signal word: Warning

Hazard statements

Causes serious eye irritation.

Causes skin irritation.

Harmful if inhaled.

Precautionary statements



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Wash thoroughly after handling.
Wear protective gloves and eye protection/face protection.
Avoid breathing dust, mist, spray.
Use only outdoors or in a well-ventilated area.
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.
IF ON SKIN: Wash with plenty of water/soap.
Specific treatment (see supplemental first aid instructions on this label).
If skin irritation occurs: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor/physician if you feel unwell.

Other hazards

Dust may form explosive mixture in air.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Oxadiazon	19666-30-9	50.0
Synthetic amorphous silica	112926-00-8	10.0
Lignin, reaction product with sodium sulfite and formaldehyde	105859-97-0	3.5
Crystalline quartz (respirable)	14808-60-7	1.8
Sodium lauryl sulfate	151-21-3	1.5

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
Inhalation	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.
Skin contact	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.
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 physician or poison control center immediately.
Ingestion	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



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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

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 Water spray, Carbon dioxide (CO₂), Dry chemical, Foam

Unsuitable High volume water jet

Special hazards arising from the substance or mixture Dangerous gases are evolved in the event of a fire., Accumulation of fine dust may entail the risk of a dust explosion in the presence of air.

Advice for firefighters

Special protective equipment for fire-fighters Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

Further information Use appropriate extinguishing media for material that is supplying fuel. Keep out of smoke. Fight fire from upwind position. Do not allow run-off from fire fighting to enter drains or water courses.

Flash point not applicable

Autoignition temperature no data available

Lower explosion limit not applicable

Upper explosion limit not applicable

Explosivity no data available



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SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions Keep unauthorized people away. Evacuate and isolate spill area. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.

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.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

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

Hygiene measures 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. Remove soiled clothing immediately and clean thoroughly before using again. Before removing gloves clean them with soap and water. 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
Oxadiazon	19666-30-9	50ug/m3 (ST ESL)	07 2011	TX ESL
Oxadiazon	19666-30-9	5ug/m3	07 2011	TX ESL



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		(AN ESL)		
Oxadiazon	19666-30-9	0.28 mg/m3 (TWA)		OES BCS*
Synthetic amorphous silica	112926-00-8	6 mg/m3 (REL)	2010	NIOSH
Synthetic amorphous silica	112926-00-8	6 mg/m3 (TWA)	1989	OSHA Z1A
Synthetic amorphous silica	112926-00-8	6 mg/m3 (TWA)	06 2008	TN OEL
Synthetic amorphous silica (Particulate.)	112926-00-8	27ug/m3 (ST ESL)	02 2013	TX ESL
Synthetic amorphous silica (Particulate.)	112926-00-8	2ug/m3 (AN ESL)	02 2013	TX ESL
Synthetic amorphous silica	112926-00-8	0.8 mg/m3 (TWA)	2000	Z3
Synthetic amorphous silica	112926-00-8	20millions of particles per cubic foot of air (TWA)	2000	Z3
Crystalline quartz (respirable) (Respirable fraction.)	14808-60-7	0.025 mg/m3 (TWA)	02 2012	ACGIH
Crystalline quartz (respirable) (Respirable dust.)	14808-60-7	0.05 mg/m3 (REL)	2010	NIOSH
Crystalline quartz (respirable) (Respirable dust.)	14808-60-7	0.1 mg/m3 (TWA)	1989	OSHA Z1A
Crystalline quartz (respirable) (Respirable dust.)	14808-60-7	0.1 mg/m3 (TWA)	06 2008	TN OEL
Crystalline quartz (respirable) (Particulate.)	14808-60-7	0.27ug/m3 (AN ESL)	02 2013	TX ESL
Crystalline quartz (respirable) (Particulate.)	14808-60-7	14ug/m3 (ST ESL)	02 2013	TX ESL
Crystalline quartz (respirable) (Respirable dust.)	14808-60-7	0.1 mg/m3 (TWA PEL)	08 2010	US CA OEL
Crystalline quartz (respirable) (Total dust.)	14808-60-7	0.3 mg/m3 (TWA PEL)	08 2010	US CA OEL
Crystalline quartz (respirable) (Total dust.)	14808-60-7	0.3 mg/m3 (TWA)	2000	Z3
Crystalline quartz (respirable) (Respirable.)	14808-60-7	2.4millions of particles per cubic foot of air (TWA)	2000	Z3
Crystalline quartz	14808-60-7	0.1 mg/m3	2000	Z3



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(respirable) (Respirable.)		(TWA)		
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*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.

Hand protection Chemical resistant nitrile rubber gloves

Eye protection Tightly fitting safety goggles

Skin and body protection Wear long-sleeved shirt and long pants and shoes plus socks.

General protective measures 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	tan
Physical State	powder
Odor	amine-like
Odour Threshold	no data available
pH	7.5 - 9.5 at 10 % (24.1 °C) aqueous suspension
Vapor Pressure	not applicable
Vapor Density (Air = 1)	not applicable
Bulk density	27 - 40 kg/m ³ (bulk density tapped)
Evaporation rate	not applicable
Boiling Point	not applicable
Melting / Freezing Point	not applicable
Water solubility	dispersible
Minimum Ignition Energy	no data available
Decomposition temperature	no data available
Partition coefficient: n-octanol/water	not applicable



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Viscosity	not applicable
Flash point	not applicable
Autoignition temperature	no data available
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Explosivity	no data available

SECTION 10: STABILITY AND REACTIVITY

Reactivity	
Thermal decomposition	no data available
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	no data available
Incompatible materials	Strong acids, Strong bases
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Inhalation, Ingestion, Eye contact, Skin contact
Immediate Effects	
Eye	Causes substantial but temporary eye injury.
Skin	Causes skin irritation. Harmful if absorbed through skin.
Ingestion	May be harmful if swallowed.
Inhalation	May cause respiratory tract irritation. Harmful if inhaled.
Information on toxicological effects	
Acute oral toxicity	LD50 (rat) > 5,000 mg/kg
Acute inhalation toxicity	LC50 (rat) > 1.8 mg/l Exposure time: 4 h Determined in the form of dust.
	LC50 (rat) > 7.2 mg/l Exposure time: 1 h Determined in the form of dust.



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Extrapolated from the 4 hr LC50.

Acute dermal toxicity LD50 (rabbit) > 2,000 mg/kg
Skin irritation Severe skin irritation. (rabbit)
Eye irritation Moderate eye irritation. (rabbit)

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 in the following organ(s): liver. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.

ACGIH

Crystalline quartz (respirable)	14808-60-7	Group A2
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NTP

Crystalline quartz (respirable)	14808-60-7	2000
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IARC

Synthetic amorphous silica	112926-00-8	Overall evaluation: 3
Crystalline quartz (respirable)	14808-60-7	Overall evaluation: 1

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.

Further information

Only acute toxicity studies have been performed on the formulated product.
The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)) 1.2 mg/l
Exposure time: 96 h



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

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	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. Dispose in accordance with all local, state/provincial and federal regulations.
Contaminated packaging	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.
RCRA Information	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	Not dangerous goods / not hazardous material
IMDG	
UN number	3077



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Class 9
Packaging group III
Marine pollutant YES
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S.
(OXADIAZON MIXTURE)

IATA

UN number **3077**
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.

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. 432-1406

US Federal Regulations

TSCA list

Lignin, reaction product with sodium 105859-97-0

sulfite and formaldehyde

Crystalline quartz (respirable) 14808-60-7

Sodium lauryl sulfate 151-21-3

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

US States Regulatory Reporting

CA Prop65

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

Oxadiazon 19666-30-9

Crystalline quartz (respirable) 14808-60-7

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.



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US State Right-To-Know Ingredients

Oxadiazon	19666-30-9	NJ, RI
Synthetic amorphous silica	112926-00-8	CA, MN
Crystalline quartz (respirable)	14808-60-7	MN

Canadian Regulations

Canadian Domestic Substance List

Crystalline quartz (respirable) 14808-60-7

Environmental

CERCLA

None.

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)

Crystalline quartz (respirable) 14808-60-7

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 substantial but temporary eye injury.
Causes skin irritation.
Harmful if inhaled or absorbed through skin.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
CAS-Nr.	Chemical Abstracts Service number
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	US. IARC Monographs on Occupational Exposures to Chemical Agents
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
N.O.S.	Not otherwise specified
NTP	US. National Toxicology Program (NTP) Report on Carcinogens
OECD	Organization for Economic Co-operation and Development
TDG	Transportation of Dangerous Goods
TWA	Time weighted average



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UN United Nations
WHO World health organisation

NFPA 704 (National Fire Protection Association):

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

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

Health - 1 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: 06/03/2015

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