

**Material Safety Data Sheet****RONSTAR® 50 WSP HERBICIDE**

MSDS Number: 102000002159

MSDS Version 2.1

Revision Date: 06/07/2010

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name RONSTAR® 50 WSP HERBICIDE
MSDS Number 102000002159
EPA Registration No. 432-893

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

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
For Product Information call: 1-800-331-2867

SECTION 2. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview Warning! Causes substantial but temporary eye injury. Causes skin irritation. Harmful if inhaled or absorbed through skin. Do not get in eyes, on skin, or on clothing. Avoid breathing dust.

Physical State powder

Odor amine-like

Appearance tan

Exposure routes Inhalation, Ingestion, Eye contact, Skin contact

Immediate Effects

Eye Causes substantial but temporary eye injury. Wear protective eyewear. Do not get in eyes.

Skin Causes skin irritation. Harmful if absorbed through skin. Do not get in eyes, on skin, or on clothing.

Ingestion May be harmful if swallowed. Do not take internally.

Inhalation May cause respiratory tract irritation. Harmful if inhaled. Avoid breathing dust.

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**Chronic or Delayed
Long-Term**

This product or its components may have target organ effects. This product contains ingredients that are considered to be probable or suspected human carcinogens (see Section 11 - Chronic).

This product is not listed as a carcinogen by ACGIH, NTP, IARC or OSHA. However, it may contain crystalline silica (quartz), a substance which has been listed as a carcinogen by ACGIH, NTP and IARC. Crystalline silica is a naturally-occurring mineral component of many sands and clays. Although the carcinogenic potential of crystalline silica in humans is controversial, it must be considered if it is inhaled under excessive exposure conditions. The respirable portion of the silica that may be contained in this product, however, is small, such that inhalation exposure during anticipated conditions of use is minimal.

**Medical Conditions
Aggravated by Exposure**

No specific medical conditions are known which may be aggravated by exposure to this product. As with all materials which can cause upper respiratory tract irritation, persons with a history of asthma, emphysema, or hyperreactive airways disease may be more susceptible to overexposure. Pulmonary and respiratory diseases may be aggravated by exposure to respirable crystalline silica.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Oxadiazon	19666-30-9	50.00
Synthetic amorphous silica	112926-00-8	10.00
Lignin, reaction product with sodium sulfite and formaldehyde	105859-97-0	3.50
Quartz (Silica, Crystalline)	14808-60-7	1.80
Crystalline quartz (respirable)		
Sodium lauryl sulfate	151-21-3	1.50

SECTION 4. FIRST AID MEASURES**General**

When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Eye

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.

Skin

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.

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 anything by mouth to an

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unconscious person. Do not leave victim unattended.

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.

**Notes to physician
Treatment**

Treat symptomatically. There is no specific antidote.

SECTION 5. FIRE FIGHTING MEASURES**Flash point**

not applicable

**Fire and Explosion
Hazards**

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.

**Suitable extinguishing
media**

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

**Fire Fighting
Instructions**

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.

Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

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

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 vegetation.

SECTION 7. HANDLING AND STORAGE**Handling procedures**

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.

Storing Procedures

Store in a cool, dry place and in such a manner as to prevent cross



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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.

Work/Hygienic Procedures

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.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection

Follow all label instructions. Train employees in safe use of the product.

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.

Eye/Face Protection

Tightly fitting safety goggles

Hand protection

Chemical-resistant gloves made of waterproof material such as neoprene, butyl rubber, barrier laminate or nitrile rubber.

Body Protection

Wear long-sleeved shirt and long pants and shoes plus socks.
Chemical resistant apron when cleaning equipment, mixing or loading.

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.
Respirator with a combined dust and gas cartridge.

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.

Exposure Limits

Oxadiazon Synthetic amorphous silica	19666-30-9	OES BCS*	TWA	0.28 mg/m3
		OSHA Z1A	TWA	6 mg/m3
		TX ESL	ST ESL	40 ug/m3
		TX ESL	AN ESL	4 ug/m3
Quartz (Silica, Crystalline)	14808-60-7	ACGIH	TWA	6 mg/m3
			TWA	0.025 mg/m3



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NIOSH	REL	0.05 mg/m3
OSHA Z1A	TWA	0.1 mg/m3
Z3	TWA	2.4 millions of particles per cubic foot of air
Z3	TWA	0.1 mg/m3
Z3	TWA	0.3 mg/m3
US CA OEL	TWA PEL	0.1 mg/m3
US CA OEL	TWA PEL	0.3 mg/m3
TX ESL	ST ESL	1 ug/m3
TX ESL	ST ESL	1 ug/m3
TX ESL	AN ESL	0.1 ug/m3
TX ESL	AN ESL	0.1 ug/m3
TX ESL	ST ESL	10 ug/m3
TX ESL	AN ESL	1 ug/m3
	TWA	0.1 mg/m3

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	tan
Physical State	powder
Odor	amine-like
pH	7.5 - 9.5 (10 %) at 24.1 °C aqueous suspension
Bulk density	27 - 40 kg/m3 (bulk density tapped) 20.72 lbs/cu.ft. (loose) 39.89 lbs/cu.ft. (packed)

SECTION 10. STABILITY AND REACTIVITY

Incompatibility	Strong acids Strong bases
Hazardous Decomposition Products	Thermal decomposition can lead to release of: Carbon oxides Hydrogen chloride (HCl) nitrogen oxides (NOx)
Chemical Stability	Stable under normal conditions.

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SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on the formulated product. The non-acute information pertains to the technical-grade active ingredient, oxadiazon.

Acute oral toxicity	rat: LD50: > 5,000 mg/kg
Acute dermal toxicity	rabbit: LD50: > 2,000 mg/kg
Acute inhalation toxicity	rat: LC50: > 1.8 mg/l Exposure time: 4 h Determined in the form of dust. rat: LC50: > 7.2 mg/l Exposure time: 1 h Determined in the form of dust. Extrapolated from the 4 hr LC50.
Skin irritation	rabbit: Severe skin irritation.
Eye irritation	rabbit: Moderate eye irritation.
Chronic toxicity	Oxadiazon caused liver effects in chronic studies in rats, mice and dogs.

Assessment Carcinogenicity

Oxadiazon has been shown to cause liver tumors in lifetime feeding studies in rats and mice.

ACGIH

Quartz (Silica, Crystalline)	14808-60-7	Group A2
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NTP

Crystalline quartz (respirable)		
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IARC

Quartz (Silica, Crystalline)	14808-60-7	Overall evaluation: 1
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OSHA

None.

Reproductive toxicity	REPRODUCTION: Oxadiazon was not a primary reproductive toxicant in a multi-generation reproduction study in rats. Reproductive effects were observed only at doses that caused systemic toxicity in adult rats. DEVELOPMENTAL TOXICITY: Oxadiazon was not a primary developmental toxicant in rats and rabbits. Developmental effects were observed but were considered secondary to maternal toxicity.
Neurotoxicity	Oxadiazon did not demonstrate the potential to cause neurotoxicity in standard toxicity studies using laboratory animals.
Mutagenicity	Oxadiazon is not considered mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

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SECTION 12. ECOLOGICAL INFORMATION

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.
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SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance	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.
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Container Disposal	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.
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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.
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SECTION 14. TRANSPORT INFORMATION

CFR	Not dangerous goods / not hazardous material
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IMDG

UN-Number	3077
Class	9
Packaging group	III
Marine pollutant	Marine Pollutant
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (OXADIAZON MIXTURE)

IATA

UN-Number	3077
Class	9
Packaging group	III
Description of the goods	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.** 432-893**US Federal Regulations****TSCA list**

Lignin, reaction product with sodium sulfite and formaldehyde 105859-97-0
Quartz (Silica, Crystalline) 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 1.0%

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)

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
Quartz (Silica, Crystalline) 14808-60-7 IL, MA

Canadian Regulations**Canadian Domestic Substance List**

Synthetic amorphous silica 112926-00-8
Lignin, reaction product with sodium sulfite and formaldehyde 105859-97-0
Quartz (Silica, Crystalline) 14808-60-7
Sodium lauryl sulfate 151-21-3

Environmental**CERCLA**

None.

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.



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International Regulations

European Inventory of Existing Commercial Substances (EINECS)

Quartz (Silica, Crystalline)

14808-60-7

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 2

Flammability - 1

Reactivity - 1

Others - none

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

Reason to Revise: Updated for general editorial purposes.

Revision Date: 06/07/2010

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