



Material Safety Data Sheet
RIMFIRE™ HERBICIDE

MSDS Number: 102000012424
 MSDS Version 1.0
 Revision Date: 10/19/2005

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name RIMFIRE™ HERBICIDE
MSDS Number 102000012424
EPA Registration No. 264-847

Bayer CropScience
 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 1-866-99BAYER (1-866-992-2937)

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Propoxycarbazone-sodium	181274-15-7	8.14
Mesosulfuron-methyl	208465-21-8	2.03
Naphthalene	91-20-3	2.58

SECTION 3. HAZARDS IDENTIFICATION

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

Emergency Overview Caution! Do not get in eyes, on skin, or on clothing. Avoid breathing dust. May be harmful by inhalation, ingestion, skin adsorption.

Physical State granular
Odor aromatic
Appearance brown
Routes of Exposure Ingestion, Inhalation, Eye contact, Skin contact
Immediate Effects
 Eye Do not get in eyes. May produce severe eye irritation.
 Skin May cause slight irritation. Avoid contact with skin and clothing.
 Ingestion Do not take internally. May be harmful if swallowed.
 Inhalation May be harmful if inhaled. Avoid breathing dust.

SECTION 4. FIRST AID MEASURES



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General	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 poison control center or doctor for treatment advice.
Skin	Take off all contaminated clothing immediately. Rinse immediately with plenty of water for at least 15 minutes. Call a poison control center or doctor for treatment advice.
Ingestion	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. 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.
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 poison control center or doctor for further treatment advice.
Notes to Physician	
Signs and Symptoms	local irritation
Treatment	There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5. FIRE FIGHTING MEASURES

Explosiveness	Not explosive
Fire and Explosion Hazards	In the event of fire the following can be released: carbon monoxide (CO) nitrogen oxides (NOx) Sulphur oxides
Suitable Extinguishing Media	foam, dry chemical, water spray
Fire Fighting Instructions	Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Dike area to prevent runoff and contamination of water sources. Equipment or materials involved in pesticide fires may become contaminated. Wear self-contained breathing apparatus and protective suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES



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- Personal Precautions** Keep unauthorized people away. Isolate hazard 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 material to enter streams, sewers, or other waterways or contact vegetation.

SECTION 7. HANDLING AND STORAGE

- Handling Procedures** Handle and open container in a manner as to prevent spillage.
- Storing Procedures** Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Keep away from direct sunlight.
- 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.

 Take off contaminated clothing and shoes immediately. Then 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.
- Engineering Controls** Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.
- Eye/Face Protection** goggles
- Hand Protection** Chemical resistant nitrile rubber gloves
- Body Protection** Wear long-sleeved shirt and long pants and shoes plus socks.
- 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.

Exposure Limits

This product contains material which are Trade Secret and may have Occupational Exposure Limits. If more information is required, call the product information number listed in Section 1.

Naphthalene	91-20-3	ACGIH	TWA	10 ppm
		ACGIH	STEL	15 ppm



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Synthetic amorphous silica	112926-00-8	NIOSH	REL	10 ppm	50 mg/m3
		NIOSH	STEL	15 ppm	75 mg/m3
		OSHA Z1	PEL	10 ppm	50 mg/m3
		OSHA Z1A	TWA	10 ppm	50 mg/m3
		OSHA Z1A	STEL	15 ppm	75 mg/m3
		US CA OEL	TWA PEL	10 ppm	50 mg/m3
		US CA OEL	STEL	15 ppm	75 mg/m3
		ACGIH	TWA		10 mg/m3
		OSHA Z1A	TWA		6 mg/m3
		NIOSH	REL		6 mg/m3
		OSHA Z1	PEL		5 mg/m3
		Form of Exposure		Respirable fraction.	
		OSHA Z1	PEL		15 mg/m3
		Form of Exposure		Total dust.	
		Z3	TWA		15 millions of particles per cubic foot of air
		Form of Exposure		Respirable fraction.	
		Z3	TWA		50 millions of particles per cubic foot of air
		Form of Exposure		Total dust.	
		Z3	TWA		5 mg/m3
		Form of Exposure		Respirable fraction.	
Z3	TWA		15 mg/m3		
Form of Exposure		Total dust.			
US CA OEL	TWA PEL		5 mg/m3		
Form of Exposure		Respirable fraction.			
US CA OEL	TWA PEL		10 mg/m3		
Form of Exposure		Total dust.			
US CA OEL	TWA PEL		5 mg/m3		
Form of Exposure		Respirable fraction.			
US CA OEL	TWA PEL		10 mg/m3		
Form of Exposure		Total dust.			
US CA OEL	TWA PEL		5 mg/m3		
Form of Exposure		Respirable fraction.			
US CA OEL	TWA PEL		10 mg/m3		
Form of Exposure		Total dust.			
Z3	TWA		20 millions of particles per cubic foot of air		
Z3	TWA		0.8 mg/m3		
Remarks		The value is calculated from a specified equation using a value of 100%. Lower values of % will give higher exposure limits. See regulation for specific equation.			
Kaolin	1332-58-7	ACGIH	TWA		2 mg/m3
		Form of Exposure		Respirable fraction.	
		Remarks		The value is for particulate	



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		matter containing no asbestos and <1% crystalline silica.
NIOSH	REL	5 mg/m3
Form of Exposure		Respirable.
NIOSH	REL	10 mg/m3
Form of Exposure		Total
US CA OEL	TWA PEL	2 mg/m3
Form of Exposure		Respirable dust.
OSHA Z1	PEL	5 mg/m3
Form of Exposure		Respirable fraction.
OSHA Z1	PEL	15 mg/m3
Form of Exposure		Total dust.
OSHA Z1A	TWA	5 mg/m3
Form of Exposure		Respirable fraction.
OSHA Z1A	TWA	10 mg/m3
Form of Exposure		Total dust.
OSHA Z1	PEL	5 mg/m3
Form of Exposure		Respirable fraction.
OSHA Z1	PEL	15 mg/m3
Form of Exposure		Total dust.
OSHA Z1A	TWA	5 mg/m3
Form of Exposure		Respirable fraction.
OSHA Z1A	TWA	15 mg/m3
Form of Exposure		Total dust.
Z3	TWA	15 millions of particles per cubic foot of air
Form of Exposure		Respirable fraction.
Z3	TWA	50 millions of particles per cubic foot of air
Form of Exposure		Total dust.
Z3	TWA	5 mg/m3
Form of Exposure		Respirable fraction.
Z3	TWA	15 mg/m3
Form of Exposure		Total dust.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	brown
Physical State	granular
Odor	aromatic
pH	7.5 - 8.5 (10 %) at 23 °C
Bulk Density	41.35 lbs/cu ft
	570 - 670 kg/m3



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Decomposition Temperature No decomposition if used as directed.

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity studies have been bridged from a similar formulation containing the active ingredients, propoxycarbazone-sodium and mesosulfuron-methyl. The non-acute information pertains to the technical-grade active ingredients.

- Acute Oral Toxicity** rat: LD50: > 2,000 mg/kg
- Acute Dermal Toxicity** male/female rat: LD50: > 2,000 mg/kg
- Acute Inhalation Toxicity** male/female rat: LC50: > 0.995 mg/l
 Exposure time: 4 h
 Determined in the form of liquid aerosol.
 (actual)
 Maximum attainable concentration.
 No deaths
- male/female rat: LC50: > 3.98 mg/l
 Exposure time: 1 h
 Determined in the form of liquid aerosol.
 Extrapolated from the 4 hr LC50.
 (actual)
- Skin Irritation** rabbit: Slight irritation.
- Eye Irritation** rabbit: Severe eye irritation.
- Sensitization** guinea pig: Non-sensitizing.
- Chronic Toxicity** Propoxycarbazone-sodium caused kidney and/or adrenal effects in chronic toxicity studies in rats and dogs.

 Mesosulfuron-methyl did not cause any treatment-related effects in chronic toxicity studies in rats and dogs.

Assessment Carcinogenicity

Propoxycarbazone-sodium and mesosulfuron-methyl do not exhibit carcinogenic potential when tested in rats and mice.

ACGIH

Naphthalene

91-20-3

Group A4



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NTP		
Naphthalene	91-20-3	
IARC		
Naphthalene	91-20-3	Overall evaluation: 2B
OSHA		
None.		

Reproductive & Developmental Toxicity

REPRODUCTION
Neither propoxycarbazone-sodium nor mesosulfuron-methyl cause reproductive toxicity in multi-generation studies in rats.

DEVELOPMENTAL TOXICITY
Propoxycarbazone-sodium is not a primary developmental toxicant in rats and rabbits. Developmental effects were observed only at doses that caused maternal toxicity.

Mesosulfuron-methyl is not a developmental toxicant in rats and rabbits.

Neurotoxicity

Propoxycarbazone-sodium is not a neurotoxicant based on acute and subchronic neurotoxicity screening studies in rats.

Mesosulfuron-methyl has no structural relationship to known neurotoxic substances. Moreover, the very low and non-specific toxicological profile of mesosulfuron-methyl shows no evidence of neurotoxic potential.

Mutagenicity

Neither propoxycarbazone-sodium nor mesosulfuron-methyl is mutagenic or genotoxic based on in vitro and in vivo mutagenicity studies.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity to Fish Rainbow trout (*Oncorhynchus mykiss*)
LC50: > 77.6 mg/l
Exposure time: 96 h

Toxicity to Aquatic Plants Pseudokirchneriella subcapitata
EC50: 1.57 mg/l
Exposure time: 96 h

Lemna gibba (duckweed)
Growth rate
EC50: 0.00664 mg/l
Exposure time: 7 d

Acute Toxicity to Aquatic Invertebrates Water flea (*Daphnia magna*)
EC50: > 107 mg/l
Exposure time: 48 h



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Environmental Precautions	Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply where runoff is likely to occur. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Do not allow sprays to drift onto adjacent desirable plants. Drift or runoff may adversely affect non-target plants.
Ecological Information	The ecological data given are those of the active ingredient propoxycarbazone-sodium.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance	Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.
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.
RCRA Classification:	The RCRA Classifications may be on the individual component(s) and not necessarily on the product as a whole.
91-20-3	Naphthalene US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261): U165
91-20-3	Naphthalene US. EPA Resource Conservation and Recovery Act (RCRA) U List of Hazardous Wastes (40 CFR 261.33(f) and 40 CFR 302 [CERCLA]): U165

SECTION 14. TRANSPORT INFORMATION

TRANSPORTATION CLASSIFICATION:
 Not regulated for Domestic surface shipment

FREIGHT CLASSIFICATION:
 Compounds, Tree or Weedkilling, N.O.I., other than poison; Having a density greater than 20 LBS. per cubic foot

Note: Material received from Europe may be classified as a Class 9, PG III hazard due to its aquatic toxic under GHS/ADR regulations.

SECTION 15. REGULATORY INFORMATION

EPA Registration No. 264-847



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US Federal Regulations

TSCA list

Naphthalene 91-20-3

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

Naphthalene 91-20-3

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

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.

Naphthalene 91-20-3

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

Naphthalene 91-20-3 CA, CT, IL, MN, NJ, PA, RI

Canadian Regulations

Canadian Domestic Substance List

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)

Naphthalene 91-20-3

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

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

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

Reason to Revise: New Material Safety Data Sheet.

Revision Date: 10/19/2005

This information is provided in good faith but without express or implied warranty. The customer assumes all



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responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.