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

Product identifier

Trade name	RIMFIRE® MAX HERBICIDE
Product code (UVP)	79717342
SDS Number	102000020887
EPA Registration No.	264-1099

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

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
Carcinogenicity: Category 2
Eye irritation: Category 2A

Labelling in accordance with regulation HCS 29CFR §1910.1200

Signal word: Warning

Hazard statements
Suspected of causing cancer.
Causes serious eye irritation.

Precautionary statements
Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash thoroughly after handling.
IF exposed or concerned: Get medical advice/ attention.
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.
Store locked up.
Dispose of contents/container in accordance with local regulation.

Hazards Not Otherwise Classified (HNOC)
No physical hazards not otherwise classified.
No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Mesosulfuron-methyl	208465-21-8	1.91
Propoxycarbazone-sodium	181274-15-7	4.76
Mefenpyr-diethyl	135590-91-9	14.28
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	16.6
Tetrapropylene benzene sulfonate, calcium salt	11117-11-6	1.3
Naphthalene	91-20-3	0.16
Naphthalene and alkyl naphthalene sulphonic acids formaldehyde condensate, sodium salt	68425-94-5	10.0

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. 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	If large amounts are ingested, the following symptoms may occur:
	Headache, Nausea, Dizziness, Somnolence
	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
	Aspiration may cause pulmonary oedema and pneumonitis.
	Inhalation may provoke the following symptoms:
	Cough, Shortness of breath, Cyanosis, Fever
	Symptoms and hazards refer to the solvent.

Indication of any immediate medical attention and special treatment needed

Risks	Contains hydrocarbon solvents. May pose an aspiration pneumonia hazard.
Treatment	There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable	High volume water jet
Special hazards arising from the substance or mixture	In the event of fire the following may be released:, Hydrogen chloride (HCl), Hydrogen cyanide (hydrocyanic acid), Carbon monoxide (CO), Nitrogen oxides (NOx), Sulphur oxides

Advice for firefighters

Special protective equipment for firefighters	Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
Further information	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.
Flash point	Not applicable
Auto-ignition temperature	No data available
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable

Explosivity	Not explosive 92/69/EEC, A.14 / OECD 113

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	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. If material is accidentally spilled, 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. Use only in area provided with appropriate 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. 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. Keep away from direct sunlight.
Advice on common storage	Keep away from food, drink and animal feedingstuffs.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Propoxycarbazone-sodium	181274-15-7	10 mg/m3 (TWA)		OES BCS*
Mefenpyr-diethyl	135590-91-9	10 mg/m3 (TWA)		OES BCS*
Solvent Naphtha (petroleum), heavy aromatic (Non-aerosol.)	64742-94-5	200 mg/m3 (TWA)	03 2014	ACGIH
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	400 mg/m3/100 ppm (REL)	2010	NIOSH
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	100 mg/m3 (REL)	2010	NIOSH
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	400 mg/m3/100 ppm (PEL)	02 2006	OSHA Z1
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	400 mg/m3/100 ppm (TWA)	1989	OSHA Z1A
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	400 mg/m3/100 ppm (TWA)	06 2008	TN OEL
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	46ppb (AN ESL)	07 2011	TX ESL
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	2560ug/m3 (ST ESL)	07 2011	TX ESL
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	460ppb (ST ESL)	07 2011	TX ESL
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	256ug/m3 (AN ESL)	07 2011	TX ESL
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	1,600 mg/m3/400 ppm (TWA PEL)	08 2010	US CA OEL
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	1,350 mg/m3/300 ppm (TWA PEL)	09 2013	US CA OEL
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	1,800 mg/m3/400 ppm (STEL)	09 2013	US CA OEL
Naphthalene	91-20-3	10 ppm (TLV)		OES BCS*
Kaolin	1332-58-7	2 mg/m3 (TWA)	02 2012	ACGIH

(Respirable fraction.)				
Kaolin (Respirable.)	1332-58-7	5 mg/m3 (REL)	2010	NIOSH
Kaolin (Total)	1332-58-7	10 mg/m3 (REL)	2010	NIOSH
Kaolin (Respirable fraction.)	1332-58-7	5 mg/m3 (PEL)	02 2006	OSHA Z1
Kaolin (Total dust.)	1332-58-7	15 mg/m3 (PEL)	02 2006	OSHA Z1
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	1332-58-7	20ug/m3 (ST ESL)	03 2014	TX ESL
Kaolin	1332-58-7	2ug/m3 (AN ESL)	03 2014	TX ESL
Kaolin (Respirable dust.)	1332-58-7	2 mg/m3 (TWA PEL)	08 2010	US CA OEL

*OES BCS: Internal Bayer AG, Crop Science Division "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 Chemical resistant goggles must be worn.

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	beige
Physical State	water-dispersible granules
Odor	aromatic
Odour Threshold	No data available
pH	7.5 - 9.0 at 1 % (23 °C) (deionized water)
Vapor Pressure	No data available
Vapor Density (Air = 1)	No data available
Bulk density	0.662 - 0.777 g/ml (loose)
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
Viscosity	Not applicable
Flash point	Not applicable
Auto-ignition temperature	No data available
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Explosivity	Not explosive 92/69/EEC, A.14 / OECD 113
Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity	
Thermal decomposition	No data available
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.

Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	No data available
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Eye contact, Skin contact, Inhalation, Ingestion
Immediate Effects	
Eye	Causes substantial but temporary eye injury. Severe eye irritation.
Skin	Harmful if absorbed through skin. May cause slight irritation.
Ingestion	Harmful if swallowed.
Inhalation	Harmful if inhaled.

Information on toxicological effects

Acute oral toxicity	LD50 (Rat) > 2,000 mg/kg
Acute inhalation toxicity	LC50 (Rat) > 0.995 mg/l Exposure time: 4 h Highest attainable concentration. Determined in the form of a respirable aerosol.
Acute dermal toxicity	LD50 (male/female combined Rat) > 2,000 mg/kg
Skin irritation	slight irritation (Rabbit)
Eye irritation	Severe eye irritation. (Rabbit)
Sensitisation	Non-sensitizing. (Guinea pig) OECD Test Guideline 406, Buehler test

Assessment STOT Specific target organ toxicity – repeated exposure

Mesosulfuron-methyl did not cause specific target organ toxicity in experimental animal studies.
Propoxycarbazone-sodium did not cause specific target organ toxicity in experimental animal studies.
Mefenpyr-diethyl did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

Mesosulfuron-methyl was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
Propoxycarbazone-sodium was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
Mefenpyr-diethyl was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Mesosulfuron-methyl was not carcinogenic in lifetime feeding studies in rats and mice.
Propoxycarbazone-sodium was not carcinogenic in lifetime feeding studies in rats and mice.
Mefenpyr-diethyl was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	Group A3

Naphthalene	91-20-3	Group A3

NTP

Naphthalene	91-20-3	

IARC

Naphthalene	91-20-3	Overall evaluation: 2B

OSHA

None.

Assessment toxicity to reproduction

Mesosulfuron-methyl did not cause reproductive toxicity in a two-generation study in rats.
Propoxycarbazone-sodium did not cause reproductive toxicity in a two-generation study in rats.
Mefenpyr-diethyl did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Mesosulfuron-methyl did not cause developmental toxicity in rats and rabbits.
Propoxycarbazone-sodium did not cause developmental toxicity in rats. Propoxycarbazone-sodium caused developmental toxicity in rabbits only at dose levels toxic to the dams. The developmental effects seen with Propoxycarbazone-sodium are related to maternal toxicity.
Mefenpyr-diethyl caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Mefenpyr-diethyl are related to maternal toxicity.

Further information

Acute toxicity studies have been bridged from a similar formulation(s).
The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 7.6 mg/l Exposure time: 96 h Test conducted with a similar formulation.
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 8.8 mg/l Exposure time: 48 h Test conducted with a similar formulation.
Toxicity to aquatic plants	EC50 (Raphidocelis subcapitata (freshwater green alga)) 3.88 mg/l Growth rate; Exposure time: 72 h Test conducted with a similar formulation.
Biodegradability	Mesosulfuron-methyl: Not rapidly biodegradable Propoxycarbazone-sodium: Not rapidly biodegradable Mefenpyr-diethyl: Not rapidly biodegradable

Koc	Mesosulfuron-methyl: Koc: 92 Propoxycarbazone-sodium: Koc: 29 Mefenpyr-diethyl: Koc: 625
Bioaccumulation	Mesosulfuron-methyl: Does not bioaccumulate. Propoxycarbazone-sodium: Does not bioaccumulate. Mefenpyr-diethyl: Bioconcentration factor (BCF) 232 Does not bioaccumulate.
Mobility in soil	Mesosulfuron-methyl: Moderately mobile in soils Propoxycarbazone-sodium: Mobile in soils Mefenpyr-diethyl: Slightly mobile in soils
Additional ecological information	No other effects to be mentioned.
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 contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Do not apply when weather conditions favor runoff or drift. Drift or runoff from treated areas may adversely affect non-target plants. 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. Triple rinse 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. Follow advice on product label and/or leaflet.
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**
Class	9
Packaging group	III
Marine pollutant	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (MESOSULFURON-METHYL, SOLVENT NAPHTHA (PETROLEUM) HEAVY AROMATIC MIXTURE)

IATA

UN number	**3077**
Class	9
Packaging group	III
Environm. Hazardous Mark	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (MESOSULFURON-METHYL, SOLVENT NAPHTHA (PETROLEUM) HEAVY AROMATIC 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. 264-1099
US Federal Regulations
TSCA list

Solvent Naphtha (petroleum), heavy aromatic	64742-94-5
Naphthalene	91-20-3
Naphthalene and alkyl naphthalene sulphonic acids formaldehyde condensate, sodium salt	68425-94-5

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
Naphthalene 91-20-3
US States Regulatory Reporting
CA Prop65
This product contains a chemical known to the State of California to cause cancer.

Naphthalene	91-20-3	

US State Right-To-Know Ingredients

Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	CA, CT, MN, NJ
Naphthalene	91-20-3	CA, CT, IL, MN, NJ, RI

Canadian Regulations
Canadian Domestic Substance List
None.

Environmental
CERCLA

Naphthalene	91-20-3	100 lbs

Clean Water Section 307 Priority Pollutants
Naphthalene 91-20-3
Safe Drinking Water Act Maximum Contaminant Levels
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 substantial but temporary eye injury.
Harmful if swallowed, inhaled or absorbed through the skin.
Avoid contact with skin, eyes and clothing.
Do not get in eyes or on clothing.
Avoid breathing dust.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	International Agency for Research on Cancer
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
UN	United Nations
WHO	World health organisation

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: 01/25/2017