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

Product identifier

Trade name	ROUNDUP® FOR LAWNS2
SDS Number	102000057756
EPA Registration No.	2217-918-71995

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 LP 800 North Lindbergh Blvd. St. Louis, MO 63167 USA
Responsible Department	Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone number

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
Eye irritation: Category 2B

Labelling in accordance with regulation HCS 29CFR §1910.1200
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.

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
MCPA	94-74-6	3.85
Quinclorac	84087-01-4	1.80
Dicamba	1918-00-9	0.43
sulfentrazone	122836-35-5	0.22
1,2-Benzisothiazol-3(2H)-one	2634-33-5	>=0.1 – <0.3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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 anything by mouth to an unconscious person. Do not leave victim unattended.

Most important symptoms and effects, both acute and delayed

Symptoms
Eye contact may provoke the following symptoms, Eye irritation, Redness, Watering of eyes.

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.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable	Water spray, Carbon dioxide (CO2), Foam, Dry chemical
Unsuitable	High volume water jet
Special hazards arising from the substance or mixture	Dangerous gases are evolved in the event of a fire.

Advice for firefighters

Special protective equipment for firefighters	In the event of fire and/or explosion do not breathe fumes. 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. Fight fire from upwind position. Keep out of smoke. Cool closed containers exposed to fire with water spray. Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.
Flash point	No data available
Auto-ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Explosivity	No data available

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	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.
Additional advice	Use personal protective equipment. If the product 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	Use only in area provided with appropriate exhaust ventilation. Handle and open container in a manner as to prevent spillage.
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. 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. Protect from freezing. 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
MCPA	94-74-6	0.1 mg/m3 (SK-SEN)		OES BCS*

*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 gloves (barrier laminate, butyl rubber, nitrile rubber or Viton)
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. Avoid inhalation of vapour or mist.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form	liquid
Colour	dark brown
Odour	weak, amine-like
Odour Threshold	No data available
pH	7.5 - 9.0 (100 %) (23 °C)
Melting point/range	No data available
Boiling Point	No data available
Flash point	No data available
Flammability	No data available
Auto-ignition temperature	No data available
Minimum ignition energy	No data available
Self-accelarating decomposition temperature (SADT)	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available
Vapour pressure	No data available
Evaporation rate	No data available
Relative vapour density	No data available
Relative density	No data available
Density	1.02 g/cm³ (20 °C)
Water solubility	No data available
Partition coefficient: n-octanol/water	MCPA: log Pow: -0.81 Quinclorac: log Pow: 0.27 Dicamba: log Pow: -1.8
Viscosity, dynamic	No data available

Viscosity, kinematic	No data available
Oxidizing properties	No data available
Explosivity	No data available

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Thermal decomposition	Stable under normal conditions.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	No incompatible materials known.
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 eye irritation.

Information on toxicological effects

Acute oral toxicity	LD50 (Rat) > 5,000 mg/kg
Acute inhalation toxicity	LC50 (Rat) > 5.0 mg/l Exposure time: 4 h
Acute dermal toxicity	LD50 (Rat) > 5,000 mg/kg
Skin corrosion/irritation	No skin irritation (Rabbit)
Serious eye damage/eye irritation	Irritating to eyes. (Rabbit)
Respiratory or skin sensitisation	Skin: Non-sensitizing. (Guinea pig)

Assessment STOT Specific target organ toxicity – single exposure

MCPA: Based on available data, the classification criteria are not met.
Dicamba: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – repeated exposure

MCPA did not cause specific target organ toxicity in experimental animal studies.
Quinclorac did not cause specific target organ toxicity in experimental animal studies.
Dicamba did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

MCPA was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
Quinclorac was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
Dicamba was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

MCPA was not carcinogenic in lifetime feeding studies in rats and mice.
Quinclorac was not carcinogenic in lifetime feeding studies in rats and mice.
Dicamba was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

None.

NTP

None.

IARC

MCPA	94-74-6	Overall evaluation: 2B

OSHA

None.

Assessment toxicity to reproduction

MCPA did not cause reproductive toxicity in a two-generation study in rats.
Quinclorac did not cause reproductive toxicity in a two-generation study in rats.
Dicamba did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

MCPA caused developmental toxicity only at dose levels toxic to the dams. MCPA caused a delayed foetal growth.
Quinclorac did not cause developmental toxicity in rats and rabbits.
Dicamba did not cause developmental toxicity in rats and rabbits.

Aspiration hazard

Based on available data, the classification criteria are not met.

SECTION 12: ECOLOGICAL INFORMATION

Biodegradability

MCPA:
Not rapidly biodegradable
Quinclorac:
Not rapidly biodegradable
Dicamba:

	Not rapidly biodegradable
Koc	MCPA: Koc: 10 - 157 Quinclorac: Koc: 13 - 54 Dicamba: Koc: 5.1
Bioaccumulation	MCPA: Bioconcentration factor (BCF) 1 Does not bioaccumulate. Quinclorac: Does not bioaccumulate. Dicamba: Bioconcentration factor (BCF) 15 Does not bioaccumulate.
Mobility in soil	MCPA: Mobile in soils Quinclorac: Mobile in soils Dicamba: Highly mobile in soils

Results of PBT and vPvB assessment

PBT and vPvB assessment	MCPA: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB). Quinclorac: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB). Dicamba: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
Additional ecological information	No data is available on the product itself.
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. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Drift or runoff from treated areas may adversely affect non-target plants. 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.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	Dispose in accordance with all local, state/provincial and federal regulations.
Contaminated packaging	Consult state and local regulations regarding the proper disposal of container. 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 Not dangerous goods / not hazardous material

IATA Not dangerous goods / not hazardous material

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.

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 2217-918-71995
US Federal Regulations
TSCA list

Water	7732-18-5
MCPA	94-74-6

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
No export notification needs to be made.
SARA Title III - Section 302 - Notification and Information
Not applicable.
SARA Title III - Section 313 - Toxic Chemical Release Reporting
Yes

US States Regulatory Reporting
CA Prop65
This product does not contain any substances known to the State of California to cause cancer.

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

US State Right-To-Know Ingredients

MCPA	94-74-6	CA, CT, MN, NJ

Environmental
CERCLA
None.
Clean Water Section 307(a)(1)
None.
Safe Drinking Water Act Maximum Contaminant Levels

None.

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: Caution!

Hazard statements: Causes moderate eye irritation.
Avoid contact with eyes or clothing.
Wash thoroughly with soap and water after handling.

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 - 0	Instability - 0	Others - none

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

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

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

Reason for Revision: New Safety Data Sheet.

Revision Date: 02/22/2021

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