

SAFETY DATA SHEET



ROUNDUP® WEED BARRIER GRANULES

Version 1.0 / USA
102000058164

1/11
Revision Date: 05/06/2021
Print Date: 05/06/2021

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

Product identifier

Trade name ROUNDUP® WEED BARRIER GRANULES
Product code (UVP) 87311163
SDS Number 102000058164
EPA Registration No. 71995-63

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 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

Eye irritation: Category 2B
Acute toxicity(Oral, Inhalation): Category 4

Labelling in accordance with regulation HCS 29CFR §1910.1200



Signal word: Warning

Hazard statements

Causes eye irritation.
Harmful if swallowed or if inhaled.

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Precautionary statements

Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Avoid breathing dust.
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 SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.
Rinse mouth.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor/physician if you feel unwell.
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
2-methylpentane-2,4-diol	107-41-5	$\geq 1 - < 3$
Pendimethalin	40487-42-1	$\geq 1 - < 3$
Titanium dioxide	13463-67-7	$\geq 0.3 - < 1$

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.

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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, Irritation, Watering of eyes., Redness

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., In the event of fire the following may be released:, Carbon dioxide (CO₂), Carbon monoxide (CO), Nitrogen oxides (NO_x)

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

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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 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.

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
2-methylpentane-2,4-diol	107-41-5	125 mg/m ³ /25 ppm (CEILING)	1989	OSHA Z1A
2-methylpentane-2,4-diol	107-41-5	50 ppm	03 2017	ACGIH

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(Vapor fraction)		(STEL)		
2-methylpentane-2,4-diol	107-41-5	25 ppm (TWA)	03 2017	ACGIH
(Vapor fraction)				
2-methylpentane-2,4-diol	107-41-5	10 mg/m ³ (STEL)	03 2017	ACGIH
(Aerosol, inhalable.)				
2-methylpentane-2,4-diol	107-41-5	125 mg/m ³ /25 ppm (Ceil_Time)	2010	NIOSH
2-methylpentane-2,4-diol	107-41-5	125 mg/m ³ /25 ppm (CEILING)	06 2008	TN OEL
2-methylpentane-2,4-diol	107-41-5	125 mg/m ³ /25 ppm (CEILING)	08 2010	US CA OEL
Pendimethalin	40487-42-1	10µg/m ³ (AN ESL)	07 2011	TX ESL
Pendimethalin	40487-42-1	100µg/m ³ (ST ESL)	07 2011	TX ESL
Titanium dioxide	13463-67-7	10 mg/m ³ (TWA)	02 2012	ACGIH
Titanium dioxide (Total dust.)	13463-67-7	15 mg/m ³ (PEL)	02 2006	OSHA Z1
Titanium dioxide (Total dust.)	13463-67-7	10 mg/m ³ (TWA)	06 2008	TN OEL
Titanium dioxide (Total dust.)	13463-67-7	10 mg/m ³ (TWA PEL)	01 2015	US CA OEL
Titanium dioxide (Respirable fraction.)	13463-67-7	5 mg/m ³ (TWA PEL)	01 2015	US CA OEL
Titanium dioxide (Total dust.)	13463-67-7	50millions of particles per cubic foot of air (TWA)	03 2016	Z3
Titanium dioxide (Respirable fraction.)	13463-67-7	5 mg/m ³ (TWA)	03 2016	Z3
Titanium dioxide (Respirable fraction.)	13463-67-7	15millions of particles per cubic foot of air (TWA)	03 2016	Z3
Titanium dioxide (Total dust.)	13463-67-7	15 mg/m ³ (TWA)	03 2016	Z3

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.

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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	Safety glasses with side-shields
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. Eye wash facility and safety shower should be available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form	granular
Colour	yellow
Odour	characteristic
Odour Threshold	No data available
pH	7.5 - 9.0 (10 %) (23 °C) (deionized water)
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
Thermal decomposition	No data available
Minimum ignition energy	No data available
Self-accelerating 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

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Relative density	No data available
Density	No data available
Bulk density	42 - 48 lb/ft ³
Water solubility	No data available
Partition coefficient: n-octanol/water	Pendimethalin: log Pow: 5.18
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	Stable under normal conditions.
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	Oxidizing agents, Reducing agents
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.
Skin	Not expected to produce significant adverse effects when recommended use instructions are followed.
Ingestion	Harmful if swallowed. May cause irritation.
Inhalation	Harmful if inhaled.
Information on toxicological effects	
Acute oral toxicity	LD50 (male/female combined Rat) 2,000 mg/kg
Acute inhalation toxicity	LC50 (Rat) 2.35 mg/l

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	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) Respiratory system: No data available

Assessment STOT Specific target organ toxicity – single exposure

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

Assessment STOT Specific target organ toxicity – repeated exposure

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

Assessment mutagenicity

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

Assessment carcinogenicity

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

ACGIH

Titanium dioxide	13463-67-7	Group A4
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NTP

None.

IARC

Titanium dioxide	13463-67-7	Overall evaluation: 2B
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OSHA

None.

Assessment toxicity to reproduction

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

Assessment developmental toxicity

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

Aspiration hazard

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

SECTION 12: ECOLOGICAL INFORMATION

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Biodegradability	Pendimethalin: Not readily biodegradable.
Koc	Pendimethalin: No data available
Bioaccumulation	Pendimethalin: Bioconcentration factor (BCF) 5,100 Does not bioaccumulate.
Mobility in soil	Pendimethalin: Adsorbs on soil. It has a low potential for leaching into groundwater or moving to deeper soil layers.
Results of PBT and vPvB assessment	
PBT and vPvB assessment	Pendimethalin: 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 further ecological information is available.
Environmental precautions	Do not allow to get into surface water, drains and ground water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not apply when weather conditions favor runoff or drift. 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

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

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SECTION 15: REGULATORY INFORMATION

EPA Registration No. 71995-63

US Federal Regulations

TSCA list

Nonylphenol ethoxylate 9016-45-9

2-methylpentane-2,4-diol 107-41-5

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

Yes. 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

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

Pendimethalin	40487-42-1	NJ
Nonylphenol ethoxylate	9016-45-9	IL, NJ
2-methylpentane-2,4-diol	107-41-5	CA, MN, RI

Environmental

CERCLA

Yes

Nonylphenol ethoxylate 9016-45-9

Included in the regulation but with no data values. See regulation for further details

Clean Water Section 307(a)(1)

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)

Pendimethalin 40487-42-1

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:

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Signal word: Caution!

Hazard statements: Harmful if absorbed through skin.
Causes moderate eye irritation.
Avoid contact with skin, eyes and clothing.
May be harmful if swallowed.
Avoid inhalation.
Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
User should remove clothing immediately if pesticide gets inside.
Wash thoroughly and put on clean clothing.

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 - 2 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: 05/06/2021

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