

SECTION 1: Product and Company Identification

1.1. Product identifier

Trade name : Onmark
 Product code : 4102

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/preparation : Herbicide

1.2.2. Uses advised against

Follow label instructions

1.3. Details of the supplier of the safety data sheet

Rainbow Treecare Scientific Advancements DBA Rainbow Ecoscience
 11571 K-Tel Drive
 Minnetonka, MN 55343
 Phone: 1-(877) 272-6747 (toll free)
www.Rainbowecoscience.com

1.4. Emergency telephone number

Emergency number : (800) 424-9300 (CHEMTREC)
 : (800) 222-1222 (National Poison Information Center)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

<u>Classification</u>	<u>Category</u>
Acute Toxicity - Oral	4
Acute Toxicity – Dermal	4
Acute Toxicity – Inhalation	4
Skin corrosion/irritation	3
Serious eye damage/eye irritation	2
Skin sensitization	Not classified
Reproductive Toxicity	1B
Specific target organ toxicity (repeated exposure)	2

2.2. Label elements

Hazard Symbols : 

Signal word : DANGER

Hazard statements	: Harmful if inhaled Causes serious eye irritation May damage fertility or the unborn child May cause damage to organs through prolonged or repeated exposure
Precautionary statements (prevention)	: 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 Use only outdoors or in a well-ventilated area Wash face, hands and any exposed skin thoroughly after handling Do not breathe dust/fume/gas/mist/vapors/spray
Precautionary statements (response)	: 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 IF INHALED: Remove person to fresh air and keep comfortable for breathing
Precautionary statements (storage)	: Store locked up
Precautionary statements (disposal)	: Dispose of contents/container to an approved waste disposal plant
Other Information	: May be harmful if swallowed. May be harmful in contact with skin.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical name	CAS No	Weight-%	Active Ingredient
Propylene glycol	57-55-6	20.37-21.63	
Ammonium nonanoate	63718-65-0	10.53-11.63	X
Glufosinate-ammonium	77182-82-2	9.50-10.50	X
Propylene glycol monomethyl ether	107-98-2	4.75-5.25	
Imazethapyr	81335-77-5	3.02-3.34	X
Other Ingredients	PROPRIETARY	>45.0	

*The exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4: First aid measures**4.1. Description of first aid measures**

- General advice** : Show this safety data sheet to the doctor in attendance.
- IF INHALED** : Remove to fresh air. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately.
- EYE CONTACT** : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
- SKIN CONTACT** : Wash skin with soap and water.
- INGESTION** : Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical attention.
- Self-protection of the first aider** : Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing vapors or mists. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed:

- Symptoms** : May cause redness and tearing of the eyes. Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

Indication of any immediate medical attention and special treatment needed:

NOTE TO PHYSICIAN: Treat symptomatically.

Have the product container or label with you when calling a poison control center or doctor, or when going for treatment. For Chemical Emergency, Spill, Leak, Fire or Accident, call CHEMTREC twenty-four (24) hours per day seven (7) days per week within the USA and Canada at 1-800-424-9300.

SECTION 5: Firefighting measures**5.1. Extinguishing media**

- Suitable extinguishing media** : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Large Fire** : CAUTION: Use of spray water when fighting fire may be inefficient.
- Unsuitable extinguishing media** : Do not scatter spilled material with high pressure water streams.

Special hazards arising from the substance or mixture : No information available

Explosion data

Sensitivity to mechanical impact : None

Sensitivity to static discharge : None

Special fire-fighting procedures/equipment

: Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Personal precautions: Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists.

Other information: Refer to protective measures listed in Sections 7 and 8.

6.3 Methods and material for containment and cleaning up**Methods for containment:**

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up:

Pick up and transfer to properly labeled containers.

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice for safe handling**

: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Ensure adequate ventilation. Avoid breathing vapors or mists. In case of insufficient ventilation, wear suitable respiratory equipment.

7.2. Conditions for safe storage, including any incompatibilities**STORAGE**

: Store locked up. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

SECTION 8: Exposure controls/personal protection**8.1. Personal protective equipment**

General hygiene considerations: Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly

and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

8.2. Exposure controls

EXPOSURE LIMITS The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Propylene glycol monomethyl ether 107-98-2	STEL: 100 ppm TWA: 50 ppm	(vacated) TWA: 100 ppm (vacated) TWA: 360 mg/m ³ (vacated) STEL: 150 ppm (vacated) STEL: 540 mg/m ³	TWA: 100 ppm TWA: 360 mg/m ³ STEL: 150 ppm STEL: 540 mg/m ³

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection If splashes are likely to occur, wear safety glasses with side-shields.

Hand protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Appearance : Liquid

Color	: Amber
Odor	: Sweet
Odor threshold	: No information available
pH	: 5.5 – 6.5
Melting/freezing point	: No information available
Boiling point/boiling range	: No information available
Flash point	: > 101.9 °C / 215.4 °F
Evaporation rate	: No information available
Flammability (solid, gas)	: > 104.1 °C
Flammability Limits in Air	
Upper flammability limits	: No data available
Lower flammability limits	: No data available
Vapor pressure	: No data available
Vapor density	: No data available
Water solubility	: No data available
Solubility in other solvents	: No data available
Partition coefficient	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Kinematic viscosity	: 96.87 (20°C); 36.95 (40°C)
Liquid density	: 1.059

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None under normal processing

10.4. Conditions to avoid

Excessive heat

10.5. Incompatible materials

None known based on information supplied

10.6. Hazardous decomposition products in a fire

None known based on information supplied

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Product Information

Inhalation May cause irritation of respiratory tract. Harmful by inhalation (based on components).

Eye contact Causes serious eye irritation. (based on components). May cause redness, itching, and pain

Skin contact May cause irritation. Prolonged contact may cause redness and irritation. May be harmful in contact with skin.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms May cause redness and tearing of the eyes. Coughing and/ or wheezing.

Acute toxicity

Numerical measures of toxicity

ACUTE TOXICITY	
Oral Toxicity LD ₅₀	>5000 mg/kg
Dermal Toxicity LD ₅₀	>5000 mg/kg
Inhalation Toxicity LC ₅₀	>2.13 mg/L

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Propylene glycol 57-55-6	= 20 g/kg (Rat)	= 20800 mg/kg (Rabbit)	-
Glufosinate-ammonium 77182-82-2	= 1620 mg/kg (Rat) = 1510 mg/kg (Rat)	> 4000 mg/kg (Rat) = 1380 mg/kg (Rat)	= 1.26 mg/L (Rat) 4 h > 0.62 mg/L (Rat) 4 h
Propylene glycol monomethyl ether 107-98-2	= 5000 mg/kg (Rat)	= 13 g/kg (Rabbit)	> 7559 ppm (Rat) 6 h
Imazethapyr 81335-77-5	> 5 g/kg (Rat)	> 2000 mg/kg (Rabbit)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Slightly irritating to the skin.

Serious eye damage/eye irritation Moderately irritating to the eyes.

Respiratory or skin sensitization Did not cause sensitization on laboratory animals.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May damage fertility or the unborn child.

STOT - single exposure No information available.

STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Target organ effects	Respiratory system, Eyes, Skin, Central nervous system.
Aspiration hazard	No information available.
Other adverse effects	No data available.
Interactive effects	No data available.

SECTION 12: Ecological information

12.1. Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Propylene glycol 57-55-6	EC50: =19000mg/L (96h, Pseudokirchneriella subcapitata)	LC50: =51600mg/L (96h, Oncorhynchus mykiss) LC50: 41 - 47mL/L (96h, Oncorhynchus mykiss) LC50: =51400mg/L (96h, Pimephales promelas) LC50: =710mg/L (96h, Pimephales promelas)	-	EC50: >1000mg/L (48h, Daphnia magna) EC50: >10000mg/L (24h, Daphnia magna)
Propylene glycol monomethyl ether 107-98-2	-	LC50: =20.8g/L (96h, Pimephales promelas) LC50: 4600 - 10000mg/L (96h, Leuciscus idus)	-	EC50: =23300mg/L (48h, Daphnia magna)

OTHER ENVIRONMENTAL INFORMATION:

Persistence and degradability	No data available.
Bioaccumulation	There is no data for this product.

Component Information

Chemical name	Partition coefficient
Propylene glycol monomethyl ether 107-98-2	-0.437

Other adverse effects	No information available
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SECTION 13: Disposal considerations

Disposal methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

SECTION 14: Transport information



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US and GHS

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US DOT 49 CFR Information : Not regulated

SECTION 15: Regulatory information

U.S. EPA Label Information

EPA Pesticide Registration Number 45002-32-74779

EPA Pesticide Label WARNING/AVISO: Causes substantial but temporary eye injury.

International Inventories

TSCA	Does not comply
DSL/NDSL	Does not comply
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Does not comply
KECL	Does not comply
PICCS	Does not comply
AIIC	Does not comply

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).



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CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Propylene glycol 57-55-6	X	-	X
Water 7732-18-5	-	-	X
Propylene glycol monomethyl ether 107-98-2	X	X	X

SECTION 16: Other information

NFPA

Health hazards 2

Flammability 1

Instability 0

Special hazards -

HMIS

Health hazards 2 *

Flammability 1

Physical hazards 0

Personal protection X

Chronic Hazard Star Legend

* = Chronic Health Hazard

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AELG(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)



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NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

REVISED DATE: 27-February-2023

REVISION NOTE: No information available

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End of Safety Data Sheet