Safety Data Sheet

According to the EPA Hazardous Substances (Safety Data Sheets) Notice 2020 and the Health and Safety at Work (Hazardous Substances) Regulations 2017, using GHS 7th edition classification criteria.

Completion date: 25/4/2025

Version number: 2
Replaced version 1 (27/9/2023)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier: **OROBOOST®**

Other means of identification: Not applicable.

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

Relevant identified uses: Adjuvant.

Uses advised against: None known.

1.3 Name, address, and telephone number of the manufacturer, importer, or other responsible party:

Manufacturer
Oro Agri, Inc.
2788 S. Maple Ave.
Fresno, CA 93725
Telephone Number: +1(559) 442-4996
Email: sds-na@rovensanext.com

Distributor
Agrisource (2000) Ltd,
45 Kitchener Road,
Pukekohe 2120, New Zealand
Telephone Number: 09 237 0442

1.4 Emergency phone number:
For Hazardous Materials [or Dangerous Goods] Incidents
Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
Within New Zealand: +(64)-98010034
Outside New Zealand: +1(703) 527-3887.

SECTION 2: HAZARD(S) IDENTIFICATION

2.1 Classification of the substance or mixture:
Classification of this product has been carried out in accordance with the EPA Hazardous Substances (Safety Data Sheets) Notice 2020 and the Health and Safety at Work (Hazardous Substances) Regulations 2017, using GHS 7th edition classification criteria.

This product is hazardous according to the EPA Hazardous Substances (Classification) Notice 2020.

HSNO approval group name and number: Additives, Process Chemicals and Raw Materials (Flammable) Group Standard 2020 – HSR002495.

Hazard code	Hazard class	Category
H226	Flammable liquids	3
H319	Eye damage/irritation	2

2.2 Label elements:

Signal word: Warning

Hazard statements:
Flammable liquid and vapour. Causes serious eye irritation.

Precautionary statements - Prevention:
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233: Keep container tightly closed.
P240: Ground and bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting equipment.
P242: Use non-sparking tools.
P243: Take action against static discharge.
P264: Wash thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements - Response:
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water or shower.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P317: If eye irritation persists: Get medical help.
P370+P378: In case of fire: Use water fog, foam, dry chemical powder, carbon dioxide to extinguish.

Precautionary statements - Storage:
P403+P235: Store in a well-ventilated place. Keep cool.

Precautionary statements - Disposal:
P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Hazards not otherwise classified (HNOC):
None known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances:
Non-applicable.

3.2 Mixtures:

Mixture description:

Identification	Chemical name	Concentration
	Proprietary mixture[1]	**85 - 95 %**
CAS: 84133-50-6	**Alcohol Ethoxylate**	**5 - <10 %**

Composition comments:
[1]Components, CAS numbers and/or concentrations not listed are either non-hazardous, below reporting limits or have been withheld as trade secrets.

SECTION 4: FIRST-AID MEASURES

4.1 Description of necessary measures:
Take off all contaminated clothing immediately. If exposed or concerned: get medical attention/advice. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Wash contaminated clothing before reuse.

By inhalation:
Move to fresh air and keep at rest in a position comfortable for breathing. Call a Physician if symptoms develop or persist.

By skin contact:
Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.

By eye contact:
Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

By ingestion/aspiration:
Rinse mouth. Get medical attention if symptoms occur. Do NOT induce vomiting.

4.2 Most important symptoms/effects, acute and delayed:
Mild eye irritation. Exposed individuals may experience eye tearing, redness, and discomfort.

4.3 Indication of immediate medical attention and special treatment needed, if necessary:
Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable (and unsuitable) extinguishing media:
Suitable extinguishing media:
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media:
Do not use water jet as an extinguisher, as this will spread the fire.

5.2 Specific hazards arising from the chemical:
During fire, gases hazardous to health may be formed. Do not breathe fumes.

5.3 Special protective equipment and precautions for fire-fighters:
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Firefighting equipment/instructions:
In case of fire and/or explosion, do not breathe fumes. Move containers from fire area if you can do so without risk. Do not allow firefighting water to enter drains or water courses. Fight fire with normal precautions from a reasonable distance.

Specific methods:
Use standard firefighting procedures and consider the hazards of other involved materials.

5.4 General fire hazards:
Flammable liquid and vapour. Does not sustain combustion.

SECTION 6: SPILLAGE, ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

For emergency responders:
Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:
Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

6.3 Methods and materials for containment and cleaning up:
Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent product from entering drains.

Large Spills: Stop the flow of material if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand, or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

6.4 Reference to other sections:
See section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:
Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid contact with eyes. Avoid prolonged exposure. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

7.2 Conditions for safe storage, including any incompatibilities:
Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

7.3 Specific end use(s):
Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters:
Substances whose occupational exposure limits must be assessed in the workplace.

New Zealand Workplace Exposure Standards (WES):

Identification	Occupational exposure limits	
Proprietary component 1	TWA	200 ppm 380 mg/m³
	STEL	800 ppm 1520 mg/ m³

Notation:
STEL: Short-term exposure limit: a limit value above which exposure should not occur, and which is related to a 15-minute period (unless otherwise specified)
TWA: Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours' time-weighted average (unless otherwise specified).

8.2 Biological limit values:
No biological exposure limits noted for the ingredient(s).

8.3 Appropriate engineering controls:
Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide easy access to water supply and eye wash facilities.

8.4 Individual protection measures, such as personal protective equipment:

Eye/face protection:
Wear safety glasses with side shields (or goggles). Wear a face shield if there is a risk of splashing.

Skin protection:

Hand protection:
Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other:
Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. Wash hands thoroughly after handling.

Respiratory protection:
When workers are facing concentrations above the exposure limit, they must use appropriate certified respirators. Chemical respirator with organic vapour cartridge and full-face piece.

Thermal hazards:
Wear appropriate thermal protective clothing, when necessary.

Environmental exposure controls:
Use appropriate container to avoid environmental contamination. Keep away from drains, surface, and ground water.

General hygiene considerations:
When using, do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance:	
Physical state:	Liquid
Colour:	Yellow/Orange
Odour:	Citrus
Odour threshold:	Data not available
Volatility:	
Boiling point at atmospheric pressure:	Data not available
Evaporation rate:	Data not available
Product description:	
Density:	0.92 - 1.08 g/cm³
Relative density:	Data not available
Dynamic viscosity:	0 – 50 mPa s
Kinematic viscosity:	Data not available
pH:	6.8 - 7.8
Vapour density:	Data not available
Partition coefficient n-octanol/water:	Data not available
Solubility in water:	Complete
Solubility properties:	Data not available
Decomposition temperature:	Data not available
Melting point/freezing point:	Data not available
Flammability:	
Flash Point:	40 °C (104 °F) - (Pensky-Martens closed cup)
Flammability (solid, gas):	Data not available
Autoignition temperature:	Data not available

Lower flammability limit:	Data not available
Upper flammability limit:	Data not available
Particle characteristics:	
Median equivalent diameter:	Data not available

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	Data not available
Oxidising properties:	Data not available
Corrosive to metals:	Data not available
Heat of combustion:	Data not available
Aerosols-total percentage (by mass) of flammable components:	Data not available
Other safety characteristics:	
Surface tension:	Data not available
Refraction index:	Data not available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:
The product is stable and non-reactive under normal conditions of use, storage and transport.

If heated:
Risk of ignition.

10.2 Chemical stability:
Material is stable under normal conditions.

10.3 Possibility of hazardous reactions:
No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid:
Avoid heat, sparks, open flames, and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Hints to prevent fire or explosion:
Use explosion-proof electrical/ventilating/lightning/equipment. Use only non-sparking tools. Take action to prevent static discharges.

10.5 Incompatible materials:
Strong oxidising agents.

10.6 Hazardous decomposition products:
Thermal decomposition of this product can generate carbon monoxide, carbon dioxide, sulphur oxides, and sodium oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Information on likely routes of exposure:
In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

Ingestion (acute effect):
May cause discomfort if swallowed.

Inhalation (acute effect):
Prolonged inhalation may be harmful.

Contact with the skin (acute effect):
Prolonged skin contact may cause discomforts.

Contact with the eyes (acute effect):
Causes serious eye irritation.

11.2 Symptoms related to the physical, chemical, and toxicological characteristics:
Mild eye irritation. Exposed individuals may experience eye tearing, redness, and discomfort.

Information on toxicological effects:

Acute toxicity:
Not expected to be acutely toxic.

Product-specific toxicological information: OROBOOST (CAS Mixture)

Exposure route	Endpoint	Value	Species	Method
Acute toxicity				
Oral	LD50	>2000 mg/kg	Rat	OECD 423
Dermal	LD50	>2000 mg/kg	Rat	OECD 402
Inhalation vapour	LC50	>3.69 mg/L (4 h)	Rat	OECD 403

Skin corrosion/irritation:
Prolonged skin contact may cause temporary irritation.

Skin contact **OROBOOST**
OECD 404
Result: Non-irritant
Species: Rabbit.

Eye damage/irritation:
Causes serious eye irritation.

Eye contact **OROBOOST**
OECD 405
Result: Mild irritant
Species: Rabbit.

Skin sensitisation:
Not a skin sensitiser.

Sensitisation **OROBOOST**
OECD 406
Result: Non-sensitising
Species: Guinea pig.

Respiratory sensitisation:
Not a respiratory sensitiser.

Carcinogenicity:
This product is not considered to be a carcinogen by IARC, NTP, or OSHA.

- International Agency for Research on Cancer (IARC) Monographs on the Evaluation of Carcinogenic Risks to Humans
Proprietary component 1: Class 1 (In alcoholic beverages, non-applicable to this product).

- National Toxicology Program (NTP) Report on Carcinogens
Not listed.

-OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

Reproductive toxicity:
This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity (STOT):

-Specific target organ toxicity - single exposure
Not classified.

-Specific target organ toxicity - repeated exposure
Not classified.

Aspiration hazard:
Not an aspiration hazard.

Chronic effects:
Prolonged inhalation may be harmful.

11.3 Information on other hazards:
There is no additional information.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity:
This product is not classified for environmental hazardous under the Health and Safety at Work (Hazardous Substances) Regulations 2017. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.2 Persistence and degradability:
No data is available on the degradability of this product.

12.3 Bioaccumulative potential:
Data not available.

12.4 Mobility in soil:
Data not available.

12.5 Results of PBT and vPvB assessment:
Data not available.

12.6 Endocrine disrupting properties:
Data not available.

12.7 Other adverse effects:
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:
Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways, or ditches with chemical or used container. Dispose of contents/ container in accordance with local/regional/national/international regulations.

Local disposal regulations:
Dispose in accordance with all applicable regulations.

Hazardous waste code:
The waste code should be assigned in discussion between the user, the producer, and the waste disposal company.

Waste from residues/unused products:
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see Disposal instructions).

Contaminated packaging:
Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: TRANSPORT INFORMATION

14.1 New Zealand transport of dangerous goods by Land - Road/Railway (NZS 5433:2020):
This product is not classified as a Dangerous Good for transport in New Zealand.

According to Land Transport Rule Dangerous Goods 2005 Rule 45001/2005: Class 3 flammable liquids with a flash point greater than 35 °C that do not sustain combustion are not dangerous goods for land transport. See also the additional information in this section.

14.2 Transport of dangerous goods by sea (IMDG):
Not regulated as dangerous goods. See additional information in this section.

14.3 Transport of dangerous goods by air (IATA/ICAO):
Not regulated as dangerous goods. See additional information in this section.

14.4 Transport in bulk (according to Annex II of MARPOL 73/78 and IBC code):
Non-applicable

14.5 Additional Information:
Test results from Sustained Combustion testing (L.2 of Part 3 section 32 of UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria) indicate that this material does not sustain combustion. At the discretion of the shipper, this material does not need to be considered a Dangerous Good when offered for transport by ground in the U.S. according to 49 FR 173.120(b)(3), by air according to IATA DGR section 3.3.1.3(a), or by sea according to IMDG Code chapter 2.3.1.3.1.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question:

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information provided in this safety data sheet as a foundation for conducting workplace-specific risk assessments. These assessments will help establish the appropriate risk prevention measures for handling, using, storing, and disposing of this product. Take into consideration other applicable federal, state, and local laws and local regulations.

15.2 HSNO approval number and, if applicable, the relevant group standard title:
HSNO Approval: HSR002495: Additives, Process Chemicals and Raw Materials (Flammable) Group Standard 2020.

15.3 Trigger quantities:

HSWA & EPA Controls	Trigger Quantity
Certified Handler	Not required
Location Certificate	500 L (>5 L), 1500 L (<5 L), 250 L open
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	1000 L
Emergency Response Plan	10 000 L
Secondary Containment	10 000 L
Fire Extinguishers	500 L = 2x
Restriction of Use	None

SECTION 16: OTHER INFORMATION

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Version Number: 2

Key literature references and sources for data:
- Globally Harmonized System of Classification and Labelling of Chemicals ("Purple book").
- Safety at Work (Hazardous Substances) Regulations 2017.
- Transport of Dangerous goods on land NZS 5433:2020.
- UN Recommendations on the Transport of Dangerous Good. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Abbreviations and acronyms:

Abbreviation	Descriptions of used abbreviations
HSNO	Hazardous Substances and New Organisms.
EPA	Environmental Protection Authority.
WES	Workplace Exposure Limit.
DGR	Dangerous Goods Regulations (see IATA/DGR).
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations.
IATA	International Air Transport Association.
IMDG	International Maritime Dangerous Goods Code.
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval.
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval.
PBT	Persistent, Bioaccumulative and Toxic.
STEL	Short-term exposure limit.
TWA	Time-weighted average.
vPvB	Very Persistent and very Bioaccumulative.

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End of SDS