

**SAFETY DATA SHEET****1. Identification****Product identifier:****OROBOOST****Other means of identification****Product code:**

097-F-3-B

**Recommended use:**

Adjuvant

**Recommended restrictions:**

None Known

**Manufacturer/Distributor information\*:****Manufacturer**Oro Agri, Inc.  
2788 S. Maple Ave  
Fresno, CA 93725**Distributor**Agrisource (2000) Ltd,  
45 Kitchener Road,  
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\*Refer to product label for New Zealand distributor contact information

**Emergency Telephone Number:**For Hazardous Materials [or Dangerous Goods] Incidents  
Spill, Leak, Fire, Exposure, or Accident  
Call CHEMTREC Day or NightWithin New Zealand:  
+(64)-98010034Outside New Zealand:  
+1(703)741-5970**2. Hazard(s) identification**Hazardous substance according to the HSNO Act 1996 Hazardous Substances (Classification) Notice 2017.  
Approval: HSR002495; Additives, Process Chemicals and Raw Materials (Flammable) Group Standard 2006.**HSNO Classification:** 3.1C, 6.1E, 6.4A, 9.1D**Physical Hazards**

Flammable liquid (Category 3)

**Health hazards**

Acute toxicity: oral (Category 5)

Acute toxicity: dermal (Category 5)

Serious eye damage/eye irritation (Category 2A)

**Environmental hazards**

Aquatic toxicity - acute (Category 2)

**Label elements****Signal word**  
WARNING

**Hazard statement**

Flammable liquid and vapour. Causes serious eye irritation. May be harmful in contact with skin. May be harmful if swallowed. Toxic to aquatic life.

**Precautionary statement****Prevention**

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting equipment. Wash thoroughly after handling. Wear protective gloves. Wear eye protection or face protection. Avoid release to the environment.

**Response**

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 ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/ attention.

In case of fire: Use water fog, foam, dry chemical powder, carbon dioxide (CO<sub>2</sub>) for extinction

**Storage**

Store in a well-ventilated place. Keep cool.

**Disposal**

Dispose of product and container in accordance with local regulations.

**3. Composition/information on ingredients****Mixtures**

Chemical name	CAS Number	%
Proprietary Mixture <sup>1</sup>		
Alcohol Ethoxylate	68131-40-8	10-15
Orange Oil	8028-48-6	5-10

**Composition comments**

<sup>1</sup> Components CAS numbers and ingredient concentrations are either non-hazardous or have been withheld as trade secret.

**4. First-aid measures****Inhalation**

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

**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.

**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. Get medical attention immediately.

**Ingestion**

Rinse mouth. Get medical attention if symptoms occur.

**Most important symptoms/effects, acute and delayed**

Mild eye irritation. Exposed individuals may experience eye tearing, redness, and discomfort.

**Indication of immediate medical attention and special treatment needed**

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.

**General information**

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.

**5. Fire-fighting measures****Suitable extinguishing media**

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

**Unsuitable extinguishing media**

Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical**

During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters**

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.

**Specific methods**

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

**General fire hazards**

Flammable liquid and vapor. Does not sustain combustion.

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

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Be aware of potential for surfaces to become slippery. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. 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. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent product from entering drains. Following product recovery, flush area with water.

Small Spills: 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.

**Environmental precautions**

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

## 7. Handling and storage

### 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.

### Conditions for safe storage, including any incompatibilities

Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Ethanol (CAS 64-17-5)	PEL	1900 mg/m <sup>3</sup> 1000 ppm
Isopropyl Alcohol (CAS 67-63-0)	PEL	980 mg/m <sup>3</sup> 400 ppm

#### US ACGIH Threshold Limit Values

Components	Type	Value
Ethanol (CAS 64-17-5)	STEL	1000 ppm
Isopropyl Alcohol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Ethanol (CAS 64-17-5)	TWA	1900 mg/m <sup>3</sup> 1000 ppm
Isopropyl Alcohol (CAS 67-63-0)	STEL	1225 mg/m <sup>3</sup> 500 ppm
	TWA	980 mg/m <sup>3</sup> 400 ppm

### Biological limit values

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Value	Determinant	Specimen	Sampling Time
Isopropyl Alcohol (CAS 67-63-0)	40 mg/l	Acetone	Urine	Please refer to source document for sampling details.

### 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.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Wear safety glasses with side shields (or goggles).

**Skin protection****Hand protection**

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

**Other**

Wear suitable protective clothing.

**Respiratory protection**

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Selection and use of respiratory protective equipment should be in accordance with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**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.

**9. Physical chemical properties****Appearance**

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Yellow/Orange.
<b>Odour</b>	Citrus
<b>Odour threshold</b>	Not available.
<b>pH</b>	6.8 - 7.8
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	40°C (104°F)
<b>Evaporate rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or exposure limits</b>	Not determined.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	0.98 - 1.02 (Water = 1)
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.

**Decomposition temperature** Not available.

**Viscosity** 0 - 50 mpa·s

## 10. Stability and reactivity

### Reactivity

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

### Chemical stability

Material is stable under normal conditions.

### Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

### Conditions to avoid

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

### Incompatible materials

Strong oxidizing agents.

### Hazardous decomposition products

Thermal decomposition of this product can generate carbon monoxide and carbon dioxide. Sulphur oxides. Sodium oxides.

## 11. Toxicological information

### Information on likely routes of exposure

#### Inhalation

Prolonged inhalation may be harmful.

#### Skin contact

Prolonged skin contact may cause discomforts.

#### Eye contact

Causes serious eye irritation.

#### Ingestion

May cause discomfort if swallowed.

### 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	Species	Test Results
OROBOOST (CAS Mixture)		
Acute Dermal Toxicity	Rat	> 2000 mg/kg, (OECD 402)
Acute Inhalation Toxicity	Rat	> 3.69 mg/l, (OECD 403)
Acute Oral Toxicity	Rat	> 5000 mg/kg, (OECD 425)
Skin corrosion/irritation	Rabbit	Non-irritant (OECD 404)
Serious eye damage/eye irritation	Rabbit	Mild Irritant (OECD 405)
Respiratory or Skin Sensitization	Guinea Pig	Non-Sensitizer (skin)

**Germ cell mutagenicity**

Not Available.

**Carcinogenicity**

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

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Not listed.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Reproductive toxicity**

Not available.

**Specific target organ toxicity - single exposure**

Not Available.

**Specific target organ toxicity - repeated exposure**

Not Available.

**Aspiration hazard**

Not Available.

**Narcotic effects**

Not Available.

**Chronic effects**

Not Available.

**12. Ecological information**
**Ecotoxicity**

Toxic to aquatic life.

Product	Species		Test Results
OROBOOST (CAS mixture)			
Algae	EC50	Pseudokirchnerella subcapitata	3.38 mg/l, 72 hours
Crustacea	EC50	Daphnia	35.36 mg/l, 48 hours
Fish	LC50	Zebrafish (Danio rerio)	29.9 mg/l, 96 hours

**Persistence and degradability**

No data is available on the degradability of this product.

**Bioaccumulative potential**

No data available on bioaccumulation.

**Mobility in soil**

No data available for this product.

**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.

**13. Disposal considerations**

**Disposal instructions**

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 packing**

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.

**14. Transport information****RID/ADR**

Not regulated as dangerous goods.

**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and IBC code**

Not applicable

**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 is not subject to 49 CFR 173.120(a), IATA DGR section 3.3.1 or IMDG Code chapter 2.3.1.2. Reference 49 CFR 173.120(b)(3), IATA DGR section 3.3.1.3(a) or IMDG Code chapter 2.3.1.3.1.

**15. Regulatory Information**

Approved pursuant to the HSNO Act 1996, approval code HSR002495; Additives, Process Chemicals and Raw Materials (Flammable) Group Standard 2006. See [www.epa.govt.nz](http://www.epa.govt.nz) for controls applying to the substance.

**International regulations**

Montreal Protocol: Not applicable

Stockholm Convention: Not applicable

Rotterdam Convention: Not applicable

**16. Other information**

Version #: Refer to version number in footer.

Revision Date: Refer to date of SDS in footer.

**List of abbreviations**

LD50: Lethal Dose, 50%.

LC50: Lethal Concentration, 50%.

EC50: Effective Concentration, 50%



**Disclaimer**

ORO AGRI cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. As conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained in accordance with all applicable occupational health and safety requirements.

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**End of SDS**