



GROW WITH CONFIDENCE

SAFETY DATA SHEET

1. Identification

Product identifier: ORO®-RZ

Other means of identification

Product code: 079-F-3-B

Recommended use: Adjuvant for Soil and Growing Media

Recommended restrictions: None Known

Manufacturer/Importer/Supplier/Distributor information:

Oro Agri, Inc.
2788 S. Maple Ave
Fresno, CA 93725

Telephone Number: +1 (559) 442-4996

Email: SDS-NA@oroagri.com

Emergency Telephone Number: Incident Spill, Leak, Fire, Exposure or Accident
Call CHEMTREC Day or Night

Within USA and Canada:
1 (800) 424-9300

Outside USA:
+1 (703) 741-5970

2. Hazard(s) identification

Physical Hazards

Not classified

Health hazards

Serious eye damage/eye irritation (Category 2A)

Environmental hazards

Hazardous to the aquatic environment, long term hazard (Category 3)

OSHA defined hazards

Not classified.

Label elements



Signal word

Warning

Hazard statement

Combustible liquid. Causes eye irritation. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Precautionary statement

The classification of this product is based all or in part on test data.

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

ORO-RZ
079F3B-US-0001 Version 06
Revision Date: July 18, 2016

Response

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Collect spillage.

Storage

Avoid extreme temperatures

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

None known.

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

Chemical name	CAS Number	%
Proprietary Mixture ¹		
Alcohol, C11-15-secondary, ethoxylated ²	84133-50-6	15-20
Orange, sweet, ext.	8028-48-6	5-10

Composition comments

¹ Components CAS numbers and exact concentration have been withheld as a trade secret.

² CAS RN 84133-50-6 is equivalent to CAS RN 68131-40-8.

4. First-aid measures**Inhalation**

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Wash off with soap and water. Get medical attention if irritation develops and persists.

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

Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information

If exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures**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

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

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

No unusual fire or explosion hazards noted.

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. 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.

Methods and materials for containment and cleaning up

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. 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

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with eyes. Avoid prolonged exposure. Should be handled in closed systems, if possible. Provide adequate ventilation. 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. Protect from freezing. Store material between 0°C and 35°C. Protect from heat and direct sunlight. Protect from humidity. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value	Form
Propylene glycol (CAS 57-55-6)	TWA	10 mg/m ³	Aerosol

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

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 eyewash station.

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.

Other

Wear suitable protective clothing. Use of an impervious apron is recommended.

Respiratory protection

Not normally needed. In case of insufficient ventilation, wear suitable respiratory equipment. Chemical respirator with organic vapor cartridge and full face piece.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using, do not eat, drink or 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**

Physical state	Liquid.
Form	Liquid.
Color	Yellow.
Odor	Citrus like.
Odor threshold	Not relevant.
pH	6.8 - 7.8
pH temperature	68°F (20 °C)
Melting point/freezing point	Not relevant.
Initial boiling point and boiling range	Not relevant.
Flash point	194.5 °F (90.3 °C) Closed Cup (725 mmHg) 196.5 °F (91.4 °C) Closed Cup (760 mmHg)
Evaporate rate	Not relevant.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or exposure limits	
Flammability limit - lower (%)	Not relevant.
Flammability limit - lower (%) temperature	Not relevant.
Flammability limit - upper (%)	Not relevant.
Flammability limit - upper (%) temperature	Not relevant.
Explosive limit - lower (%)	Not relevant.
Explosive limit - lower (%) temperature	Not relevant.
Explosive limit - upper (%)	Not relevant.
Explosive limit - upper (%) temperature	Not relevant.
Vapor pressure	Not relevant.
Vapor density	Not relevant.
Relative density	0.98 - 1.15 (Water = 1)

Relative density temperature	68 °F (20 °C)
Solubility(ies)	
Solubility (water)	Not relevant.
Partition coefficient (n-octanol/water)	Not relevant.
Auto-ignition temperature	Not relevant.
Decomposition temperature	Not relevant.
Viscosity	80 - 150 mPa·s
Viscosity temperature	68 °F (20 °C)
Other information	
Bulk density	Not relevant.
VOC (Weight %)	Not relevant.

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

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.

11. Toxicological information

Information on likely routes of exposure

Inhalation

Prolonged inhalation may be harmful.

Skin contact

Prolonged skin contact may cause temporary irritation.

ORO-RZ

OECD 404

Result: Non irritating

Species: Rabbit

Eye contact

Causes eye irritation.

ORO-RZ

OECD 405

Result: Irritating

Species: Rabbit

Severity: Mildly

Ingestion

Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics

Causes eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Information on toxicological effects

Acute toxicity

Not expected to be acutely toxic.

Product	Species	Test Results
ORO-RZ (CAS Mixture)		
Acute		
<i>Dermal</i>		
LD50	Rat	> 2000 mg/kg, (OECD 402)
<i>Inhalation</i>		
LD50	Rat	> 3.69 mg/l, 4 hours, (OECD 403) Maximum attainable concentration. No mortality observed at this dose.
<i>Oral</i>		
LD50	Rat	> 2000 mg/kg, (OECD 425)

Skin corrosion/irritation

Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Eye contact

ORO-RZ OECD 405
Result: Irritating
Species: Rabbit
Severity: Mildly

Respiratory or skin sensitization**Respiratory sensitization**

Not a respiratory sensitizer.

Skin sensitization

This product is not expected to cause skin sensitization.

Sensitization

ORO-RZ OECD 406
Result: Non-sensitizing
Species: Guinea pig

Germ cell mutagenicity

Not classified.

Carcinogenicity

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

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity

Not Classified.

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.

Further Information

No additional adverse health effects noted.

12. Ecological information**Ecotoxicity**

Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Product	Species		Test Results
ORO-RZ			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Daphnia	13.4 mg/l, 48 hours
Fish	LC50	Zebrafish (Danio rerio)	20.54 mg/l, 96 hours

Persistence and degradability

The product is expected to be biodegradable.

Bioaccumulative potential

Low bioaccumulation is expected.

Partition coefficient n-octanol / water (log Kow)

Propylene glycol (CAS 57-55-6) -0.92

Mobility in soil

This product is water soluble and may disperse in soil.

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

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

14. Transport information**DOT**

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

15. Regulatory Information**US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. One or more components are not listed on TSCA.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**Hazard categories**

Immediate Hazard – Yes

Delayed Hazard – Yes

Fire Hazard – No

Pressure Hazard – No

Reactivity Hazard – No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes.

SARA 313 (TRI reporting)

Not Regulated

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) list**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated

US state regulations**U.S Massachusetts RTK - Substance List**

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Propylene glycol (CAS 57-55-6)

US. Pennsylvania Worker and Community Right-to-Know Law

Propylene glycol (CAS 57-55-6)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Version #: 06

NFPA ratings



List of abbreviations

DSD	Directive 67/548-EC / Dangerous Substances Directive.
CLP	Classification, Labeling and Packaging REGULATION (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures.
TLV	Threshold Limit Value.
AGW	Occupational threshold limit value (Arbeitsplatzgrenzwert – Germany).
STEL	Short term exposure limit.
TWA	Time Weighted Average.
OECD	Organization for Economic Cooperation and Development.
EL50	Effective level, 50%.
EC50	Effective concentration, 50%.
LC50	Lethal Concentration, 50%.
IATA	International Air Transport Association.
IMDG	International Maritime Dangerous Goods.
MARPOL	International Convention for the Prevention of Pollution From Ships.

Disclaimer

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