

## SAFETY DATA SHEET

### 1. Identification

**Product identifier:** ORO®-SOLUTE

**Other means of identification**  
**Product code:** 009-F-1-E  
**Recommended use:** Water Conditioner/Utility Modifier  
**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](mailto: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

Acute toxicity, Inhalation (Category 4)  
Skin corrosion/irritation (Category 2)  
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

Harmful if Inhaled. Causes skin irritation. Causes serious eye irritation. Harmful to aquatic life with long lasting effects.

#### Precautionary statement

##### Prevention

Avoid breathing mist, vapours or spray. Use only outdoors in a well-ventilated area. Wear protective gloves, protective clothing, and eye/face protection. Wash hands thoroughly after handling.

**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 obtain medical attention. IF ON SKIN: Wash with plenty of water. If skin irritation occurs obtain medical attention. Take off contaminated clothing and wash it before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing.

**Storage**

Store in a well-ventilated place. Keep cool.

**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 <sup>1</sup>		
Alcohol, C11-15-secondary, ethoxylated	84133-50-6	5-10

**Composition comments**

<sup>1</sup> Components CAS numbers and exact concentration have been withheld as a trade secret.

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

Move to fresh air. 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**

Serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

**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. 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**

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**

Material will burn in a fire.

## **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**

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**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get this material in contact with eyes. Avoid breathing fume/mist/vapors/spray. Use only outdoors in a well-ventilated area. 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**

##### **Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)**

<b>Components</b>	<b>Type</b>	<b>Value</b>
2,6-di-tert-butyl-p-cresol (CAS 128-37-0)	TWA	10 mg/m3
Sodium Hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

##### **Canada. British Columbia OELs (Occupational Exposure Limits for Chemical Substances, Occupational Healthy and Safety Regulation 296/97, as amended)**

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
2,6-di-tert-butyl-p-cresol (CAS 128-37-0)	TWA	2 mg/m3	Inhalable fraction and vapor
Sodium Hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3	

**Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)**

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
2,6-di-tert-butyl-p-cresol (CAS 128-37-0)	TWA	2 mg/m3	Inhalable fraction and vapor.
Sodium Hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3	

**Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)**

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
2,6-di-tert-butyl-p-cresol (CAS 128-37-0)	TWA	2 mg/m3	Inhalable fraction and vapor.
Sodium Hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3	

**Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)**

<b>Components</b>	<b>Type</b>	<b>Value</b>
2,6-di-tert-butyl-p-cresol (CAS 128-37-0)	TWA	10 mg/m3
Sodium Hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

**Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)**

<b>Components</b>	<b>Type</b>	<b>Value</b>
Sodium Hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

**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 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). Wear face shield if there is risk of splashes.

**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.

**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**

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.

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

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.

<b>Color</b>	Green.
<b>Odor</b>	Citrus
<b>Odor threshold</b>	Not relevant.
<b>pH</b>	6.8 - 7.8
<b>pH temperature</b>	68°F (20 °C)
<b>Melting point/freezing point</b>	Not relevant.
<b>Initial boiling point and boiling range</b>	Not relevant.
<b>Flash point</b>	>100°C (212°F)
<b>Evaporate rate</b>	Not relevant.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Vapor pressure</b>	Not relevant.
<b>Vapor density</b>	Not relevant.
<b>Relative density</b>	1.0 - 1.2 (Water = 1)
<b>Relative density temperature</b>	73 °F (23 °C)
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Complete
<b>Partition coefficient (n-octanol/water)</b>	Not relevant.
<b>Auto-ignition temperature</b>	Not relevant.
<b>Decomposition temperature</b>	Not relevant.
<b>Viscosity</b>	80 - 150 mpa·s
<b>Viscosity temperature</b>	73°F (23 °C)

## 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. Sodium oxides.

## 11. Toxicological information

### Information on likely routes of exposure

#### Inhalation

Harmful if inhaled.

#### Skin contact

Causes skin irritation.

ORO-SOLUTE    OECD 404  
Result: Irritating

Species: Rabbit  
Severity: Slight

**Eye contact**

Causes serious eye irritation.

ORO-SOLUTE    OECD 405  
Result: Irritating  
Species: Rabbit

**Ingestion**

May cause discomfort if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics**

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

**Information on toxicological effects**

**Acute toxicity**

Not expected to be acutely toxic.

Product	Species	Test Results
ORO-SOLUTE (CAS Mixture)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rat	> 2000 mg/kg, (OECD 402)
<i>Inhalation</i>		
LD50	Rat	> 2.13 mg/l, (OECD 403)
<i>Oral</i>		
LD50	Rat	> 2000 mg/kg, (OECD 425)

**Skin corrosion/irritation**

Causes skin irritation.

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Eye contact**

ORO-SOLUTE    OECD 405  
Result: Irritating  
Species: Rabbit

**Respiratory or skin sensitization**

**Respiratory sensitization**

Not a respiratory sensitizer.

**Skin sensitization**

This product is not expected to cause skin sensitization.

**Sensitization**

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

**Germ cell mutagenicity**

Not classified.

**Carcinogenicity**

**ACGIH Carcinogens**

2,6-di-tert-butyl-p-cresol (CAS 128-37-0)

A4 Not classifiable as a human carcinogen.

**Canada - Manitoba OELs: carcinogenicity**

2,6-di-tert-butyl-p-cresol (CAS 128-37-0)

Not classifiable as a human carcinogen.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

2,6-di-tert-butyl-p-cresol (CAS 128-37-0)

3 Not classifiable as to carcinogenicity to humans.

**Reproductive toxicity**

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

**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.

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

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product		Species	Test Results
ORO-SOLUTE			
<b>Aquatic</b>			
<i>Acute</i>			
Algae	ErC50	Pseudokirchnerella subcapitata	7.6 mg/l, 72 hours
	IC50	Pseudokirchnerella subcapitata	6.21 mg/l, 72 hours (yield)
	LOEC	Pseudokirchnerella subcapitata	5.93 mg/l, 72 hours
	NOEC	Pseudokirchnerella subcapitata	2.32 mg/l, 72 hours
Crustacea	EC50	Daphnia	11 mg/l, 48 hours
Fish	LC50	Zebrafish (Danio rerio)	18.7 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

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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

**TDG**

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

**Canadian regulations**

This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

**Controlled Drugs and Substances Act**

Not regulated.

**Export Control List (CEPA 1999, Schedule 3)**

Not listed.

**Greenhouse Gases**

Not listed.

**Precursor Control Regulations**

Not regulated.

**International regulations**

**Stockholm Convention**

Not applicable.

**Rotterdam Convention**

Not applicable.

**Kyoto protocol**

Not applicable.

**Montreal Protocol**

Not applicable.

**Basel Convention**

Not applicable.



## 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 #: See footer

### NFPA ratings



### 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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