

SAFETY DATA SHEET

1. Identification

Product identifier: TRANSFORMER®

Other means of identification

Product code: 079-F-1-B

Recommended use: Soil Conditioner

Recommended restrictions: None Known

Manufacturer/Distributor information*:

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

Telephone Number: +1 (559) 442-4996

Email: SDS-NA@oroagri.com

*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 Night

Within New Zealand:
+(64)-98010034

Outside 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, 6.8B, 9.1D, 9.3C

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)

Reproductive toxicity (Category 2)

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. Suspected of damaging fertility or the unborn child. Toxic to aquatic life. Harmful to terrestrial vertebrates.

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. IF exposed or concerned: Get medical advice/ attention.

In case of fire: Use water fog, foam, dry chemical powder, carbon dioxide (CO₂) for extinction.

Storage

Store locked up. 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 ¹		
Alcohol Ethoxylate	84133-50-6	15-25
Orange Oil	8028-48-6	5-15

Composition comments

¹ 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

Severe 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. 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 (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

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. 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. Ventilate closed spaces before entering them. 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. 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.

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 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 inhalation of vapors and spray mists. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. 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).

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 ³ 1000 ppm

US ACGIH Threshold Limit Values

Components	Type	Value
Ethanol (CAS 64-17-5)	STEL	1000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Ethanol (CAS 64-17-5)	TWA	1900 mg/m ³ 1000 ppm

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value	Form
Propylene Glycol (CAS 57-13-6)	TWA	10 mg/m ³	Aerosol.
Urea (CAS 57-13-6)	TWA	10 mg/m ³	Total particulate.

Biological limit values

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

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 eyewash station. 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

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

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. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical chemical properties

Appearance

Physical state	Liquid.
Form	Liquid.
Color	Green.
Odour	Citrus
Odour threshold	Not available.
pH	6.8 - 7.8
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	40.6°C (105.1°F)
Evaporate rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or exposure limits	Not determined.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	0.98 - 1.02 (Water = 1)
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	80 - 150 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
TRANSFORMER (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

Suspected of damaging fertility or the unborn child.

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
TRANSFORMER (CAS mixture)			
Algae	EC50	Pseudokirchnerella subcapitata	3.38 mg/l, 72 hours
Crustacea	EC50	Daphnia	13.4 mg/l, 48 hours
Fish	LC50	Zebrafish (Danio rerio)	20.5 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 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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