

SAFETY DATA SHEET

1. Identification

Product identifier: HOWITZER™

Other means of identification

Product code: 295-F-9-A

Recommended use: Adjuvant

Recommended restrictions: None Known

Manufacturer/Importer/Supplier/Distributor information:

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

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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

Inhalation (Category 4)

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 serious eye irritation. Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention

Avoid breathing fume/mist/vapors/spray. Use only outdoors in a well-ventilated area. Wash thoroughly after handling. Wear protective eye protection/face protection. Avoid release to the environment.

Response

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. 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 or attention.

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 ¹		
Alcohol, C9-11-secondary, ethoxylated	68439-46-3	5-10

Composition comments

¹ 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 (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

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

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

Components	Type	Value
Ethanol (CAS 64-17-5)	PEL	1900 mg/m3 1000 ppm
Sodium Hydroxide (CAS 1310-73-2)		2 mg/m3

US ACGIH Threshold Limit Values

Components	Type	Value	Form
2,6-di-tert-butyl-p-cresol (CAS 128-37-0)	TWA	2 mg/m3	Inhalable fraction and vapor
Ethanol (CAS 64-17-5)	STEL	1000 ppm	
Sodium Hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2,6-di-tert-butyl-p-cresol (CAS 128-37-0)	TWA	10 mg/m ³
Ethanol (CAS 64-17-5)	TWA	1900 mg/m ³
		1000 ppm
Sodium Hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m ³

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

Physical state	Liquid.
Form	Liquid.
Color	Various
Odor	Wintergreen
Odor threshold	Not relevant.
pH	7.5
pH temperature	68°F (20 °C)
Melting point/freezing point	Not relevant.
Initial boiling point and boiling range	Not relevant.
Flash point	>85°C (>185°F)
Evaporate rate	Not relevant.
Flammability (solid, gas)	Not applicable.

Vapor pressure	Not relevant.
Vapor density	Not relevant.
Relative density	1.01 - 1.02 (Water = 1)
Relative density temperature	73 °F (23 °C)
Solubility(ies)	
Solubility (water)	Complete
Partition coefficient (n-octanol/water)	Not relevant.
Auto-ignition temperature	Not relevant.
Decomposition temperature	Not relevant.
Viscosity	50 mpa·s (typical)
Viscosity temperature	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.

HOWITZER

OECD 404

Result: Irritating

Species: Rabbit

Severity: Slight

Eye contact

Causes serious eye irritation.

HOWITZER

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
HOWITZER (CAS Mixture)		
Acute		
<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

HOWITZER 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

HOWITZER 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.

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.

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.

12. Ecological information

Ecotoxicity

Harmful to aquatic life with long lasting effects.

Product	Species		Test Results
HOWITZER			
Aquatic			
<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 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

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.

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

2,6-di-tert-butyl-p-cresol (CAS 128-37-0), Ethanol (CAS 64-17-5), Sodium Hydroxide (CAS 1310-73-2)

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

2,6-di-tert-butyl-p-cresol (CAS 128-37-0), Ethanol (CAS 64-17-5), Sodium Hydroxide (CAS 1310-73-2)

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

2,6-di-tert-butyl-p-cresol (CAS 128-37-0), Ethanol (CAS 64-17-5), Sodium Hydroxide (CAS 1310-73-2)

US. Rhode Island RTK

2,6-di-tert-butyl-p-cresol (CAS 128-37-0), Ethanol (CAS 64-17-5), Sodium Hydroxide (CAS 1310-73-2)

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 #: 01

NFPA ratings



Disclaimer

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