

SECTION 1: Identification**1.1 Product identifier**

Product Trade Name ENCOURAGE® NANOCAL®
Product Code Number 244-F-0-B

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses Fertilizer
Uses advised against None Known

1.3 Details of the supplier of the safety data sheet

Oro Agri, Inc.
2788 S Maple Ave.
Fresno, CA 93725
United States
Telephone: +1(559) 442-4996
Email: SDS-NA@oroagri.com

1.4 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.

SECTION 2: Hazard(s) identification**2.1 Classification of the substance or mixture**

Classification according to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Hazard class and category

<u>Hazard class.</u>	<u>Category</u>
Acute toxicity (inhal.)	4
Flammable liquid	4

2.2 Label elements

Labelling according to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word **WARNING**

- Pictograms

**Hazard statements**

Combustible liquid. Harmful if inhaled.

Precautionary statements - prevention

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Avoid breathing mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wear protective gloves/eye protection/face protection.

Precautionary statements - response.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

Call a poison center/doctor/.../ if you feel unwell.

In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish.

Precautionary statements - storage

Store in a well-ventilated place. Keep cool.

Precautionary statements - disposal

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

2.3 Other hazards

None known.

2.4 Supplemental information

None.

SECTION 3: Composition/information on ingredients**3.1 Substances**

Not relevant (mixture)

3.2 Mixtures**Description of the mixture**

Calcium Carbonate (CAS 1317-65-3) 20 - 30%

Urea (CAS 57-13-6) 5 - 10%

Alcohol Ethoxylate (CAS 84133-50-6) 1 - 5%

Proprietary mixture*

*Components, CAS numbers and/or concentrations not listed are either non-hazardous, below reporting limits or have been withheld as trade secrets.

SECTION 4: First-aid measures**4.1 Description of first-aid measures****General notes**

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing and wash it before reuse. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention.

Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. In all cases of doubt, or when symptoms persist, seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Harmful if inhaled. Exposed individuals may experience discomfort.

4.3 Indication of any immediate medical attention and special treatment needed

In case of burns and frostbite: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours.

SECTION 5: Fire-fighting measures**5.1 Extinguishing media**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.

5.2 Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, product may form flammable/explosive vapor-air mixture. Solvent vapors are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. In case of fire and/or explosion do not breathe fumes.

5.3 Advice for firefighters

In case of fire and/or explosion, do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated water separately. Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

Protective clothing against liquid and gaseous chemicals, including liquid aerosols and solid particles, Wear self-contained breathing apparatus.

5.4 General fire hazards

Flammable liquid.

SECTION 6: Accidental release measures

6.1 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. Avoid breathing mist or vapor. 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. For personal protection, see section 8 of the SDS.

6.2 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. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. 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. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. 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.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Keep away from open flames, hot surfaces and sources of ignition. When using do not smoke. Do not get in eyes, on skin, or on clothing. Avoid breathing mist or vapor. Avoid prolonged exposure. Provide adequate ventilation. 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. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

Flammability hazards

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from sunlight.

Control of the effects

Keep in a cool, well-ventilated place. Protect from sunlight. Store in a dry place. Store in a closed container. Take precautionary measures against static discharge. Ground/bond container and receiving equipment. Keep away from incompatible materials. Incompatible materials: see section 10.

Protect against external exposure, such as

Frost, UV-radiation/sunlight.

Ventilation requirements

Keep any substance that emits harmful vapors or gases in a place that allow these to be permanently extracted. Use local and general ventilation. Ground/bond container and receiving equipment.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)				
Country	Name of substance	TWA [mg/m ³]	Ceiling-C [mg/m ³]	Source
United States	Proprietary component	10		Cal/OSHA PEL
United States	Proprietary component	10 (10 h)		NIOSH REL
United States	Proprietary component	2		ACGIH® 2022
United States	Proprietary componentet		2	NIOSH REL
United States	Proprietary componentet		2	ACGIH® 2022
United States	Proprietary componentet	2		29 CFR 1910.1000
United States	Proprietary componentet		2	Cal/OSHA PEL
United States	Proprietary component	10 (10 h)		NIOSH REL
United States	Proprietary component	5 (10 h)		NIOSH REL
United States	Proprietary component	15		29 CFR 1910.1000
United States	Proprietary component	5		29 CFR 1910.1000

Notation

Ceiling-C

Ceiling value is a limit value above which exposure should not occur

TWA

Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

8.2 Exposure controls

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 (personal protective equipment)**Eye/face protection**

Wear eye/face protection. Use safety goggle with side protection. Wear face shield if there is risk of splashes.

Skin protection- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Protective clothing against liquid chemicals. Take recovery periods for skin regeneration. Preventive skin protection is recommended. Wash hands thoroughly after handling.

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.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

General hygiene considerations

Observe any medical surveillance requirements. 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. Contaminated work clothing should not be allowed out of the workplace.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****Appearance**

Physical state	Liquid
Color	Brown

Particle characteristics

Particle	Not relevant(liquid)
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Odor / odor threshold

- Odor	Burnt like
- Odor threshold	No data available

Other safety parameters

pH (value)	8 – 9.5
Melting point/freezing point	Not determined
Initial boiling point and boiling range	Not determined
Flash point	75°C (176°F) - (Pensky-Martens closed cup)
Evaporation rate	Not determined
Flammability (solid, gas)	Not relevant(fluid)

Upper/lower flammability or explosive limits

- Lower explosion limit (LEL)	Not determined
- Upper explosion limit (UEL)	Not determined
Vapor pressure	Not determined
Density	1.3 – 1.4 g/cm³
Vapor density	This information is not available
Solubility(ies)	
Water solubility	Complete

Partition coefficient

n-octanol/water (log KOW)	This information is not available
Auto-ignition temperature	Not determined

Viscosity

- Kinematic viscosity	No data available
- Dynamic viscosity	500 – 1,000 cP
- Kinematic viscosity	Not determined
Decomposition temperature	This information not available

9.2

Other information	There is no additional information
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SECTION 10: Stability and reactivity

10.1 Reactivity

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

If heated

Risk of ignition

10.2 Chemical stability

Stable under normal conditions of use.

10.3 Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

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

Hints to prevent fire or explosion

Use explosion-proof electrical/ventilating/lightning/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Information on likely routes of exposure

Inhalation

Harmful if inhaled.

Skin contact

Expected to be a low dermal hazard.

Eye contact

No adverse effects due to eye contact are expected.

Ingestion

Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics

Harmful if inhaled. Exposed individuals may experience discomfort.

-Values for lethality

Information on toxicological effects.

Acute toxicity

Not expected to be acutely toxic.

ENCOURAGE NANOCAL (CAS Mixture)				
Exposure route	Endpoint	Value	Species	Method
Dermal	LD50	>2,000 mg/kg	Rat	OECD 402
Inhalation: dust/mist	LC50	>1.877 mg/l/4h	Rat	OECD 403
Oral	LD50	5,000 mg/kg	Rat	OECD 423

Skin corrosion/irritation

Prolonged skin contact may cause temporary irritation.

Skin contact**ENCOURAGE NANOCAL**

OECD 404

Result: Non-Irritating.

Species: Rabbit .

Serious eye damage/eye irritation

Non-irritating.

Eye contact**ENCOURAGE NANOCAL**

OECD 405

Result: Non-irritating.

Species: Rabbit.

Respiratory or skin sensitization

This product is not expected to cause respiratory or skin sensitization.

Skin sensitization**ENCOURAGE NANOCAL**

OECD 406

Result: Non-sensitizing.

Species: Guinea pig.

Germ cell mutagenicity

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

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

-IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

Name of substance	Classification	Date indication
Proprietary component	3	1987

Legend

3 Not classifiable as to carcinogenicity in humans

-NTP Report on Carcinogens

Not Listed.

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

Not regulated.

Reproductive toxicity

Not classified.

Specific target organ toxicity (STOT)
- 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.

SECTION 12: Ecological information
12.1 Toxicity

This product is not classified as environmentally hazardous under 29 CFR 1910.1200. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.2 Persistence and degradability

No data is available on the degradability of any ingredients in the mixture.

12.3 Bioaccumulative potential

Urea -2.11

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

Information on this property is not available.

12.7 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.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****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 packaging

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.

SECTION 14: Transport information**14.1 DOT**

Not regulated as dangerous goods.

14.2 IATA

Not regulated as dangerous goods.

14.3 IMDG

Not regulated as dangerous goods.

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

Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

SARA 311/312 Hazardous chemical

Yes.

SARA 313 (TRI reporting)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

Superfund Amendment and Reauthorization Act(SARA TITLE III)

The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302,304).

None of the ingredients are listed.

Clear Air Act

None of the ingredients are listed.

California Proposition 65

This product is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. .

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

SECTION 16: Other information, including date of preparation or last revision

Revision Date: 01/28/2023

Version number: 1.0

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
29 CFR 1910.1000	29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits).
49 CFR US DOT	49 CFR U.S. Department of Transportation.
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Cal/OSHA PEL	California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs).

Abbr.	Descriptions of used abbreviations
Ceiling-C	Ceiling value.
DGR	Dangerous Goods Regulations (see IATA/DGR).
IARC	International Agency for Research on Cancer.
IATA	International Air Transport Association.
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA).
IMDG	International Maritime Dangerous Goods Code.
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval.
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval.
NIOSH REL	National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs).
PBT	Persistent, Bioaccumulative and Toxic.
TWA	Time-weighted average.
vPvB	Very Persistent and very Bioaccumulative.

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

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