

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product Code 00030142
Product Name Ginger CO2 Extract

CAS No 8007-08-7

Recommended use of the chemical and restrictions on use

Recommended use Aromatic Ingredient(s). For Industrial Use Only.
Restrictions on use Do not ingest as such. Avoid eye contact.

Details of the supplier of the safety data sheet

Supplier

Robertet, Inc.
 400 International Drive
 Mount Olive, NJ 07828 USA
 TEL: 201-337-7100
 E-mail: reginc@robertetusa.com

Emergency telephone number

Emergency Telephone Chemtrec 1-800-424-9300 (24 hrs)
 Outside of the USA and Canada (703) 527-3887. Collect calls accepted

2. HAZARDS IDENTIFICATION

Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1A
Aspiration hazard	Category 1
Flammable liquids	Category 4

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Signal word

Danger

Hazard statements

Causes skin irritation
 Causes serious eye irritation
 May cause an allergic skin reaction
 May be fatal if swallowed and enters airways
 Combustible liquid



Appearance Yellow to brown red **Physical state** Liquid **Odor** Characteristic

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Contaminated work clothing must not be allowed out of the workplace
 Keep away from flames and hot surfaces. - No smoking
 Wear protective gloves/eye protection/face protection

Precautionary Statements - Response

Specific treatment (see supplemental first aid instructions on this label)
 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: Wash with plenty of water and soap
 Take off contaminated clothing and wash it before reuse
 If skin irritation or rash occurs: Get medical advice/attention
 IF SWALLOWED: Immediately call a POISON CENTER or doctor
 Do NOT induce vomiting
 In case of fire: Use CO2, dry chemical, or foam to extinguish

Precautionary Statements - Storage

Store locked up
 Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other information

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%	GHS Classification
Citral	5392-40-5	5.0 - 10	Acute Tox. Dermal 5 (H313) Skin Irrit. 2 (H315) Eye Irrit. 2A (H319) Skin Sens. 1 (H317) Aquatic Acute 2 (H401)
l-.beta.-Bisabolene	495-61-4	5.0 - 10	Skin Irrit. 2 (H315) Skin Sens. 1B (H317) Asp. Tox. 1 (H304)
Eucalyptol	470-82-6	1.0 - 5.0	Flam. Liq. 3 (H226) Acute Tox. Oral 5 (H303) Skin Irrit. 3 (H316) Skin Sens. 1B (H317)
Camphene	79-92-5	1.0 - 5.0	Flam. Sol. 2 (H228) Eye Irrit. 2B (H320) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Terpineol	8000-41-7	1.0 - 5.0	Flam. Liq. 4 (H227) Acute Tox. Oral 5 (H303) Skin Irrit. 2 (H315) Eye Irrit. 2A (H319)

			Aquatic Acute 3 (H402)
Limonene	5989-27-5	1.0 - 5.0	Flam. Liq. 3 (H226) Skin Irrit. 2 (H315) Skin Sens. 1B (H317) Asp. Tox. 1 (H304) Aquatic Acute 1 (H400) Aquatic Chronic 3 (H412)
alpha-Pinene	80-56-8	1.0 - 5.0	Flam. Liq. 3 (H226) Acute Tox. Oral 4 (H302) Skin Irrit. 2 (H315) Skin Sens. 1B (H317) Asp. Tox. 1 (H304) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Borneol	507-70-0	1.0 - 5.0	Skin Irrit. 2 (H315) Flam. Sol. 1 (H228) Aquatic Chronic 2 (H411) Aquatic Acute 2 (H401) Acute Tox. Oral 5 (H303)
Geranyl acetate	105-87-3	0.1 - 1.0	Skin Sens. 1B (H317) Skin Irrit. 2 (H315) Aquatic Chronic 3 (H412) Aquatic Acute 2 (H401)
Geraniol	106-24-1	0.1 - 1.0	Skin Sens. 1B (H317) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Aquatic Acute 3 (H402) Acute Tox. Oral 5 (H303)
Citronellol	106-22-9	0.1 - 1.0	Acute Tox. Oral 5 (H303) Acute Tox. Dermal 5 (H313) Skin Irrit. 2 (H315) Eye Irrit. 2A (H319) Skin Sens. 1B (H317) Aquatic Acute 2 (H401)
trans-Nerolidol	40716-66-3	0.1 - 1.0	Eye Irrit. 2B (H320) Skin Sens. 1B (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
beta-Pinene	127-91-3	0.1 - 1.0	Flam. Liq. 3 (H226) Skin Irrit. 2 (H315) Skin Sens. 1B (H317) Asp. Tox. 1 (H304) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
beta-Caryophyllene	87-44-5	0.1 - 1.0	Skin Sens. 1B (H317) Asp. Tox. 1 (H304) Aquatic Chronic 4 (H413)
Linalool	78-70-6	0.1 - 1.0	Flam. Liq. 4 (H227) Acute Tox. Oral 5 (H303) Skin Irrit. 2 (H315) Eye Irrit. 2A (H319) Skin Sens. 1B (H317) Aquatic Acute 3 (H402)
Isoeugenol	97-54-1	0.1 - 1.0	Acute Tox. Oral 4 (H302) Acute Tox. Dermal 4 (H312) Acute Tox. Inhalation - dust and mist 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2A (H319) Skin Sens. 1A (H317) STOT SE 3 (H335) Aquatic Acute 2 (H401)
Terpinolene	586-62-9	0.1 - 1.0	Skin Sens. 1B (H317)

			Skin Irrit. 3 (H316) Flam. Liq. 4 (H227) Asp. Tox. 1 (H304) Aquatic Chronic 1 (H410) Aquatic Acute 1 (H400) Acute Tox. Oral 5 (H303)
Farnesal	19317-11-4	< 0.1	Skin Irrit. 2 (H315) Skin Sens. 1B (H317)

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Inhalation	Aspiration into lungs can produce severe lung damage. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If breathing is difficult, (trained personnel should) give oxygen. Get immediate medical advice/attention. Delayed pulmonary edema may occur.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. Do NOT induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.
Self-protection of the first aider	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives. Difficulty in breathing. Coughing and/ or wheezing. Dizziness. May cause redness and tearing of the eyes. Burning sensation.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically. Because of the danger of aspiration, emesis or gastric lavage should not be employed unless the risk is justified by the presence of additional toxic substances.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Large Fire	Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam. CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Product is or contains a sensitizer. May cause sensitization by skin contact.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Take precautionary measures against static discharges. Do not touch or walk through spilled material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protection equipment. Do not breathe vapor or mist. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use with local exhaust ventilation. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other

recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Citral 5392-40-5	dermal sensitizer TWA: 5 ppm inhalable fraction and vapor S*	-	-
alpha-Pinene 80-56-8	dermal sensitizer TWA: 20 ppm	-	-
beta-Pinene 127-91-3	dermal sensitizer TWA: 20 ppm	-	-

Appropriate engineering controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid
Appearance Yellow to brown red
Odor Characteristic
Odor threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH		No information available
Melting point / freezing point		No information available
Boiling point / boiling range	> 35 °C	No information available
Flash point	83 °C / 181 °F	CC (closed cup)
Evaporation rate		No information available
Flammability (solid, gas)		No information available
Vapor Pressure (mm Hg @ 20°C):		No information available
Vapor density		No information available
Relative density		No information available
Specific Gravity @ 20/20 °C	0.8790-0.8990	RTM-101
Solubility(ies)		
Water solubility		No information available
Solubility in other solvents		No information available
Partition coefficient		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
Viscosity		No information available

Other information

Explosive properties No information available
Oxidizing properties No information available

10. STABILITY AND REACTIVITY

Reactivity No information available.
Chemical stability Stable under normal conditions.
Possibility of hazardous reactions None under normal processing.
Conditions to avoid Heat, flames and sparks.
Incompatible materials Strong acids. Strong bases. Strong oxidizing agents.
Hazardous decomposition products None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure**Product Information**

Inhalation Specific test data for the substance or mixture is not available. Aspiration into lungs can produce severe lung damage. May cause pulmonary edema. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye contact Specific test data for the substance or mixture is not available. Irritating to eyes. (based on components). Causes serious eye irritation.

Skin contact May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). Repeated exposure may cause skin dryness or cracking. Causes skin irritation.

Ingestion Specific test data for the substance or mixture is not available. Potential for aspiration if swallowed. May cause lung damage if swallowed. Aspiration may cause pulmonary edema and pneumonitis. May be fatal if swallowed and enters airways. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives. Difficulty in breathing. Coughing and/ or wheezing. Dizziness. Redness. May cause redness and tearing of the eyes.

Acute toxicity**Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) > 5000 mg/kg
ATEmix (dermal) > 5000 mg/kg

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. Irritating to skin.
Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye irritation.

Respiratory or skin sensitization May cause sensitization by skin contact.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Persistence and degradability

No information available.

Bioaccumulation

There is no data for this product.

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

DOT Not regulated

IATA/ICAO

UN/ID no	3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (Citral and Camphene)
Hazard class	9
Packing group	III

IMDG/IMO

UN number	3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (Citral and Camphene)
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F

15. REGULATORY INFORMATION

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

16. OTHER INFORMATION**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet