

FRESH HOP OIL SAFETY DATA SHEET

Section 1.0 Product and Company Identification

1.1 Product Identification	Amplifire™ Fresh Hop Oils
1.3 Trade Names and Synonyms	Green Hop Oil, Hop Oil, Fresh Hop Oil, Hop Oil Distillate, Hop Oil extract, Solubilized Hop Oil
1.4 Supplier	Clayton Hops 377 Waimea West Road Brightwater, Tasman 7091 New Zealand Phone: +64 274360395 Email: Brian.clayton@claytonhops.co.nz Website: www.claytonhops.co.nz
1.5 Identified Use	Hops are a traditional ingredient of beer. This product is intended for use as a flavouring for foods and beverages. Not for direct human consumption as an undiluted product.
1.6 Restrictions on Use	None

Section 2.0 Hazard(s) Identification

2.1 Hazard Classification	<p>Flammable Liquid Hazard Category 3 -H226 Flammable liquid and vapour Skin Corrosion / Irritation Category 2 -H315 Causes skin irritation Eye Damage / Irritation Category 2A -H319 Causes serious eye irritation Sensitization – Skin Category 1 -H317 May cause an allergic reaction Aspiration Hazard Category 1 -May be fatal if swallowed and enters airways</p>
2.2 Label Elements	<p>Signal Word: Danger</p> <p>Hazard Statement: -H226, Flammable liquid and vapour -H304, May be fatal if swallowed and enters airways -H315, Causes skin irritation -H317, May cause an allergic skin reaction -H319, Causes serious eye irritation -P210, Keep away from heat, sparks open flames and hot surfaces</p> <p>Precautionary statements: -P210, Keep away from heat, sparks, open flames, and hot surfaces. – No smoking -P233, Keep container tightly closed</p>

	<p>-P240, Ground, bond container and receiving equipment</p> <p>-P241, Use explosion-proof electrical, ventilating and lighting equipment</p> <p>-P242, Use only non-sparking tools</p> <p>-P243, Take precautionary measures against static discharge</p> <p>-P261, Avoid breathing vapour or dust</p> <p>-P264, Wash hands and other contacted skin thoroughly after handling</p> <p>-P272, Contaminated work clothing should not be allowed out of the workplace</p> <p>-P280, Wear protective clothing, eye protection, face protection</p> <p>-P301 / P310, If swallowed: Immediately call a doctor</p> <p>-P302 / P352, If on skin: Wash with plenty of water</p> <p>-P303 / P361 / P353, If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower</p> <p>-P305 / P351 / P338, If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing</p> <p>-P331, Do NOT induce vomiting</p> <p>-P332 / P313, If skin irritation occurs: Get medical advice/attention</p> <p>-P333 / P313, If skin irritation or rash occurs: Get medical advice/attention</p> <p>-P337 / P313, If eye irritation persists: Get medical advice/attention</p> <p>-P362 / P364, Take off contaminated clothing and wash it before reuse</p> <p>-P363, Wash contaminated clothing before reuse</p> <p>-P370 / P78, In case of fire: Use carbon dioxide, dry chemical, or foam for extinction</p> <p>-P403 / P235, Store in a well-ventilated place. Keep cool.</p> <p>-P405, Store locked up</p> <p>-P501, Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation</p>
2.3 Other Hazards	None

Section 3.0 Ingredient Composition and Information

3.1 Substances	<p>Substance Identifier: UVCB</p> <p>Chemical name: hop oil CAS-No: 9007-04-3</p> <p>GHS US classification:</p> <p>-Flam. Liq. 3, H226</p> <p>-Skin Irrit. 2, H315</p> <p>-Eye Irrit. 2A, H319</p> <p>-Skin Sens. 1, H317</p> <p>Asp. Tox. 1, H304</p> <p>Contains flavouring components in a carrier of Monopropylene Glycol USP</p> <p>CAS-No: 57-55-6</p> <p>Not classified as hazardous under GHS US</p>
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Section 4.0 First Aid Measures

4.1 Inhalation	Move affected person to fresh air and keep comfortable for breathing.
4.2 Skin Contact	Rinse skin with water/ shower. Remove/Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical attention/advice.
4.3 Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention/advice.
4.4 Oral Ingestion	Do not induce vomiting. Call a physician immediately.
4.5 Symptoms	<p>Symptoms/effects after skin contact -Causes skin irritation.</p> <p>Symptoms/effects after eye contact -Causes eye irritation.</p> <p>Symptoms/effects after ingestion -Drink large amounts of water to dilute. Vomiting may occur but do not induce vomiting. Obtain medical attention if symptoms persist.</p>
4.6 Immediate Medical Attention and Special Treatment, If Necessary	Treat symptomatically. See sections 4.1-4.4

Section 5.0 Fire Aid Measures

5.1 Extinguishing Media	Carbon dioxide, Dry Chemical, Foam.
5.2 Hazards from Fire	Flammable liquid and vapor.
5.3 Advice for fire righters	In case of insufficient ventilation, wear respiratory equipment.

Section 6.0 Spillage, Accidental Release Measures

6.1 Procedure	Ventilate spillage area well. Avoid contact with skin and eyes. Avoid breathing vapours. No open flames, no sparks, and no smoking.
6.2 Personal Protective Equipment	Ensure adequate ventilation or use a respirator. Wear suitable protective equipment.
6.3 Environmental Precautions	Do not discharge onto the ground or into watercourses. Notify authorities if product enters sewers or public waters.

Section 7.0 Handling and Storage

7.1 Recommended Safe Handling	Use only in well-ventilated areas. Avoid inhalation of vapours, spilling on skin and eye contact. Keep away from heat, sparks, open flames, and hot surfaces. No smoking.
7.2 Recommended Storage Conditions	<p>Suitable storage containers:</p> <ul style="list-style-type: none"> • Closed Containers of Food Grade Quality • Stainless Steel • Lacquered Steel <p>Store in a cool dark place. Keep container closed when not in use. To preserve product quality purge Oxygen out of partially used containers with inert gas. Keep away from heat and from sources of ignition.</p>
7.3 Specific End Uses	The substance is manufactured from food ingredients, and it is intended for use as a processing ingredient in the manufacture of foodstuffs. Use in accordance with good manufacturing, industrial hygiene practices, and applicable food legislation.

Section 8.0 Exposure Controls and Personal Protection

8.1 Control Parameters	Not Applicable
8.2 Threshold Limit Values	Not Applicable
8.3 Exposure Controls	<p>Engineering Controls: provide adequate ventilation</p> <p>Eye/Face Protection: Wear safety glasses or chemical goggles</p> <p>Hand Protection: PVC or rubber gloves</p> <p>Skin Protection: If danger of splashing wear PVC or rubber apron</p> <p>Respiratory Protection: Not normally required</p>

Section 9.0 Physical and Chemical Properties

9.1 Appearance	Liquid
9.2 Odour	Characteristic
9.3 odour Threshold	NA
9.4 pH	NA
9.5 Melting Point	NA
9.6 Boiling Point	NA
9.7 Flash Point	Terpene compound flash points vary. Hop oil terpene composition varies by variety. Flash point >60 °C
9.8 Evaporation Rate	NA
9.9 Flammability	No data available
9.10 Upper/Lower Flammability	No data available
9.11 Vapour Pressure	No data available
9.12 Vapour Density	No data available
9.13 Density (kg / m ³)	Varies with production parameters. Usually 800-900
9.14 Solubility in Water	Soluble in water.
9.15 Partition Coefficient	No data available
9.16 Auto-Ignition Temperature	No data available
9.17 Viscosity at 20°C	No data available
9.18 Explosive properties	No data available
9.19 Oxidising properties	No data available
Other information	No data available

Section 10.0 Stability and Reactivity

10.1 Reactivity	No reactivity hazards known
10.2 Chemical Stability	Product is stable if stored in accordance with Section 7.2 and 10.5
10.3 Possibility of Hazardous Reactions	None known
10.4 Conditions to Avoid	Keep container closed when not in use.
10.5 Incompatible Materials	Oxidizing agents
10.6 Hazardous Decomposition Products	None known

Section 11.0 Toxicological Information

11.1 Acute Toxicity	No data available. Hops and liquid hop extracts are "Generally Recognized as Safe" (GRAS 21 CFR 182.20) for intended use.
11.2 Skin Corrosion/Irritation	No data available
11.3 Serious Eye Damage/Irritation	No data available
11.4 Respiratory or Skin Sensitisation	No data available
11.5 Germ Cell Mutagenicity	No data available
11.6 Carcinogenicity	No data available
11.7 Reproductive Toxicity	No data available

Section 12.0 Ecological Information

12.1 Ecotoxicity	No data available.
12.2 Persistence and Degradability	No data available.
12.3 Bioaccumulation potential	No data available.
12.4 Mobility in soil	No data available
12.5 Other effects	No data available

Section 13.0 Disposal Considerations

13.1 Product disposal	Dispose in accordance with all applicable and national regulations in force.
13.2 Container disposal	Dispose of containers in accordance with all applicable and national regulations in force. Do not remove labels from containers until container has been cleaned.

Section 14.0 Transport Information

14.1 UN Number	Non-hazardous product
14.2 Shipping Name	N/A
14.3 Hazardous Class	Non-hazardous product
14.4 Packing Group	Non-hazardous product
14.5 Environmental Hazards	Non-hazardous product
14.6 Other	No data available

Section 15.0 Regulatory Information

15.1 Safety, Health and Environmental Regulations	No data available
15.2 Chemical Safety Assessment	No data available

Section 16.0 Other Information

16.1 Issue Date	September 5 th , 2023
16.2 Revision Date	
16.3 Other	The information provided in this safety data sheet is believed to be correct and based on knowledge present at document issue. Document does not purport to be all-inclusive and shall be used only as a guide. Document does not represent any guarantee of the properties of the product nor do we accept any liability for loss, injury or damage that may result from its use.