

## HOP PELLETS SAFETY DATA SHEET

### Section 1.0 Product and Company Identification

1.1 Product Identification	Hop Pellets
1.2 Product Description	Hop Pellets made from dried and ground hop cones
1.3 Trade Names and Synonyms	Type 90 Hop Pellets, PE90, Hop Pellets, Kettle Pellets, Dry Hop Pellets, Amplifire™ Hop Pellets, Amplifire™ Lupulin Hop Pellets, Concentrated Hop Pellets
1.4 Supplier	Clayton Hops 377 Waimea West Road Brightwater, Tasman 7091 New Zealand Phone: Email: Brian.Clayton@claytonhops.co.nz Website: www.claytonhops.co.nz
1.5 Identified Use	For use as an ingredient used in brewing beer.
1.6 Restrictions on Use	None

### Section 2.0 Hazard(s) Identification

2.1 Hazard Classification	Not Classified
2.2 Label Elements	Not Applicable (not classified)
2.3 Other Hazards	Associated dust may be a mild irritant to the eyes, mouth and throat. Prolonged skin contact could cause dermatitis in some individuals.

### Section 3.0 Ingredient Composition and Information

3.1 Composition	The product consists entirely of hop cones cultivated from the Humulus lupulus plant. Product is produced by pelleting the milled, dried, cones of many different varieties and degrees of enrichment.
3.2 Hazard Components	Not Applicable. Product is natural, unrefined and contains no additives.

### Section 4.0 First Aid Measures

4.1 Inhalation	Move affected person to fresh air.
4.2 Skin Contact	Brush excess material off and wash skin thoroughly with soap and water. Seek medical attention if irritation persists.
4.3 Eye Contact	Flood the eye with copious amounts of water. Seek medical attention if irritation persists.
4.4 Oral Ingestion	Not applicable.
4.5 Symptoms	None known. See Section 2.3

### Section 5.0 Fire Aid Measures

5.1 Extinguishing Media	Carbon dioxide, water
5.2 Hazards from Fire	None known.

### Section 6.0 Spillage, Accidental Release Measures

6.1 Procedure	Normal clean-up procedures for any agricultural commodity apply. Scoop or shovel spilled material into a recovery container. Flush area with warm soapy water to remove traces.
6.2 Personal Protective Equipment	Ensure adequate ventilation or use a respirator. Wear rubber gloves and safety glasses.
6.3 Environmental Precautions	Do not discharge onto the ground or into watercourses

## Section 7.0 Handling and Storage

7.1 Recommended Safe Handling	Use personal protective equipment. Avoid generating excessive dust. Avoid prolonged contact with product.
7.2 Recommended Storage Conditions	<p>Suitable storage containers:</p> <ul style="list-style-type: none"> <li>• Closed Containers of Food Grade Quality</li> <li>• Thick gauge laminated foils</li> <li>• PET Pouches</li> <li>• Stainless Steel</li> <li>• Lacquered Steel</li> </ul> <p>To guarantee quality store in a dry, odour free environment. Avoid heat and moisture during storage. Ideal storage temperature range of -1°F to 5°C. Avoid prolonged storage temperatures above 20°C (68°F) which may cause foil packaging to burst resulting in oxidation of product and considerable deterioration of quality.</p>

## 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</p> <p>Hand Protection: Gloves possible (not mandatory)</p> <p>Skin Protection: Gloves possible (not mandatory)</p> <p>Respiratory Protection: Wear facemask if dust will be generated</p>

## Section 9.0 Physical and Chemical Properties

9.1 Appearance	Pelleted powder, various shades of yellow, green or brown
9.2 Odour	Characteristic, typical hoppy, depends on variety
9.3 odour Threshold	No data available
9.4 pH	NA
9.5 Melting Point	NA
9.6 Boiling Point	NA
9.7 Flash Point	NA
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 <sup>3</sup> )	Varies with production parameters. Usually 450-700
9.14 Solubility in Water	Insoluble
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	May form explosible dust-air mixture if the associated dust is dispersed

## Section 10.0 Stability and Reactivity

10.1 Reactivity	Product is sensitive to oxidation in open containers.
10.2 Chemical Stability	Product is stable if stored in accordance with Section 7.2
10.3 Possibility of Hazardous Reactions	None known
10.4 Conditions to Avoid	See Section 7.2
10.5 Incompatible Materials	None known
10.6 Hazardous Decomposition Products	None known

## Section 11.0 Toxicological Information

11.1 Acute Toxicity	None known. Product is "Generally Recognized as Safe" (GRAS 21 CFR 182.20) for its intended use. Supported by long history of safe use in brewing.
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. Product is all natural and biodegradable
12.3 Bioaccumulation potential	No data available. Product is all natural and not expected to bioaccumulate.
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.

### Section 14.0 Transport Information

14.1 UN Number	Non-hazardous product
14.2 Shipping Name	Type 90 Hop Pellets
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	10/01/2023
16.2 Revision Date	10/01/2025
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.