



Product Name: T-90 Hop Pellets
Revision Date: 07/28/2021

Page 1 of 6

SAFETY DATA SHEET

Note

Hop Pellets are not classified as dangerous products according to 29 CFR 1910.1200.b.5.iii, and European Union legislation. Hops, Hop Pellets and hop extracts are generally recognized as safe (GRAS) for their intended use in accordance with US FDA regulation, 21 CFR 182.20. Supported by a long history of safe use in brewing. This safety data sheet is provided voluntarily.

SECTION 1

PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: Hop Pellets
Product Description: Cylindrical pellets made from dried, milled and compressed whole hops.
Intended Use: For use as an ingredient in the brewing of beer.

COMPANY IDENTIFICATION

Supplier: **Brewer Supply Group**
5150 Yakima Valley Highway
Wapato, WA 98951 USA

24 Hour Health Emergency National Poison Control Center 1-800-222-1222
Product Technical Information 1-800-374-2739

SECTION 2

HAZARDS IDENTIFICATION

This material is not hazardous according to regulatory guidelines (see SDS Section 15).

Other hazard information:

None as defined under 29 CFR 1910.1200.
Not classified (Regulation (EC) No. 1272/2008)
Not classified (Directive 67/548/EEC)

PHYSICAL / CHEMICAL HAZARDS

No significant hazards.

HEALTH HAZARDS

Associated dust may be irritating to eyes, mouth and throat.

ENVIRONMENTAL HAZARDS

No significant hazards.

SECTION 3

COMPOSITION / INFORMATION ON INGREDIENTS

The product consists entirely of pelleted hop cones of the cultivated hop plant *Humulus lupulus*. Many different varieties.



Product Name: T-90 Hop Pellets
Revision Date: 07/28/2021

Page 2 of 6

SECTION 4	FIRST AID MEASURES
------------------	---------------------------

INHALATION

Move to fresh air

SKIN CONTACT

Brush off excess material and wash skin thoroughly with soap and water.

EYE CONTACT

Flood the eye with plenty of water. If any symptoms persist obtain medical attention.

INGESTION

Drink large amounts of water to dilute. Vomiting may occur but should not be induced. Obtain medical attention if symptoms persist.

INFORMATION FOR DOCTOR

Treatment – Symptomatic treatment.

SECTION 5	FIRE FIGHTING MEASURES
------------------	-------------------------------

EXTINGUISHING MEDIA

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Use firefighting measures that suit the environment.

FIRE FIGHTING

Special hazards caused by the material, its products of combustion or resulting gases:

Dangerous decomposition product see chapter 10: stability and reactivity

Protective equipment: Wear self-contained respiratory protective device.

Additional information: Dispose of fire debris and contaminated firefighting water in accordance with official regulations. Collect contaminated firefighting water separately. It must not enter the sewage system.

SECTION 6	ACCIDENTAL RELEASE MEASURES
------------------	------------------------------------

Person-related safety precautions: Wear protective clothing. Ensure adequate ventilation. Use respiratory protective device against the effects of fumes/dust/aerosol.

Measures for environmental protection: Do not discharge onto the ground or into watercourses.

Measures for cleaning/collecting: Pick up mechanically. Avoid dust formation absolutely. If necessary pick up with a tested and approved industrial vacuum cleaner. Send for recovery or disposal in suitable receptacles.

SECTION 7	HANDLING AND STORAGE
------------------	-----------------------------

HANDLING

Precautions for safe handling: Avoid generating excessive dust. Avoid excessive contact with product. Use appropriate protective clothing as indicated in Section 8. Wash hands after use.

Information about protection against explosions and fires: Dust can combine with air to form an explosive mixture. Keep ignition sources away - Do not smoke. Protect against electrostatic charges. Never allow Cone Hops to become wet as self-ignition may occur.

STORAGE

Conditions for Safe Storage:

To guarantee quality avoid heat, moisture and strong odors during storage. Pellets should not be exposed to temperatures above 20°C (68°F) since it is possible that gases are formed from hop constituents. The resulting pressure increase may cause bursting of the foils. Consequently the pellets will be exposed to air and oxidation resulting in a considerable deterioration of quality. Suitable storage containers are thick gauge laminated foil bags, stainless steel and lacquered mild steel

Requirements to be met by storerooms and receptacles: Store cool and dry.

Recommended Storage:

Maximum storage temperature: 5° C (41°F)

Minimum storage temperature: 0° C (32°F)

Storage time: Up to 2 years when stored correctly

Storage class: 11 Combustible solids

Information about storage in one common storage facility: Not required.

Further information about storage conditions: Keep receptacle tightly sealed.

Specific End Uses:

The substance is manufactured for use as a food ingredient and for such uses is not subject to registration via REACH (Regulation (EC) No.1907/2006). It should be used in accordance with applicable food legislation such as FSMA.

SECTION 8

EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide adequate ventilation.

PERSONAL PROTECTION

Eye Protection: If in danger or generating dust, wear goggles.

Hand Protection: Gloves possible (not mandatory)

Skin Protection: Gloves possible (not mandatory)

Body Protection: Protective work clothing

Respiratory Protection: If in danger of generating dust, wear a facemask.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Always wash hands before returning to work. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

GENERAL INFORMATION

Form: Pellets
Color: Green
Odor: Characteristic

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Appearance: Pelleted powder; various shades of green
Odor: Characteristic, typical hoppy, depends on variety
Odor Threshold: No data available
pH: No data available
Melting Point: No data available
Boiling Point: No data available
Flash Point: No data available
Evaporation Rate: No data available
Flammability: No data available
Upper/Lower Flammability: No data available
Vapor Pressure: No data available
Vapor Density: No data available
Density: 450 – 700 kg.m-3
Solubility in Water: Slightly soluble in water
Partition Coefficient: No data available
Auto Ignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity at 20°C: No data available
Explosive properties: No data available
Oxidizing properties: No data available
Self-igniting: Product is not self-igniting.

Danger of explosion: Product is not explosive. However, formation of explosive air/dust mixtures is possible.

SECTION 10

STABILITY AND REACTIVITY

Reactivity: No reactivity hazards known

Chemical Stability: Stable if stored in accordance with chapter 7

Possibility of Hazardous Reactions: None known

Incompatible Materials: None known

Hazardous Decomposition Products: None known

CONDITIONS TO AVOID:

Thermal decomposition: Decomposition of alpha acids can be as high as 50 % or more per annum depending upon variety, crop year and storage conditions. Conditions to be avoided: see chapter 7

Dangerous reactions: As the product is supplied it is not capable of dust explosion; however, the risk of dust explosion cannot be excluded completely if the atmosphere is enriched with fine dust. Therefore avoid formation of dust!



Product Name: T-90 Hop Pellets
Revision Date: 07/28/2021

Page 5 of 6

Dangerous products of decomposition: In the case of fire or at high temperatures the formation of the following decomposition products is possible. Carbon monoxide and carbon dioxide

SECTION 11 TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

Acute toxicity: Hops and hop extracts are generally recognized as safe (GRAS) for their intended use in accordance with US FDA regulation, 21 CFR 182.20. Supported by a long history of safe use in brewing.

LD/LC50 values that are relevant for classification: No toxicity data are available for the product itself.

PRIMARY IRRITANT EFFECT:

On the skin: Not determined

On the eye: Eye irritation is possible after mechanical influence (dust).

Sensitization: No sensitizing effects known.

Germ Cell Mutagenicity: No data available

Carcinogenicity: No data available

Reproductive Toxicity: No data available

STOT-Single Exposure: No data available

STOT-Repeated Exposure: No data available

Aspiration Hazard: No data available

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicology effects:

Aquatic toxicity: Presently there are no ecotoxicological values available.

General notes: Slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13 DISPOSAL CONSIDERATIONS

Product disposal: Dispose in accordance with all applicable local and national regulations.

Container disposal: Labels should not be removed from containers until they have been cleaned. Contaminated containers should not be treated as household waste. Containers should be cleaned using appropriate methods and then re-used or disposed of by landfill or incineration as appropriate.

SECTION 14 TRANSPORT INFORMATION

Land:

ADR/RID class (cross-border): Not a hazardous good according to the regulation.

Domestic (D.O.T): Not a hazardous good according to the regulation.

Water:

IMDG Class: Not a hazardous good according to the regulation.

Marine pollutant: Not a hazardous good according to the regulation.

Air:

ICAO/IATA Class: Not a hazardous good according to the regulation.



Product Name: T-90 Hop Pellets
Revision Date: 07/28/2021

Page 6 of 6

SECTION 15

REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: This material is not considered hazardous in accordance with OSHA HazCom 2012, 29 CFR 1910.1200.b.5.iii.

FDA: Hops, Hop Pellets and hop extracts are generally recognized as safe (GRAS) for their intended use in accordance with US FDA regulation, 21 CFR 182.20.

SECTION 16

OTHER INFORMATION

The information in this safety data sheet is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on our present knowledge and should be used only as a supplement to information already in your possession concerning this product. It does not represent any guarantee of the properties of the product. The determination of whether and under what condition the product should be used is you.

Issue Date: July 28, 2021