



# Stabilized & Isomerized Hop Pellets

## MATERIAL SAFETY DATA SHEET

<b>Section I. PRODUCTS AND SUPPLIER</b>	
<b>Supplier's Name</b> S. S. Steiner, Inc. <b>or</b> Simon H. Steiner Hopfen GmbH <b>or</b> Steiner Hops Ltd.	<b>Emergency Telephone No.</b> USA: +1-509-453-4731 <b>or</b> Germany: +49-8751-8605-0 <b>or</b> UK: +44-1992-572331
<b>Address</b> 1 West Washington Avenue, Yakima, Washington 98903, USA <b>or</b> Auhofstrasse 18, 84048 Mainburg, Germany <b>or</b> 319A High Street, Epping, Essex CM16 4DA, United Kingdom	
<b>Product Name</b> Modified Hop Pellets	<b>Trade Name and Synonyms</b> Stabilized Hop Pellets, Isomerized Hop Pellets, Pre-isomerized Hop Pellets, Iso-Pellets
<b>CAS No(s).</b> Not available	
<b>Chemical Family</b> Natural product; not applicable	<b>Formula</b> Not applicable
<b>Section II. COMPONENTS</b>	
<b>Material or components</b>	<b>%</b>
Compressed and pelletised hop powder produced from many different varieties of cultivated <i>Humulus lupulus</i> containing cellulose, hop resins, hop essential oils; small amounts of Magnesium Oxide are added to facilitate the conversion of alpha acids to iso-alpha-acids.	Hop Powder typically 97-99%; MgO typically 1-3%
<b>Section III. PHYSICAL DATA</b>	
<b>Boiling Point °C (° F.)</b> Not applicable	<b>Specific Gravity (H<sub>2</sub>O = 1)</b> Not applicable
<b>Vapor Pressure (mm Hg.)</b> Not applicable	<b>Volatiles by volume (%)</b> Essential oils only typically 0.5-5.0%
<b>Vapor Density (AIR =1)</b> Not applicable	<b>Evaporation Rate ( Ether =1)</b> Not applicable
<b>Solubility in Water</b> Very slight	
<b>Appearance and Odor</b> Solid pellets approx. 6mm diameter x 10-15 mm length; Color – various shades of green depending on variety; Aroma – typical hoppy aroma varying in intensity.	



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Section IV. FIRE AND EXPLOSION HAZARD DATA			
Flash Point (Method used) Not applicable	Flammable Limits Not applicable	<u>Le</u> <sup>1</sup>	<u>Ue</u> <sup>f</sup>
Extinguishing Media Water, foam or CO <sub>2</sub> .			
Specific Fire Fighting Procedures None required.			
Unusual Fire and Explosion Hazards None known; very fine hop powdered hop dust can form explosive mixtures with air particularly in enclosed tanks or vessels.			
Section V. HEALTH HAZARD DATA			
Threshold Limit Value None known			
Effects of Exposure <u>Inhalation</u> Irritating dust may cause adverse reaction in sensitive individuals			
Emergency and First Aid Procedures None required.			
Section VI. SPILL OR LEAK PROCEDURES			
Normal procedures as for any non-hazardous agricultural product; bio-degradable and acceptable at landfill sites.			



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<b>Section VII. SPECIAL PROTECTION &amp; PRECAUTION INFORMATION</b>		
<b>Respiratory Protection (Specify type)</b> Dust masks are advisable, particularly if dust is generated.		
<b>Ventilation</b> Normal	<b>Local Exhaust</b> <u>Normal ventilation</u> Mechanical (General)	<b>Special</b> <hr/> <b>Other</b>
<b>Protective Gloves</b> Not applicable.	<b>Eye Protection</b> Not applicable.	
<b>Other Protective Equipment</b> Not applicable.		
<b>Precautions Taken in Handling and Storing</b> Store at ambient or cool temperature in unopened original packs. Use opened packs as soon as possible after opening.  Maximum storage temperature preferably less than 5°C (41°F)		
<b>Other Precautions</b> None known		
<b>Disclaimer</b> This MSDS is based on a limited review of files and standard toxicology handbooks. The information herein is supplied in good faith but without warranty of any kind. This information should be used only as a supplement to information already in your possession concerning this product and its use. The determination of whether and under what conditions your employees should handle and use the product is yours to make.		