

TYPE 90 HOP PELLETS SAFETY DATA SHEET

Products and Manufacturer		
Manufacturer's Name Hop Products Australia (HPA)	Telephone No + 61 3 6282 2000	Email info@hops.com.au
Address 446 Elizabeth Street, North Hobart, Tasmania 7000, Australia		
Chemical Name and Synonyms Pelletised, powdered hops	Trade Name and Synonyms Hop Pellets (Type 90), Kettle hops, kettle pellets	
Chemical Family Desired components include the hop bitter acids and essential oils		Formula N/A

Materials or Components		
Pelletised, powdered cones of the cultivated hop plant (<i>humulus lupulus</i>). Hop pellets are available from many varieties of hops. Used as an ingredient in the brewing of beers. This MSDS applies equally to all varieties.		
	Humulones (Alpha Acids)	Lupulones (Beta Acids)
CAS Number	26472-41-3	468-20-0

Physical Data	
Form Pelleted powder	Colour Various shades of green
Aroma Characteristic, typical hoppy, depends on variety	Density (kg/m³) 470 - 700
Boiling Point (°C) N/A	Specific Gravity (Water = 1) N/A
Vapour Pressure (mm Hg.) N/A	Volatile by Volume (%) Applicable only to the essential oil fraction which comprises 0.5 – 5.0%
Vapour Density (AIR = 1) N/A	Evaporation Rate (Water = 1) N/A
Solubility in Water Insoluble in water	pH N/A
Flash Point N/A	

Fire and Explosion Hazard Data

Extinguishing Media

Use a dry powder, foam or carbon dioxide. Keep containers and surrounding cool with water spray.

Unsuitable Extinguishing Media

Great care should be taken using water jet/spray.

Specific Fire Fighting Procedures

Fire fighters should wear self-contained positive pressure breathing apparatus.

Unusual Fire and Explosion Hazards

None known.

Health Hazard Data

Threshold Limit Value

None.

Effects of Overexposure

None known.

Main Hazards

None.

Oral Ingestion

Associated dust may be irritating to mouth and throat.

Eye Contact

Associated dust may be irritating to eyes.

Skin Contact

May cause skin irritation.

Emergency and First Aid Procedures

Eye Contact

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

Skin Contact

Brush of excess material and wash skin thoroughly with mild soap and water.

Inhalation

Move to fresh air.

Oral Ingestion

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

Accidental Spill or Leak Procedures
Personal Protection Wear appropriate protective clothing.
Environmental Precautions Do not allow product to enter drains, watercourses, or discharge onto the ground.
Steps To Be Taken In Case Material Is Released Or Spilled Normal clean-up procedures as for any agricultural commodity.
Waste Disposal Methods Biodegradable material acceptable at landfill sites.

Special Protection Information
Respiratory Protection (specify type) If any danger of generating dust use facemask.
Protective Gloves Normally not required
Eye Protection If in danger of generation dust use facemask or goggles.
Other Protective Equipment None.
Engineering Controls Provide adequate ventilation.

Handling and Storage
Storage Temperature 0-5°C (32-41°F). To guarantee quality avoid heat, moisture, strong odours 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 are exposed to air and oxidation takes place resulting in a considerable deterioration of quality. Suitable storage containers are thick gauge laminated foil bags, stainless steel and lacquered mild steel.
Stability and Reactivity Hop constituents oxidize in contact with air, no hazardous reactivity known. If originally sealed packages are stored at temperatures above 20°C (68°F), gas formation is possible. Combustion will generate oxides of carbon.
Toxological Information No data available. Supported by a long history of safe use in brewing and in accordance with US FDA 21 CFR 182.2, hop pellets and hop extracts are generally recognised as safe (GRAS).

Ecological Information The product is all natural and biodegradable. Not expected to bioaccumulate.											
Disposal Considerations Product Disposal – Dispose of 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.											
Transport Information <table border="0" style="width: 100%;"> <tr> <td style="width: 33%;">UN-No.</td> <td style="width: 33%;">RID</td> <td style="width: 33%;">Class</td> </tr> <tr> <td>Non-hazardous for transport.</td> <td>Non-hazardous for transport.</td> <td>Non-hazardous for transport.</td> </tr> <tr> <td colspan="2">Recommended Transport Conditions</td> <td>Quickest possible transport at temperatures below 20°C (68°F).</td> </tr> </table>			UN-No.	RID	Class	Non-hazardous for transport.	Non-hazardous for transport.	Non-hazardous for transport.	Recommended Transport Conditions		Quickest possible transport at temperatures below 20°C (68°F).
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Regulatory Information Labelling According to EC Directives <table border="0" style="width: 100%;"> <tr> <td style="width: 33%;">R-phrases</td> <td style="width: 33%;">S-phrases</td> <td style="width: 33%;">Einecs Listing</td> </tr> <tr> <td>N/A</td> <td>N/A</td> <td>Not listed.</td> </tr> </table>			R-phrases	S-phrases	Einecs Listing	N/A	N/A	Not listed.			
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Notice from Hop Products Australia

The information in this Material Data Safety Sheet is correct to the best of our knowledge. This information herein is furnished without warranty of any kind. This information should be used only as a supplement to information already in your possession concerning this product. The determination of whether and under what conditions the product should be used by your employees is yours to make. We do not accept any liability for loss, injury or damage that may result from its use.