



## BetaBio 45 (Potassium Salt Form)

### MATERIAL SAFETY DATA SHEET

Section I. PRODUCTS AND SUPPLIER	
<b>Supplier's Name</b> S. S. Steiner, Inc. or Simon H. Steiner Hopfen, GmbH or Steiner Hops Ltd.	<b>Emergency Telephone No.</b> USA: +1-509-453-4731 or Germany: +49-8751-8605-0 UK: +44-1992-572331
<b>Address</b> 1 West Washington Avenue, Yakima, Washington 98903, USA or Auhofstrasse 18, 84048 Mainburg, Germany or 319A High Street, Epping, Essex CM16 4DA, United Kingdom	
<b>Product Name</b> Beta – 45% in PG (Potassium Salt Form)	<b>Trade Name and Synonyms</b> BetaBio 45
<b>CAS No(s).</b> 57-55-6 (Propylene Glycol) 468-28-0 (Lupulone) 468-27-9 (Colupulone)	<b>Formula</b> CH <sub>2</sub> (OH)-CH(OH)-CH <sub>3</sub> (Propylene Glycol) Mostly KC <sub>25</sub> H <sub>35</sub> O <sub>4</sub> & KC <sub>26</sub> H <sub>37</sub> O <sub>4</sub> (β-acids)
<b>Chemical Family</b> Modified hop extract in organic solvent.	<b>Molecular Weight</b> 76.1 (Propylene Glycol) Mostly 437 & 451 (K salt β-acids)
Section II. HAZARDOUS COMPONENTS	
<b>Material or components</b>	<b>%</b>
A slightly alkaline solution in propylene glycol of the potassium salts of naturally occurring β-acids obtained from CO <sub>2</sub> extract of hops. Contains mostly the co-, n-, & ad- homologs of the β-acids. Contains some water (8 - 22%).	45% β-acids
Section III. PHYSICAL DATA	
<b>Boiling Point °C (°F.)</b> Approximately 187°C (369°F)	<b>Specific Gravity (H<sub>2</sub>O = 1)</b> 1.08
<b>Vapor Pressure (mm Hg.)</b> 0.1 @ 20°C	<b>Volatiles by volume (%)</b> Not applicable
<b>Vapor Density (AIR =1)</b> Approx. 2.6	<b>Evaporation Rate ( Ether =1)</b> Slight
<b>Solubility in Water</b> Partially miscible	<b>Viscosity (@ 20°C)</b> c. 300 cP
<b>Appearance and Odor</b> A dark brown, sometimes slightly hazy, viscous liquid; slight hoppy aroma.	



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<b>Section IV. FIRE AND EXPLOSION HAZARD DATA</b>			
<b>Flash Point (Method used)</b> Not known; believed > 90°C (194°F) (CC)	<b>Flammable Limits</b> Not known	<b>Le<sup>1</sup></b>	<b>Ue<sup>f</sup></b>
<b>Extinguishing Media</b> Water, CO <sub>2</sub> , Dry Powder, Foam			
<b>Specific Fire Fighting Procedures</b> Wear self-contained breathing apparatus			
<b>Unusual Fire and Explosion Hazards</b> None known			
<b>Section V. HEALTH HAZARD DATA</b>			
<b>Threshold Limit Value</b> Not known			
<b>Effects of Exposure</b> <u>Oral Ingestion</u> : Not known. Ingestion of large amounts may be dangerous. <u>Eye contact</u> : Assume severe irritant; may cause corneal inflammation. <u>Skin contact</u> : Prolonged contact may cause dermatitis in some individuals.			
<b>Emergency and First Aid Procedures</b> <u>Eye contact</u> : Wash with copious amounts of water; seek medical attention. <u>Skin contact</u> : Remove with proprietary skin cleanser or warm soapy water.			
<b>Section VI. SPILL OR LEAK PROCEDURES</b>			
Apply commercial absorbents to spill comparable to clean-up of lubricating oil. Scoop/shovel material into disposal container. Flush area with hot water and detergent to remove final traces.			



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<b>Section VII. SPECIAL PROTECTION &amp; PRECAUTION INFORMATION</b>		
<b>Respiratory Protection (Specify type)</b> None required for normal handling.		
<b>Ventilation</b> Normally none required.	<b>Local Exhaust</b> <u>Normal ventilation</u> Mechanical (General)	<b>Special</b> _____ <b>Other</b>
<b>Protective Gloves</b> Recommended cloth or rubber gloves.	<b>Eye Protection</b> Use protective goggles or safety glasses.	
<b>Other Protective Equipment</b> Use of low-grade protective clothing (e.g. rubber apron) recommended.		
<b>Precautions Taken in Handling and Storing</b> Store at low or ambient temperature in unopened original containers. Use opened containers as soon as possible. Minimum storage temperature: -5°C (23°F). Maximum storage temperature: 30°C (86°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.		