

MATERIAL SAFETY DATA SHEET

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SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: YC-HopAroma
CHEMICAL NAME: Resin concentrate of lupulones and essential hop oils
CHEMICAL FAMILY: Beta Acid Oil Concentrate

SECTION II - MATERIAL or COMPONENTS

COMPOSITION: A solid or resinous phase (pH 8.5-11) of beta acids, oils and uncharacterized resins produced by CO2 extraction.
Concentration of the beta acids is typically between 35-55% w/w.
Concentration of the hop oils is typically between 10-15% v/w.

HAZARDOUS COMPONENTS: Not Applicable

Resin Concentrate from a Single Product (i.e. Hop Acid)

SECTION III - PHYSICAL DATA

BOILING POINT: > 100°C
FREEZING POINT: -2°C
VAPOUR PRESSURE: Not Applicable
VAPOUR DENSITY: Not Applicable
SOLUBILITY IN WATER: Slightly
APPEARANCE & ODOUR: Yellow, green or brown resin concentrate with a pungent odor.
SPECIFIC GRAVITY: 0.95-1.05
PERCENT VOLATILE by VOLUME: < 15%
EVAPORATION RATE: < 1 (as aqueous solution)

SECTION IV - FIRE & EXPLOSION

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| FLASH POINT: | Not Applicable |
| EXTINGUISHING MEDIA: | CO2 |
| SPECIAL FIRE FIGHTING PROCEDURES: | None Required |
| UNUSUAL FIRE & EXPLOSION HAZARDS: | None |
| HANDLING: | Avoid exposure of hop aroma product to high temperatures (> 50°C) if it has been admixed to a solid support medium. Hop oil, when on a loose, dry, solid supportive medium, is known to auto-oxidize, creating conditions for spontaneous combustion. This can happen at temperatures 0°C. Rags, paper trash, and clothing that have been contaminated with hop oil should be stored in airtight cans prior to discard or laundering. |

SECTION V - HEALTH HAZARD DATA

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| THRESHOLD LIMIT VALUE: | Not Established |
| ORAL INGESTION: | Not applicable – Food product, very bitter therefore unpalatable. |
| EYE CONTACT: | May be a mild irritant. |
| SKIN CONTACT: | Prolonged contact could cause dermatitis in some individuals. |
| INHALATION: | Vapors generated during steam cleaning product spills may cause severe respiratory distress in some individuals. |

EMERGENCY FIRST AID:

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| ORAL INGESTION: | Not Applicable |
| EYE CONTACT: | Wash with copious amounts of water. Seek medical attention if irritation persists. |
| SKIN CONTACT: | Wash with warm, soapy water. Seek medical attention if irritation persists. Launder contaminated clothing before reuse. |
| INHALATION: | Remove affected person to fresh air. Administer oxygen if necessary. |

SECTION VI - SPILL or LEAK PROCEDURE

Steps to be taken in case material is released or spilled: Scoop/shovel spilled material into recovery container. Flush area with hot soapy water to remove final traces. Use adequate ventilation or a respirator if in a confined area.

SECTION VII - SPECIAL PROTECTION

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| PROTECTIVE GLOVES: | Rubber |
| EYE PROTECTION: | Safety Glasses |