1 PRODUCT AND COMPANY IDENTIFICATION

1.1 Trade Name (as labeled): Hops Total CO2 Extract
   Botanical Name: Humulus lupulus
   INCI Name: Humulus Lupulus (Hops) Extract
   Synonyms: N/A
   CAS No: 8060-28-4
   EINECS No: 232-504-3
   FEMA No: Not available

1.2 Product Use: Personal Care Formulations

1.3 Company Name: Natural Sourcing, LLC
   Company Address: 341 Christian Street, Oxford, CT 06478, USA
   Business Phone: (800) 340-0080
   Website: www.naturalsourcing.com
   Email: info@naturalsourcing.com

1.4 Emergency Telephone Number: Chemtrec: (800) 262-8200
   Date of Current Revision: September 15, 2020
   Date of Last Revision: New

2 HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This product is a brown pasty substance with a hop-like odor.
Health Hazards: May be harmful if swallowed.
Flammability Hazards: This product is considered a non-flammable liquid with a flash point >100 °C.
Reactivity Hazards: None.
Environmental Hazards: Release of this product may cause adverse effects in the environment.

US DOT Symbols: Non-Regulated Material
CANADA (WHMIS) Symbols: None
EU and GHS Symbols:

Signal Word: Warning

2.1 EU Labeling and Classification:
This product does meet the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives.

Components Contributing to Classification: Hop, Humulus lupulus, ext.

2.2 Label Elements:
GHS Hazard Classifications: Acute toxicity: Acute Tox. 4
Hazard Statements: H302 May be harmful if swallowed
Prevention Statements: P270 Do not eat, drink or smoke when using this product.
Response Statements: P301 + P310 IF SWALLOWED: Immediately call a Poison Center/doctor if you feel unwell.
P330 Rinse mouth.
2.3 Health Hazards or Risks From Exposure:

Symptoms of Overexposure by Route of Exposure:

The most significant routes of overexposure for this product are by contact with skin or eyes. The symptoms of overexposure are described in the following paragraphs.

Acute:
- Inhalation: May be harmful if inhaled.
- Skin Contact: None expected when used under normal conditions.
- Eye Contact: None expected when used under normal conditions.
- Ingestion: None expected when used under normal conditions.

Chronic: No data available.

Target Organs:
- Acute: No data available.
- Chronic: No data available

3 COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Type of Product: Natural Sourcing CO2 Extracts

<table>
<thead>
<tr>
<th>Ingredients:</th>
<th>WT%</th>
<th>CAS No.</th>
<th>EINECS No.</th>
<th>Hazard Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humulus lupulus(Hops)Extract</td>
<td>100%</td>
<td>8060-28-4</td>
<td>232-504-3</td>
<td>Acute Tox. 4; H302</td>
</tr>
</tbody>
</table>

Note: All WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format. This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all the information required by the CPR, EU Directives and the Japanese Industrial Standard JIS Z 7250:2000

4 FIRST AID MEASURES

4.1 Description of First Aid Measures:

- **Eye Contact:** If product enters the eyes, flush with plenty of water or eye wash solution for several minutes. Seek medical attention if irritation persists.
- **Skin Contact:** Wash skin thoroughly with soap and water after handling. Seek medical attention if irritation develops and persists.
- **Inhalation:** If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention.
- **Ingestion:** If product is swallowed, call physician or poison center if you feel unwell. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or SDS with the victim to the health professional.
- **Medical Conditions Generally Aggravated by Exposure:** No data available

4.2 Symptoms and Effects Both Acute and Delayed: None expected under normal conditions of use.

4.3 Recommendations to Physicians: Treat symptoms and eliminate overexposure.

5 FIRE FIGHTING MEASURES

5.1 Fire Extinguishing Materials:

<table>
<thead>
<tr>
<th>Use the following fire extinguishing materials:</th>
<th>Water Spray:</th>
<th>Carbon Dioxide:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foam: Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Halon: Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Other: Any “A, B, C” Class</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.2 Unusual Fire and Explosion Hazards:

- Formation of dangerous fumes possible.
- Explosive Sensitivity to Mechanical Impact: No
5.3 Special Fire-Fighting Procedures:

- Incipient fire responders should wear eye protection.
- Structural firefighters must wear Self-Contained Breathing Apparatus (SCBA) and full protective equipment.
- Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray.
- If possible, prevent run-off water from entering storm drains, bodies of water, or other environmentally sensitive areas.

NFPA RATING SYSTEM

<table>
<thead>
<tr>
<th>Flammability</th>
<th>Health</th>
<th>Reactivity</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

HMIS RATING SYSTEM

<table>
<thead>
<tr>
<th>HEALTH HAZARD (BLUE)</th>
<th>FLAMMABILITY HAZARD (RED)</th>
<th>PHYSICAL HAZARD (YELLOW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

PROTECTIVE EQUIPMENT

- **EYES**: See Sect 8
- **RESPIRATORY**: See Sect 8
- **HANDS**: See Sect 8
- **BODY**: See Sect 8

Hazard Scale: 0 = Minimum  1 = Slight  2 = Moderate  3 = Serious  4 = Severe  * = Chronic Hazard

6 ACCIDENTAL RELEASE MEASURES (STEPS FOR SPILLS)

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:
Wear suitable personal protective equipment. Provide adequate ventilation. Wear breathing apparatus if exposed to vapors, dust, or aerosols.

6.2 Environmental Precautions:
Construct a dike to prevent spreading. Keep out of sewers, storm drains, surface waters, and soils.

6.3 Spill and Leak Response:

- **Small Spills**: Collect material via broom or mop. Place in tightly sealed containers for proper disposal.
- **Approach spill areas with caution.**
- **If liquid was introduced, create a dike or trench to contain material. Soak up with absorbent material such as clay, sand or other suitable non-reactive material.**

- **Large Spills**: Place in leak-proof containers. Seal tightly for proper disposal.
- **Dispose in accordance with U.S. Federal, State, and local hazardous waste disposal regulations and those of Canada and its Provinces, those of Australia, Japan and EU Member States (see Section 13, Disposal Considerations).**

7 HANDLING AND STORAGE

7.1 Precautions for Safe Handling:
Avoid contact with skin and eyes, inhalation of vapors and mists. When handling, do not eat, drink, or smoke. Wash thoroughly after handling. Keep away from sources of ignition.

7.2 Storage and Handling Practices:
Store in tightly closed containers in a cool, dry place away from light. Keep away from food, drink, and feed.

7.3 Specific Uses:
Personal care formulations.
8 EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Exposure Parameters:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS No.</th>
<th>OSHA PEL</th>
<th>NIOSH PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humulus lupulus(Hops) Extract</td>
<td>8060-28-4</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

8.2 Exposure Controls:

Ventilation and Engineering Controls: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

Respiratory Protection: Not required for properly ventilated areas. Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

Eye Protection: Safety glasses with EN 166 standard or goggles are recommended. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN166, Australian Standards, or relevant Japanese Standards.


Body Protection: Use body protect appropriate to task being performed. If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee’s feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties:

Appearance (Physical State and Color): This product is a brown pasty substance.

Odor: Hop-like

Odor Threshold: Slight

pH: Not Available

Melting/Freezing Point: Not Available

Boiling Point: Not Available

Flash Point: >100 °C closed cup

Evaporation Rate: Non-volatile

Flammability (Solid; Gas): Not Available

Upper/Lower Flammability or Explosion Limits: Not Available

Vapor Pressure (mm Hg @ 20°C (68°F)): Not Available

Vapor Density: Not Available

Relative Density: < 1.00 g/cm³ pycnometer @ 20 °C

Specific Gravity: Not Available

Solubility in Water: Insoluble in water
10 STABILITY AND REACTIVITY

10.1 Reactivity: Stable under conditions of normal storage and use.
10.2 Stability: Stable under conditions of normal storage and use.
10.3 Possibility of Hazardous Reactions: None known
10.4 Conditions to Avoid: Heat, open flame, sunlight.
10.5 Incompatible Substances: Oxidizing agents.
10.6 Hazardous Decomposition Products: None under conditions of normal storage and use.

11 TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects: No specific data available on this product.
   Oral ATE 500 mg/kg.
   Suspected Cancer Agent: Ingredients within this product are not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore are not considered to be, nor suspected to be, cancer-causing agents by these agencies.
   Irritancy: Skin: Not expected to be an irritant
   Sensitization to the Product: This product is not expected to cause skin sensitization.
   Reproductive Toxicity: No specific information is available concerning the effects of this product and its components on the human reproductive system.

12 ECOLOGICAL INFORMATION

12.1 Toxicity: No specific data available on this product.
12.2 Persistence and Degradability: No specific data available on this product.
12.3 Bioaccumulative Potential: No specific data available on this product.
12.4 Mobility in Soil: No specific data available on this product.
12.5 Results of PBT and vPvB Assessment: No specific data available on this product.
12.6 Other Adverse Effects: No specific data available on this product.
12.7 Water Endangerment Class: At present, there are no ecotoxicological assessments for this product.

13 DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan. Wash contaminated packaging with water/detergent before reutilization.
160305: Wastes not otherwise specified in the list.

14 TRANSPORTATION INFORMATION

US DOT, IATA, IMO, ADR:

14.1 U.S. Department of Transportation (DOT) Shipping Regulations:
This product is classified (per 49 CFR 172.101) by the U.S. Department of Transportation, as follows.
   UN Identification Number: None
   Proper Shipping Name: Not Regulated
   Hazard Class Number and Description: None
   Packing Group: None
   DOT Label(s) Required: None
   North American Emergency Response Guidebook Number: None
14.2 Environmental Hazards:

Marine Pollutant: The components of this product are not designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).

14.3 Special Precaution for User: None known

14.4 International Air Transport Association Shipping Information (IATA): This product is not considered as dangerous goods.

14.5 International Maritime Organization Shipping Information (IMO): This product is not considered as dangerous goods.

14.6 Transport in Bulk According to Annex II of Marpol 73/78 and IBC Code: European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR): This product is not considered by the United Nations Economic Commission for Europe to be dangerous goods.

15 REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations Specific for the Substance or Mixture:

United States Regulations:

U.S. SARA Reporting Requirements: The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act as follows: None

U.S. SARA Threshold Planning Quantity: There are no specific Threshold Planning Quantities for the components of this product. The default Federal SDS submission and inventory requirement filing threshold of 10,000 lbs (4,540 kg) therefore applies, per 40 CFR 370.20.

U.S. CERCLA Reportable Quantity: None

U.S. TSCA Inventory Status: The components of this product are listed on the TSCA Inventory or are exempted from listing.

Other U.S. Federal Regulations: None known

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): This product does not contain ingredients on the Proposition 65 Lists.

15.2 Canadian Regulations:

Canadian DSL/NDSL Inventory Status: Components are DSL Listed, NDSL Listed and/or are exempt from listing

Other Canadian Regulations: Not applicable

Canadian Environmental Protection Act (CEPA) Priorities Substances Lists: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by those regulations.

Canadian WHMIS Classification and Symbols: This product is classified per WHMIS Controlled Product Regulations.

15.3 European Economic Community Information:

This product meets the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives. See Section 2 for Details.

Chemical Safety Assessment: No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

Water Contaminating Class (D): 1 - Slightly water contaminating.

15.4 Australian Information for Product:

Components of this product are listed on the International Chemical Inventory list.

15.5 Japanese Information for Product:

Japanese Minister of International Trade and Industry (MITI) Status: The components of this product are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.
15.6 International Chemical Inventories:
Listing of the components on individual country Chemical Inventories is as follows:
- Australian Inventory of Chemical Substances (AICS): Listed
- Korean Existing Chemicals List (ECL): Listed
- Japanese Existing & New Chemical Substances Inventory (ENCS): Listed
- Philippines Inventory of Chemicals and Chemical Substances (PICCS): Listed
- U.S. TSCA: Listed

16 ADDITIONAL INFORMATION

Prepared By: Natural Sourcing
Date of Printing: September 15, 2020

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of the need that information is current, applicable and suited to the circumstances of use. This safety sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. Natural Sourcing, LLC. assumes no responsibility for injury to vendee or third party person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, Natural Sourcing, LLC assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

END OF SDS SHEET