

PRODUCT NAME: **CONDENSED DISTILLERS SOLUBLES (SYRUP)** Page 1 of 6

MSDS NO: **SYR-1** EFFECTIVE DATE: February 1, 2011

MANUFACTURED BY: **Greenfield Ethanol, Commercial Alcohols**  
 Bruce Energy Centre 275 Bloomfield Road 3300 boulevard Marie-Victorin 2 Chelsea Lane  
 4th Concession Chatham, Varennes, Quebec Brampton, Ontario  
 Tiverton, Ontario Ontario J3X 1P7 L6T 3Y4  
 N0G 2T0 N7M 5J5

**EMERGENCY PHONE NUMBER: CANUTEC (613) 996-6666**  
 NON-EMERGENCY INFORMATION PHONE NUMBER: (905) 790-7500

**TRANSPORTATION**

|                          |                |                    |                |             |                |
|--------------------------|----------------|--------------------|----------------|-------------|----------------|
| <b>PRIMARY CLASS:</b>    | NOT APPLICABLE | <b>CLASS NAME:</b> | NOT APPLICABLE | <b>UN#:</b> | NOT APPLICABLE |
| <b>SUBSIDIARY CLASS:</b> | NONE           |                    |                |             |                |
| <b>SHIPPING NAME:</b>    | NOT APPLICABLE |                    |                |             |                |

**I. EMERGENCY AND FIRST AID PROCEDURE**

|                                  |  |
|----------------------------------|--|
| <b><u>INGESTION</u></b>          | <ul style="list-style-type: none"> <li>It is unlikely that an acute hazard would be posed from ingestion of this product.</li> <li>Never give anything by mouth if victim is rapidly losing consciousness or is unconscious or convulsing.</li> <li>DO NOT INDUCE VOMITING.</li> <li>Have victim drink about 250 ml (8 oz) of water to dilute material in stomach.</li> <li>If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration.</li> <li>Seek medical attention immediately.</li> </ul> |
| <b><u>SKIN</u></b>               | <ul style="list-style-type: none"> <li>Fibers may mildly irritate skin.</li> <li>Flush contaminated area with water for at least 20 minutes.</li> <li>Remove contaminated clothing under running water.</li> <li>Completely decontaminate clothing before re-use, or discard.</li> <li>If irritation occurs seek medical attention.</li> </ul>   |
| <b><u>INHALATION</u></b>         | <ul style="list-style-type: none"> <li>Dust from this product is categorized as a nuisance particulate.</li> <li>May cause irritation upon respiration.</li> <li>Remove victim to fresh air.</li> </ul>  |
| <b><u>EYES</u></b>               | <ul style="list-style-type: none"> <li>Dust may cause eye irritation.</li> <li>Immediately flush eyes with water for at least 10 minutes, holding the eyelids open.</li> <li>Seek medical attention.</li> </ul>  |
| <b><u>NOTES TO PHYSICIAN</u></b> | <ul style="list-style-type: none"> <li>Condensed distillers solubles are an animal feed product. Health effects upon exposure or ingestion are expected to be minimal.</li> </ul>  |

THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BASED UPON DATA BELIEVED TO BE CORRECT. HOWEVER, NO GUARANTEE OR WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, IS MADE WITH RESPECT TO INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN.

PRODUCT NAME: **CONDENSED DISTILLERS SOLUBLES (SYRUP)** Page 2 of 6  
 MSDS NO: **SYR-1** EFFECTIVE DATE: February 1, 2011

**II. FIRE AND EXPLOSION HAZARD DATA**

|  |                                   |               |                         |                |                 |                |                |
|--|-----------------------------------|---------------|-------------------------|----------------|-----------------|----------------|----------------|
| <b><u>FLASH POINT, °C</u></b>                    | • NOT APPLICABLE.                 |               |                         |                |                 |                |                |
| <b><u>OTHER IMPORTANT DATA</u></b>               | COMPONENT                         | % W/W         | FLAMMABLE LIMITS, % V/V |                | VAPOUR PRESSURE | VAPOUR DENSITY | AUTOIGNITION   |
|  |                                   |               | LOWER                   | UPPER          | KPA AT 20°C     | (AIR = 1)      | POINT, °C      |
|  | (1) Condensed distillers solubles | 30-40 approx. | Not applicable          | Not applicable | Not applicable  | Not applicable | Not applicable |
|  | Water                             | remainder     |                         |                |                 |                |                |
| <b><u>EXTINGUISHING MEDIA</u></b>                | • Not flammable or combustible.   |               |                         |                |                 |                |                |
| <b><u>SPECIAL FIREFIGHTING PROCEDURES</u></b>    | • None.                           |               |                         |                |                 |                |                |
| <b><u>UNUSUAL FIRE AND EXPLOSION HAZARDS</u></b> | • None                            |               |                         |                |                 |                |                |

**III. IDENTIFICATION**

|                             |   |                                |                         |
|-----------------------------|---|--------------------------------|-------------------------|
| <b><u>CHEMICAL NAME</u></b> | CONDENSED DISTILLERS SOLUBLES.                    | <b><u>CHEMICAL FAMILY</u></b>  | PROTEINS, CARBOHYDRATES |
| <b><u>FORMULA</u></b>       | • Not applicable                                  | <b><u>MOLECULAR WEIGHT</u></b> | • Not applicable        |
| <b><u>SYNONYMS</u></b>      | • Syrup, distillers solubles, condensed solubles. |                                |                         |
| <b><u>USE</u></b>           | • Animal feed                                     |                                |                         |

PRODUCT NAME: **CONDENSED DISTILLERS SOLUBLES (SYRUP)** Page 3 of 6  
 MSDS NO: **SYR-1** EFFECTIVE DATE: February 1, 2011

**IV. PHYSICAL DATA**

|                                       |                    |
|---------------------------------------|--------------------|
| BOILING POINT, °C at 760mm Hg         | 100 deg. C approx. |
| FREEZING POINT, °C                    | 0 deg. C approx.   |
| DENSITY, kg/L @ 20°C                  | 1 to 1.4           |
| COEFFICIENT OF WATER/OIL DISTRIBUTION | Not applicable     |
| pH                                    | 3 to 4 approx.     |
| DISTILLATION RANGE, °C                | Not applicable     |
| MISCIBILITY IN WATER                  | Not applicable     |
| % VOLATILES BY VOLUME                 | 60-70              |
| EVAPORATION RATE (butyl acetate = 1)  | Not applicable     |

**APPEARANCE AND ODOUR**

- Yellowish brown solid substance with cooked corn odour.

**V. INGREDIENTS AND TOXICOLOGICAL DATA**

| INGREDIENT                        | % V/V         | CAS NO.        | TLV, ppm       | LC50, ppm/4h.  | LD50, mg/kg    | LD50, mg/kg    |
|-----------------------------------|---------------|----------------|----------------|----------------|----------------|----------------|
|                                   |               |                |                | RAT, INHAL.    | RAT, ORAL      | RABBIT, SKIN   |
| (1) Condensed distillers solubles | 30-40 approx. | Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| Water                             | Balance       |                |                |                |                |                |

**VI. WHMIS CLASSIFICATION AND SYNERGISTIC MATERIALS**

**WHMIS CLASSIFICATION**

- Dust from the product may be considered an eye irritant

**SYNERGISTIC MATERIALS**

- Not available

|               |  |                                  |
|---------------|--|----------------------------------|
| PRODUCT NAME: | <b>CONDENSED DISTILLERS SOLUBLES (SYRUP)</b> | Page 4 of 6                      |
| MSDS NO:      | <b>SYR-1</b>                                 | EFFECTIVE DATE: February 1, 2011 |

**VII. HEALTH HAZARD DATA**

|   |   |
|---|---|
| <b><u>INGESTION</u></b>                                     | <ul style="list-style-type: none"> <li>It is unlikely that an acute hazard would be posed from ingestion of this product.</li> </ul>                                      |
| <b><u>SKIN ABSORPTION</u></b>                               | <ul style="list-style-type: none"> <li>Not applicable .</li> </ul>  |
| <b><u>INHALATION</u></b>                                    | <ul style="list-style-type: none"> <li>Dust from this product may cause irritation upon respiration.</li> </ul>   |
| <b><u>SKIN CONTACT</u></b>                                  | <ul style="list-style-type: none"> <li>No evidence of significant adverse effects from available information.</li> <li>Fibres may cause minor skin irritation.</li> </ul> |
| <b><u>EYE CONTACT</u></b>                                   | <ul style="list-style-type: none"> <li>Airborne dust from this product may irritate eyes.</li> <li>Wear appropriate eye protection.</li> </ul>                            |
| <b><u>EFFECT OF REPEATED OVEREXPOSURE</u></b>               | <ul style="list-style-type: none"> <li>Not available.</li> </ul>  |
| <b><u>MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE</u></b> | <ul style="list-style-type: none"> <li>Not available.</li> </ul>  |
| <b><u>OTHER EFFECTS OF OVEREXPOSURE</u></b>                 | <ul style="list-style-type: none"> <li>Not available.</li> </ul>  |

|  |                                  |
|--|----------------------------------|
| PRODUCT NAME: <b>CONDENSED DISTILLERS SOLUBLES (SYRUP)</b> | Page 5 of 6                      |
| MSDS NO: <b>SYR-1</b>                                      | EFFECTIVE DATE: February 1, 2011 |

### VIII. REACTIVITY DATA

|  |  |
|--|--|
| <b><u>STABILITY</u></b>                                      | <ul style="list-style-type: none"> <li>This product is susceptible to degradation by growth of micro organisms on exposed surfaces over time.</li> </ul>   |
| <b><u>CONDITIONS TO AVOID</u></b>                            | <ul style="list-style-type: none"> <li>None.</li> </ul>  |
| <b><u>INCOMPATIBILITY</u></b>                                | <ul style="list-style-type: none"> <li>Not applicable.</li> </ul>  |
| <b><u>HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS</u></b> | <ul style="list-style-type: none"> <li>Burning can produce carbon monoxide and/or carbon dioxide.</li> </ul>   |
| <b><u>HAZARDOUS POLYMERIZATION</u></b>                       | <ul style="list-style-type: none"> <li>Will not occur</li> </ul>   |
| <b><u>CONDITIONS TO AVOID</u></b>                            | <ul style="list-style-type: none"> <li>Over time, microbial growth on exposed surfaces may cause the oxygen content in confined spaces to be reduced. Do not enter confined spaces containing this product without first verifying that the oxygen content is safe.</li> </ul> |

### IX. SPILL OR LEAK PROCEDURES

|                              |   |
|------------------------------|---|
| <b><u>SPILL</u></b>          | <ul style="list-style-type: none"> <li>Use conventional cleanup methods.</li> </ul>   |
| <b><u>WASTE DISPOSAL</u></b> | <ul style="list-style-type: none"> <li>Waste material should be disposed of using conventional methods, in compliance with all federal, provincial and local government regulations.</li> </ul> |

### X. SPECIAL PROTECTION INFORMATION

|  |  |
|--|--|
| <b><u>RESPIRATORY PROTECTION</u></b>     | <ul style="list-style-type: none"> <li>Not normally required.</li> <li>Over time, microbial growth on exposed surfaces may cause the oxygen content in confined spaces to be reduced. Do not enter confined spaces containing this product without first verifying that the oxygen content is safe.</li> </ul> |
| <b><u>VENTILATION</u></b>                | <ul style="list-style-type: none"> <li>Not normally required.</li> </ul>   |
| <b><u>PROTECTIVE GLOVES</u></b>          | <ul style="list-style-type: none"> <li>Generally not required.</li> <li>Neoprene, butyl or natural rubber.</li> </ul>  |
| <b><u>EYE PROTECTION</u></b>             | <ul style="list-style-type: none"> <li>Safety glasses or monogoggles when exposed to flying particles during handling.</li> </ul>  |
| <b><u>OTHER PROTECTIVE EQUIPMENT</u></b> | <ul style="list-style-type: none"> <li>Eye bath, safety shower and other protective equipment as required.</li> </ul>  |

|               |  |                                  |
|---------------|--|----------------------------------|
| PRODUCT NAME: | <b>CONDENSED DISTILLERS SOLUBLES (SYRUP)</b> | Page 6 of 6                      |
| MSDS NO:      | <b>SYR-1</b>                                 | EFFECTIVE DATE: February 1, 2011 |

### XI. SPECIAL PRECAUTIONS

|   |   |
|---|---|
| <b><u>PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING</u></b> | <ul style="list-style-type: none"><li>• Wear eye protection suitable to the hazard.</li><li>• Wash exposed skin thoroughly after handling.</li></ul>                    |
| <b><u>OTHER PRECAUTIONS</u></b>                               | <ul style="list-style-type: none"><li>• Good personal hygiene practices are suggested, such as abstaining from eating, drinking and smoking in the workplace.</li></ul> |

### XII. MSDS PREPARATION

|              |   |                        |
|--------------|---|------------------------|
| PREPARED BY  | Alcohol Quality Assurance, Technical Services and Regulatory Affairs Department |                        |
| PHONE NUMBER | (905) 790-7500  | DATE: February 1, 2011 |

GREENFIELD ETHANOL URGES EACH CUSTOMER OR RECIPIENT OF THIS MSDS TO STUDY IT CAREFULLY TO BECOME AWARE OF AND UNDERSTAND THE HAZARDS ASSOCIATED WITH THE PRODUCT. THE READER SHOULD CONSIDER CONSULTING REFERENCE WORKS OR INDIVIDUALS WHO ARE EXPERTS IN VENTILATION, TOXICOLOGY OR FIRE PREVENTION, AS NECESSARY OR APPROPRIATE TO USE AND UNDERSTAND THE DATA CONTAINED IN THIS MSDS.

TO PROMOTE SAFE USE AND HANDLING OF THIS PRODUCT, EACH CUSTOMER OR RECIPIENT SHOULD

- (1) NOTIFY EMPLOYEES, AGENTS, CONTRACTORS AND OTHERS WHO MAY USE THIS MATERIAL, OF THE INFORMATION IN THIS MSDS AND ANY OTHER INFORMATION REGARDING HAZARDS OR SAFETY,
- (2) FURNISH THIS SAME INFORMATION TO EACH CUSTOMER FOR THE PRODUCT, AND
- (3) REQUEST CUSTOMERS TO NOTIFY THEIR EMPLOYEES, CUSTOMERS, AND OTHER USERS OF THE PRODUCT OF THIS INFORMATION.