


# Notice of Alteration Form

Client File No. :	Environment Act Licence No. : 2698 R
Legal name of the Licencee: Husky Oil Operations Limited	
Name of the development: Minnedosa Ethanol Plant, Primary Corn Oil Separation System	
Category and Type of development per Classes of Development Regulation: Manufacturing Manufacturing and industrial plants	
Licencee Contact Person: Jocelan Lundquist Mailing address of the Licencee: HWY 16 East, Upgrader Road, Box 1710 City: Lloydminster Province: Saskatchewan Postal Code: S9V 1M6 Phone Number: (306) 825-1901 Fax: Email: Jocelan.Lundquist@huskyenergy.com	
Name of proponent contact person for purposes of the environmental assessment (e.g. consultant): Torey McLeish	
Phone: (403) 828-3418 Fax:	Mailing address: 707 8th Avenue SW, Calgary, AB, T2G 0K7
Email address: Torey.McLeish@huskyenergy.com	
Short Description of Alteration ( <i>max 90 characters</i> ): Minor alterations associated with installation of a Primary Corn Oil Separation System	
Alteration fee attached: Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/> If No, please explain:	
Date: 2021-04-01	Signature:  Printed name: Jocelan Lundquist
<p>A complete Notice of Alteration (<b>NoA</b>) consists of the following components:</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Cover letter</li> <li><input checked="" type="checkbox"/> Notice of Alteration Form</li> <li><input checked="" type="checkbox"/> 2 hard copies and 1 electronic copy of the NoA detailed report (see "<a href="#">Information Bulletin - Alteration to Developments with Environment Act Licences</a>")</li> <li><input checked="" type="checkbox"/> \$500 Application fee, if applicable (Cheque, payable to the Minister of Finance)</li> </ul>	
<p><b>Submit the complete NoA to:</b></p> <p>Director Environmental Approvals Branch Manitoba Sustainable Development 1007 Century Street Winnipeg, Manitoba R3H 0W4</p> <p><b>For more information:</b></p> <p>Phone: (204) 945-8321 Fax: (204) 945-5229 <a href="http://www.gov.mb.ca/sd/eal">http://www.gov.mb.ca/sd/eal</a></p>	
<b>Note: Per Section 14(3) of the Environment Act, Major Notices of Alteration must be filed through submission of an <a href="#">Environment Act Proposal Form</a> (see "<a href="#">Information Bulletin – Environment Act Proposal Report Guidelines</a>")</b>	

**Cover Letter and Environmental Assessment  
Proposed Alterations for the Corn Oil Project  
Minnedosa Ethanol Plant  
Manitoba Conservation Licence No. 2698 R**

March 2021



# MEP Corn Oil Project Notice of Alteration

## SENT ELECTRONICALLY

Manitoba Conservation and Climate  
Director  
Environmental Approvals Branch  
1007 Century Street  
Winnipeg, MB R3H 0W4

Attn: Director Shannon Kohler  
[Shannon.Kohler@gov.mb.ca](mailto:Shannon.Kohler@gov.mb.ca)

**Subject: Cover Letter and Environmental Assessment for the proposed Primary Corn Oil Separation System Project at the Husky Energy Marketing Partnership (a subsidiary of Cenovus Energy Inc.) Minnedosa Ethanol Plant**

In accordance to Section 43 of the Licence No. 2698 R issued by Manitoba Conservation to Husky Oil Limited (Husky) for the operation of the Minnedosa Ethanol Plant (MEP) located in Minnedosa, Manitoba, Cenovus hereby requests regulatory approval to complete the proposed facility alterations associated with the MEP Corn Oil Project as described below. Husky Energy Marketing Partnership is the successor in interest to named licensee, Husky Oil Limited. Husky Oil Operations Limited is the Managing Partner of Husky Energy Marketing Partnership and is authorized to enter into all commitments on behalf of the partnership.

Note that as of Jan 1, 2021, Husky Energy Marketing Partnership, Husky Oil Operations Limited (and all other Husky related operating entities) are subsidiaries of Cenovus Energy Inc. As the internal reorganization of Husky and Cenovus has not yet been completed we do not wish to update the licensee name at this time but anticipate doing so in the future. We understand that until that time, per *The Environment Act* Section 15(4), the licence is binding to a person who acquires control over the licenced development, regardless of the name on the issued licence.

### **Corn Oil Project Description**

As part of existing Minnedosa Ethanol Plant operations, ethanol is removed from fermented corn slurry (beer) in the distillation process. Downstream of distillation once ethanol is removed, the spent corn slurry (whole stillage) is processed through a centrifuge to separate the solids (wet cake) from the liquids (thin stillage). Wet cake discharged from the centrifuge is conveyed to the distiller's dry grain and solubles (DDGS) dryer to produce a dry livestock feed.

Thin stillage discharged from the centrifuge is processed through a four stage closed loop evaporator system to remove water. Water vapor from the evaporator is captured, condensed, and collected for re-use in the process. The remaining concentrated liquid discharged from the evaporator system is referred to as "syrup"

which contains carbohydrates, fats (corn oil), sugars, and proteins. The syrup is pumped to a storage tank and is then added to the distillers grains and run through the dryers.

The proposed Primary Corn Oil Separation System (PCOSS) will extract corn oil from the syrup by diverting the discharge from the first effect evaporation system to a specially designed stacked disc centrifuge to physically separate corn oil from the syrup. Corn oil will be piped to a product storage tank and the remaining liquids (deoiled syrup) will be returned to the syrup tank for continued processing per the normal process.

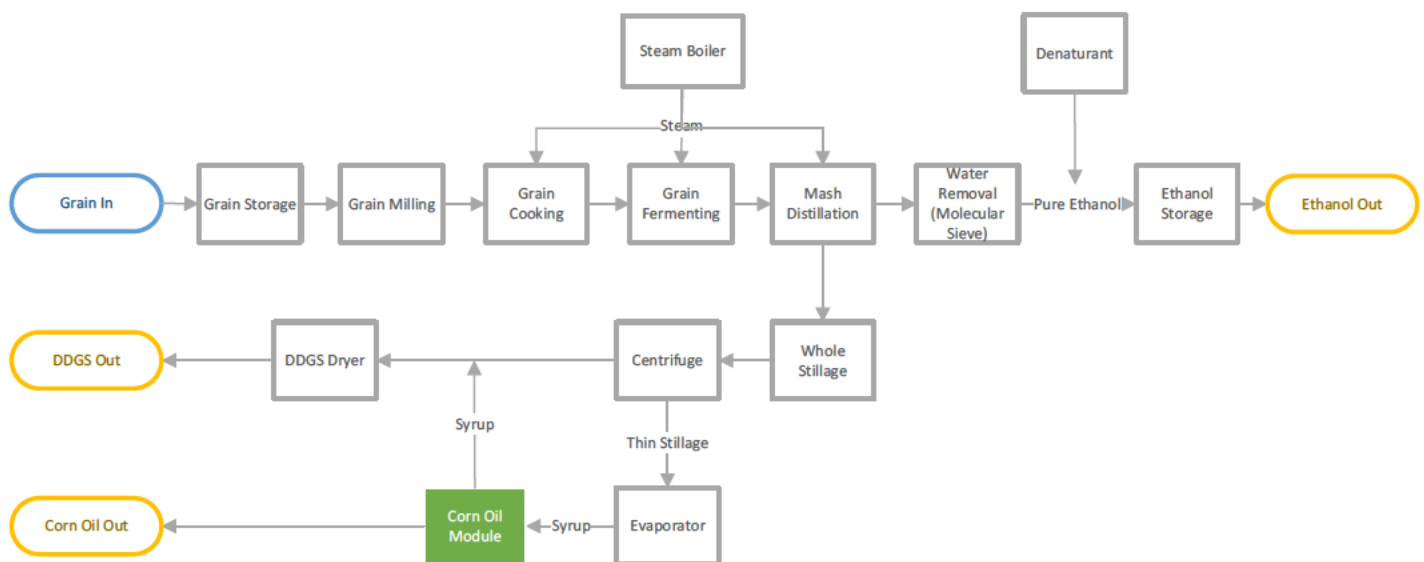


Figure 1: Process Overview

The PCOSS is comprised of a **heating step**, a **physical separation step**, and a **storage/load out step**. Each of these steps is described below:

### Heating Step (non-obstructing)

This heating step is required if the required min temp 181.4 F (83 C) is not obtained from the current evaporation system. Syrup from the discharge of the first effect of the evaporator system is pumped through a non-obstructing heater.

### Separation Step

Heated syrup is fed to a stacked disc centrifuge to separate and remove corn oil. The centrifuge separates corn oil from sludge and de-oiled syrup. Upon exiting the centrifuge, the corn oil is directed to the intermediate tanks and

the sludge & de-oiled syrup are recombined and returned to the syrup tank for continued processing as normal. The corn oil from the stacked disc centrifuge is discharged to intermediate tanks to allow additional retention time. During this time heavy solids to drop to the bottom of the intermediate tanks.

### **Storage/Load Out**

The recovered corn oil from the clean intermediate tank is continuously pumped to one of two 75 m<sup>3</sup> storage tanks. These are specially designed heat traced corn oil storage tanks located outside of the production building. The tanks will have secondary containment. See preliminary plot plan, Appendix A, and note that the dimensions of the secondary containment may be updated in the final plot plan, which can be submitted once finalized, if requested. Corn oil is pumped from the storage tanks to tank trucks for shipment to off-site customers.

### **Equipment Details**

The Corn Oil Extraction project includes the following systems (primary equipment):

1. Separation and Process Equipment (skidded, indoors):
  - i. Centrifugal separator
  - ii. Two (2) 3.4 m<sup>3</sup> stainless steel cone bottom insulated tanks
  - iii. Associated valves, pumps and control equipment
2. Oil Storage and Load-Out Systems (outdoor)
  - i. Two (2), heat traced 75 m<sup>3</sup>, stainless steel cone bottom atmospheric storage tanks, level sensors and controls
  - ii. Oil Storage Load-Out Pump
  - iii. Tank Truck Load-out Package complete with control panel and safety shut off device.

The proposed project is entirely on the existing developed footprint of the facility, and except for the storage tanks, is contained within the existing process building. Mitigation measures to protect against environmental effects will be similar to those already approved and in place at the facility.

### **Potential Environmental and Community Effects Considered**

Impacts to the following aspects were considered:

<b>Environmental Aspect</b>	<b>Potentially Impacted by Corn Oil Project?</b>
<b>Energy Use</b>	Yes (positively), discussed below
<b>Air Emissions</b>	No (slight positive)
<b>Water Usage</b>	No

<b>Wastewater</b>	No
<b>Stormwater</b>	No
<b>Solid Waste</b>	No
<b>Soil/Groundwater</b>	No
<b>Construction</b>	Negligible, equipment brought on skids. Installation primarily indoors.
<b>Chemicals</b>	Yes, discussed below
<b>Spill Containment</b>	Yes, discussed below
<b>Odour, Dust and Noise Control</b>	No
<b>Sewage</b>	No
<b>Heritage Resources</b>	No
<b>Wildlife and Land Protection</b>	No
<b>Decommissioning</b>	Negligible
<b>Traffic</b>	Yes, discussed below
<b>Socio-Economic Considerations</b>	Yes (positively), discussed below

## Environmental and Community Effects Analysis- Corn Oil Extraction Project

### **Energy Use:**

The proposed project will reduce the volume entering the DDGS dryer. The project will divert about 5,000 tonnes of corn oil (estimated annual production 5,600 m3) that won't need to be dried. This will reduce the amount of gas required to heat the dryer by approximately 700 e3m3 (26,104 GJ of energy), which will also reduce the emissions profile of the facility, and therefore improve the carbon intensity of the ethanol produced. This represents a reduction of approximately 1.7% of the total natural gas usage of the facility.

### **Chemicals:**

The corn oil (though already present in the existing process) in its concentrated form is a new chemical to the site. The project would also introduce food grade emulsifiers to enhance corn oil recovery. These food grade emulsifiers would be present in small amounts and would ultimately end up in the DDGS stream. Both the corn oil and the food grade emulsifiers are non-toxic and environmentally inert. See example SDS sheets, Appendix B. Corn oil is not soluble in water and the potential for dispersion in groundwater is low. However, vegetable oil spills in large quantities in aquatic ecosystems have been known to coat shoreline organisms and birds, resulting in death ([Fingas et al, 2001](#)). Spill prevention measures are outlined in the Spill Containment section below.

The corn oil has a flashpoint of approximately 254°C, much higher than other products on site, including ethanol. The product is considered a Class IIIB liquid

under the Manitoba Fire Code. Existing fire protection on site will be suitable to manage the fire hazard of the corn oil. The site maintains an inventory of firefighting foam, which has been evaluated and confirmed to be suitable and effective for the corn oil product.

### **Spill Containment:**

Though the chemicals being introduced are non-toxic, spill containment is proposed for the project as follows: the process skids and clarification tanks will be contained within the production building. The production building is contained and graded to a sump which would collect liquids in the event of a loss of containment. Fluids from the building sump are returned to the process. The two 75 m<sup>3</sup> storage tanks are proposed to be outdoors and will be equipped with secondary containment. The transfer point between tanks and trucks will be constructed of a concrete containment area (with collection sump) that the trucks will drive on to, similar to existing loading point containments on site. The loading process will be fully supervised, and the site itself is bermed and graded for surface water collection.

As mentioned in the Chemicals section above, the corn oil product is generally non-toxic but poses a potential threat to wildlife and aquatic ecosystems. The Little Saskatchewan River is near the site, but there are several barriers in place to protect this potential receptor, including primary containment, secondary containment, operator oversight (spill response: source control, containment and recovery), transfer area containment, and site surface drainage containment. Therefore, there are several highly reliable barriers to the threat and this hazard is considered mitigated.

### **Traffic:**

The proposed project would result in approximately five, 5,000 gal (18,927 L) tanker trucks per week coming to and leaving the site to load and distribute the sales corn oil. This traffic volume would be partially offset by an equivalent reduced volume of DDGS needing to be trucked off site. Corn oil is not reduced or evaporated in the dryer so the trucked out volume reduction would be directly equivalent to the corn oil volume produced. However, the DDGS trucks are typically larger (B-Trains with a load volume of approximately 17,000 gal) than the proposed corn oil sales trucks, so the project would result in a net increase of approximately four trucks per week (i.e. adding five small corn oil tankers but reducing one large B-Train).

Provincial Road 355 (PR 355), had a daily average of 1430 vehicle trips in 2018 (Manitoba Infrastructure and Transportation – Manitoba Highway Traffic Information System, Station 2190). The ~1 per day trip for sales corn oil will not coincide with the peak hours (e.g. morning and afternoon rush hours/ shift changes). Relative to the current traffic on the main access road to the site, the ~1 truck per day is negligible (~0.1% of flow).

### **Socio-Economic Considerations:**

The proposed project will improve the economics of the facility while lowering the carbon intensity. The facility locally employs ~45 full time employees as well as various contractors and tradespeople. The corn oil project will increase the annual tax revenue for the province. While the project is not specific regarding the future buyers of corn oil produced, much of the corn oil produced by this project will likely be used to create biodiesel. Biodiesel production (as with ethanol biofuel) is an important contributor to the provincial and federal climate plans, as mandated in the Manitoba *Biodiesel Mandate For Diesel Fuel Regulation* (147/2009) and the proposed Canada *Clean Fuel Standard*. Increased corn oil production is essential to supplying the inputs needed to meet these regulatory standards and reduce greenhouse gas emissions.

### **Conclusion**

The proposed project provides economic benefit to the community and province and reduces the greenhouse gas profile of the facility. It will produce a product that is essential to meeting provincial and federal climate regulations. The potential for environmental or community effects is minimal, and the facility has several highly reliable barriers in place to prevent and mitigate any potential unforeseen events.

If you have any questions, or if you require any further information, please do not hesitate to contact the undersigned.

Sincerely;



**Jocelan Lundquist, B.Sc., P.Ag.**  
Sr Environmental Advisor  
*Unit Contact Engineering*  
**Lloydminster Upgrader**  
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**Torey McLeish, P.Biol.**  
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*Regulatory Services*  
W 1.403.750.1308  
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Calgary, AB



## **References:**

Fingas, M., Fieldhouse, B., & Jokuty, P. (2001). [Vegetable oil spills : oil properties and behaviour](#). Proceedings of the 24 Arctic and Marine Oilspill Program (AMOP) Technical Seminar, including the 18 Technical Seminar on Chemical Spills (TSOCS) and the 3 Phytoremediation/Biotechnology Solutions for Spills (PHYTO), (p. 925). Canada: Environment Canada

## **Attachments:**

Attachment A: Proposed project preliminary plot plan

Attachment B: example SDS sheets for new products



**Section 1: IDENTIFICATION**

**Product Name:** Distillers Corn Oil (DCO)  
**Synonyms:** Not available.  
**Product Use:** Biodiesel / Renewable Diesel / Asphalt / Animal feed.  
**Restrictions on Use:** Not available.  
**Manufacturer/Supplier:** Husky Oil Marketing (Husky Oil Operations Ltd.)  
PO Box 6525 Station 'D'  
Calgary, Alberta  
**Phone Number:** 403-298-6111  
**Emergency Phone:** 403-262-2111  
**Date of Preparation of SDS:** January 19, 2021

**Section 2: HAZARD(S) IDENTIFICATION****GHS INFORMATION**

**Classification:** Not hazardous according to OSHA criteria (29 CFR 1910.1200).  
Not hazardous according to WHMIS 2015 criteria.

**LABEL ELEMENTS**

**Hazard** None.

**Pictogram(s):**

**Signal Word:** None.

**Hazard** Not applicable.

**Statements:**

**Precautionary Statements**

**Prevention:** Not applicable.

**Response:** Not applicable.

**Storage:** Not applicable.

**Disposal:** Not applicable.

**Hazards Not Otherwise Classified:** Not applicable.

**Ingredients with Unknown Toxicity:** None.

This material is not considered hazardous by the OSHA Hazard Communication Standard, (29 CFR 1910.1200).

This material is not considered hazardous by the Hazardous Products Regulations.

**Section 3: COMPOSITION / INFORMATION ON INGREDIENTS**

<b>Ingredient(s)</b>	<b>Common name / Synonyms</b>	<b>CAS No.</b>	<b>% wt./wt.</b>
Corn oil	Not available.	8001-30-7	80 - 100

**Section 4: FIRST-AID MEASURES**

- Inhalation:** If inhaled: Call a poison center or doctor if you feel unwell.  
**Acute and delayed symptoms and effects:** May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.
- Eye Contact:** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center or doctor if you feel unwell.  
**Acute and delayed symptoms and effects:** May cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.
- Skin Contact:** If on skin: Wash with plenty of water. Call a poison center or doctor if you feel unwell.  
**Acute and delayed symptoms and effects:** May cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching.
- Ingestion:** If swallowed: Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.  
**Acute and delayed symptoms and effects:** May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.
- General Advice:** In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).
- Note to Physicians:** Symptoms may not appear immediately.

**Section 5: FIRE-FIGHTING MEASURES****FLAMMABILITY AND EXPLOSION INFORMATION**

Not flammable or combustible by OSHA/WHMIS criteria. Material will burn if involved in a fire.

- Sensitivity to Mechanical Impact:** This material is not sensitive to mechanical impact.
- Sensitivity to Static Discharge:** This material is sensitive to static discharge at temperatures at or above the flash point.

**MEANS OF EXTINCTION**

**Suitable Extinguishing Media:** Small Fire: Dry chemical, CO<sub>2</sub>, water spray or regular foam.

Large Fire: Water spray, fog or regular foam. Move containers from fire area if you can do it without risk.

**Unsuitable Extinguishing Media:** Do not use straight streams.

**Products of Combustion:** Oxides of carbon.

**Protection of Firefighters:** Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may cause pollution. Wear positive pressure self-contained breathing apparatus

(SCBA). Structural firefighters' protective clothing will only provide limited protection.

**Section 6: ACCIDENTAL RELEASE MEASURES**

<b>Emergency Procedures:</b>	Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering.
<b>Personal Precautions:</b>	Do not touch or walk through spilled material. Use personal protection recommended in Section 8.
<b>Environmental Precautions:</b>	Keep out of drains, sewers, ditches, and waterways.
<b>Methods for Containment:</b>	Stop leak if without risk. Do not flush to sewer or allow to enter waterways.
<b>Methods for Clean-Up:</b>	Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
<b>Other Information:</b>	See Section 13 for disposal considerations.

**Section 7: HANDLING AND STORAGE****Handling:**

Do not swallow. Wash hands thoroughly after handling. See Section 8 for information on Personal Protective Equipment.

**Storage:**

Store away from incompatible materials. See Section 10 for information on Incompatible Materials. Keep out of the reach of children.

**Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION****Exposure Guidelines****Component**

Corn oil [CAS No. 8001-30-7]

**ACGIH:** No TLV established.

**OSHA:** 15 mg/m<sup>3</sup> (Total mist) (TWA), 5 mg/m<sup>3</sup> (Respirable fraction) (TWA); For Vegetable oil mist

**TLV:** Threshold Limit Value

**TWA:** Time-Weighted Average

**Engineering Controls:**

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapour, gas, etc.) below recommended exposure limits.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)****Eye/Face Protection:**

Wear safety glasses. Use equipment for eye protection that meets the standards referenced by CSA Standard

CAN/CSA-Z94.3 and OSHA regulations in 29 CFR 1910.133 for Personal Protective Equipment.

<b>Hand Protection:</b>	Wear protective gloves. Consult glove manufacturer specifications for further information.
<b>Skin and Body Protection:</b>	Wear protective clothing.
<b>Respiratory Protection:</b>	If engineering controls and ventilation are not sufficient to control exposure to below the allowable limits then an appropriate NIOSH/MSHA approved air-purifying respirator that meets the requirements of CSA Standard CAN/CSA-Z94.4, or self-contained breathing apparatus must be used. Supplied air breathing apparatus must be used when oxygen concentrations are low or if airborne concentrations exceed the limits of the air-purifying respirators.
<b>General Hygiene Considerations:</b>	Handle according to established industrial hygiene and safety practices. Consult a competent industrial hygienist to determine hazard potential and/or the PPE manufacturers to ensure adequate protection.

**Section 9: PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Light-reddish to orange liquid.
<b>Colour:</b>	Light-reddish to orange.
<b>Odour:</b>	Characteristic.
<b>Odour Threshold:</b>	Not available.
<b>Physical State:</b>	Liquid.
<b>pH:</b>	Not available.
<b>Melting Point / Freezing Point:</b>	-14 °C (6.8 °F)
<b>Initial Boiling Point:</b>	Not available.
<b>Boiling Range:</b>	Not available.
<b>Flash Point:</b>	254 °C (489.2 °F) (ASTM D93)
<b>Evaporation Rate:</b>	Not available.
<b>Flammability (solid, gas):</b>	Not applicable.
<b>Lower Flammability Limit:</b>	Not available.
<b>Upper Flammability Limit:</b>	Not available.
<b>Vapor Pressure:</b>	Not available.
<b>Vapor Density:</b>	Not available.
<b>Relative Density:</b>	Not available.
<b>Solubilities:</b>	Insoluble in water.



## Distillers Corn Oil (DCO)

Date of Preparation: January 19, 2021

### SAFETY DATA SHEET

**Partition Coefficient: n-Octanol/Water:** Not available.

**Auto-ignition Temperature:** 392 °C (737.6 °F)

**Decomposition Temperature:** Not available.

**Viscosity:** Not available.

**Percent Volatile, wt. %:** Not available.

**VOC content, wt. %:** Not available.

**Density:** Not available.

**Coefficient of Water/Oil Distribution:** Not available.

### Section 10: STABILITY AND REACTIVITY

**Reactivity:** Contact with incompatible materials. Exposure to heat.

**Chemical Stability:** Stable under normal storage conditions.

**Possibility of Hazardous Reactions:** None known.

**Conditions to Avoid:** Contact with incompatible materials. Exposure to heat.

**Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers.

**Hazardous Decomposition Products:** Not available.

### Section 11: TOXICOLOGICAL INFORMATION

#### EFFECTS OF ACUTE EXPOSURE

##### Product Toxicity

**Oral:** Not available.

**Dermal:** Not available.

**Inhalation:** Not available.

##### Component Toxicity

Component	CAS No.	LD <sub>50</sub> oral	LD <sub>50</sub> dermal	LC <sub>50</sub>
Corn oil	8001-30-7	> 100 mL/kg (rat)	Not available.	Not available.

**Likely Routes of Exposure:** Eye contact. Skin contact. Inhalation. Ingestion.

**Target Organs:** Skin. Eyes. Gastrointestinal tract. Respiratory system.

##### Symptoms (including delayed and immediate effects)

**Inhalation:** May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

**Eye:** May cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.



## Distillers Corn Oil (DCO)

Date of Preparation: January 19, 2021

### SAFETY DATA SHEET

**Skin:** May cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

**Ingestion:** May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

**Skin Sensitization:** Not available.

**Respiratory Sensitization:** Not available.

**Medical Conditions** Not available.

**Aggravated By Exposure:**

### EFFECTS OF CHRONIC EXPOSURE (from short and long-term exposure)

**Target Organs:** Skin. Eyes. Gastrointestinal tract. Respiratory system.

**Chronic Effects:** Prolonged or repeated contact may dry skin and cause irritation.

**Carcinogenicity:** This product does not contain any carcinogens or potential carcinogens above reportable thresholds as listed by ACGIH, IARC, OSHA, or NTP.

**Mutagenicity:** Not available.

**Reproductive Effects:** Not available.

#### Developmental Effects

**Teratogenicity:** Not available.

**Embryotoxicity:** Not available.

**Toxicologically Synergistic Materials:** Not available.

### Section 12: ECOLOGICAL INFORMATION

**Ecotoxicity:** Not available.

**Persistence / Degradability:** Not available.

**Bioaccumulation / Accumulation:** Not available.

**Mobility in Environment:** Not available.

**Other Adverse Effects:** Not available.

### Section 13: DISPOSAL CONSIDERATIONS

**Disposal Instructions:** Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.



**Section 14: TRANSPORT INFORMATION****U.S. Department of Transportation (DOT)**

**Proper Shipping Name:** Not regulated.  
**Class:** Not applicable.  
**UN Number:** Not applicable.  
**Packing Group:** Not applicable.  
**Label Code:** Not applicable.

**Canada Transportation of Dangerous Goods (TDG)**

**Proper Shipping Name:** Not regulated.  
**Class:** Not applicable.  
**UN Number:** Not applicable.  
**Packing Group:** Not applicable.  
**Label Code:** Not applicable.

**Section 15: REGULATORY INFORMATION****Chemical Inventories****US (TSCA)**

The components of this product are in compliance with the chemical notification requirements of TSCA.

**Canada (DSL)**

The components of this product are in compliance with the chemical notification requirements of the NSN Regulations under CEPA, 1999.

**Federal Regulations****United States**

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**SARA Title III**

No components are listed.

**State Regulations****Massachusetts**

US Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

No components are listed.



## Distillers Corn Oil (DCO)

Date of Preparation: January 19, 2021

### SAFETY DATA SHEET

#### New Jersey

US New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

No components are listed.

#### Pennsylvania

US Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

Component	CAS No.	RTK List
Corn oil	8001-30-7	Listed.

#### California

**California Prop 65:** This product does not contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

### Section 16: OTHER INFORMATION

#### Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for their own particular use.

**Date of Preparation of SDS:** January 19, 2021

**Version:** 1.0

**GHS SDS Prepared by:** Deerfoot Consulting Inc.

**Phone:** (403) 720-3700

# SAFETY DATA SHEET



## ASCENT™

Version	Product code(s):	Revision Date:	Date of first issue:	Print Date:
1.4	ASCENT™ 642, ASCENT™ 665, ASCENT™ 735, ASCENT™ 783, ASCENT™ 840	12/4/2019	01/28/2019	12/4/2019

### SECTION 1. IDENTIFICATION

Product name : ASCENT™

Manufacturer or supplier's details

Company name of supplier : TRUCENT

Address : 7400 Newman Blvd.  
Dexter, MI 48130 US

Telephone : (734) 426- 9015

Telefax : (734) 426- 9016

Emergency telephone : USA: 24 Hour Emergency Response Information Verisk/ 3E  
toll free: 1-800-451-8346; direct/international: +1(760) 602-8703.

Recommended use of the chemical and restrictions on use

Recommended use : De-emulsifier

### SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients : No hazardous ingredients

The specific chemical identity and/or exact percentage of composition for one or more ingredients has been withheld as a trade secret.

### SECTION 4. FIRST AID MEASURES

If inhaled : If breathed in, move person into fresh air.  
If symptoms persist, call a physician.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.  
If symptoms persist, call a physician.

In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

If swallowed : If large quantities of this material are swallowed, call a physician immediately.

Most important symptoms and effects, both acute and delayed : None known.

# SAFETY DATA SHEET



ASCENT™

Version	Product code(s):	Revision Date:	Date of first issue:	Print Date:
1.4	ASCENT™ 642, ASCENT™ 665, ASCENT™ 735, ASCENT™ 783, ASCENT™ 840	12/4/2019	01/28/2019	12/4/2019

## SECTION 5. FIRE-FIGHTING MEASURES

### Flammable properties

Flash point : >212 °F / 100 °C

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media : High volume water jet

Specific hazards during fire fighting : Do not use a solid water stream as it may scatter and spread fire.

Specific extinguishing methods : Standard procedure for chemical fires.

Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation.  
Use personal protective equipment.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material.  
Sweep up and shovel into suitable containers for disposal.

## SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage : Store in original container.  
Keep container tightly closed in a dry and well-ventilated place.

Materials to avoid : No special restrictions on storage with other products.

Further information on storage stability : Stable under recommended storage conditions.

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection

Remarks : For prolonged or repeated contact use protective gloves.

Eye protection : Safety glasses with side-shields

Skin and body protection : Impervious clothing

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : black

Odor : mild

Odor Threshold : No data available

pH : 7  
Method: 1%  
(as aqueous solution)

Melting point : No data available

Freezing point : No data available

Boiling point : No data available

Decomposition temperature : No data available

Initial boiling point and boiling range : No data available

Flash point : > 212 °F / 100 °C

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Self-ignition : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower : No data available

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Vapor pressure	: No data available
Relative vapor density	: No data available
Relative density	: No data available
Density	: No data available
Solubility(ies)	
Water solubility	: No data available
Solubility in other solvents	: not determined
Partition coefficient: n-octanol/water	: No data available
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Explosive properties	: Classification Code: No data available
Oxidizing properties	: No data available

## SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No data available
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: None known.
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	: In case of fire hazardous decomposition products may be produced such as: Carbon oxides

## SECTION 11. TOXICOLOGICAL INFORMATION

## Acute toxicity

Product:

Acute oral toxicity	: No data available:
Acute inhalation toxicity	: No data available:
Acute dermal toxicity	: No data available:

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## Skin corrosion/irritation

**Product:**

Remarks : No data available

## Serious eye damage/eye irritation

**Product:**

Remarks : No data available

## Respiratory or skin sensitization

**Product:**

Remarks : No data available

## Germ cell mutagenicity

**Product:**

Genotoxicity in vitro : Remarks: No data available

## Carcinogenicity

**Product:**

Carcinogenicity - Assessment : No data available

## STOT-single exposure

**Product:**

Assessment : No data available

## STOT-repeated exposure

**Product:**

Assessment : No data available

## Aspiration toxicity

**Product:**

No data available

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## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

**Product:**

Toxicity to fish :  
Remarks: No data available

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## Persistence and degradability

### Product:

Biodegradability : Remarks: No data available

## Bio accumulative potential

### Product:

Bioaccumulation : Remarks: No data available

## Mobility in soil

### Product:

Distribution among environmental compartments : Remarks: No data available

## Other adverse effects

### Product:

Additional ecological information : There is no data available for this product.

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## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Dispose of in accordance with local regulations.  
Contaminated packaging : Empty remaining contents.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.

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## SECTION 14. TRANSPORT INFORMATION

### International Regulations

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
Not applicable for product as supplied.

### Domestic regulation

### Special precautions for user

Remarks : Not regulated for transport in accordance with DOT, TDG, IMDG, and IATA regulations.

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## SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.



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SARA 311/312 Hazards : No SARA Hazards  
 SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

## US State Regulations

## Pennsylvania Right To Know

NJTSN 08306620-60370P

Proprietary

## New Jersey Right To Know

NJTSN 08306620-60370P

Proprietary

## California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

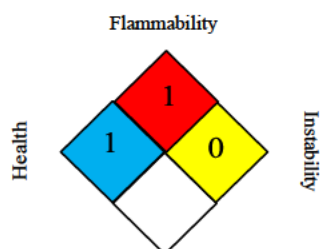
The ingredients of this product are reported in the following inventories:

TSCA : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

## SECTION 16. OTHER INFORMATION

## Further information

## NFPA:



## HMIS II:

HEALTH	1
FLAMMABILITY	1
REACTIVITY	0

0 = not significant, 1 = Slight,  
 2 = Moderate, 3 = High, 4 = Extreme,  
 \* = Chronic

## Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with

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x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and re-lease and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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