

1. IDENTIFICATION

PRODUCT NAME: Biofuel™ 3-3-2

SYNONIMOUS WITH: Corn Steepwater, Corn steep liquor, Condensed fermented corn extractives.

SUPPLIER IDENTIFICATION: 546 8th St SE BLDG A Unit 4B
 Loveland, CO 80537
 info@impellobio.com
 www.impellobio.com

EMERGENCY PHONE: 720-772-9767 8am – 4pm MST

USE OF THE SUBSTANCE/PREPARATION: Animal feed

2. HAZARD IDENTIFICATION

CLASSIFICATION: The product contains no substances which at their given concentration, are considered to be hazardous to health.

APPEARANCE: Tan – Brown **PHYSICAL STATE:** Liquid **ODOR:** Characteristic

The product is NOT classified as hazardous according to the criteria contained in the Hazard Communication Standard 29 CFR 1910.1200 (known as HCS 2012) or the Hazardous Products Regulations SOR/2015-17 (known as WHMIS 2015).

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMMON NAME: Corn Steepwater

CHEMICAL NAME	CAS NUMBER	% BY WEIGHT	NORTH AMERICAN SUBSTANCE HAZARD CLASS
Corn, steep liquor	66071-94-1	100%	None known

4. FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

INHALATION: Move to fresh air in case of accidental inhalation of vapours or decomposition products.

EYE CONTACT: Rinse thoroughly with plenty of water, also under the eyelids.

SKIN CONTACT: Wash off immediately with plenty of water.

INGESTION: Not for human consumption. Health injuries are not known or expected under normal use.

MOST IMPORTANT SYMPTOMS AND EFFECTS (BOTH ACUTE AND DELAYED)

INHALATION: Avoid breathing vapors or mists. Health injuries are not known or expected under normal use.

EYE CONTACT: Contact with eyes may cause irritation.

SKIN CONTACT: Prolonged skin contact may cause irritation. Contact with product at elevated temperatures can result in thermal burns.

INGESTION: Not for human consumption. Over exposure may cause: Gastrointestinal disturbance.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

NOTES TO PHYSICIAN: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

FLAMMABILITY PROPERTIES: Not applicable.

EXTINGUISH MEDIA

SUITABLE EXTINGUISHING MEDIA: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

UNSUITABLE EXTINGUISHING MEDIA: None known.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide (CO), Carbon dioxide (CO₂).

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: None known.

SENSITIVITY TO MECHANICAL IMPACT: No information available.

SENSITIVITY TO STATIC DISCHARGE: No information available.

ADVICE FOR FIRE-FIGHTERS

PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA



HEALTH: 0

FLAMMABILITY: 0

STABILITY AND REACTIVITY: 0

PHYSICAL HAZARD: None known.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTION AND PROTECTIVE EQUIPMENT: Ensure adequate ventilation.

ENVIRONMENTAL PRECAUTIONS: Prevent further leakage or spillage if safe to do so. Try to prevent the material from entering drains or water courses.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Ensure adequate ventilation.

CONDITIONS FOR SAFE STORAGE (INCLUDING INCOMPATIBILITIES): Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS

This product is not known to contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

BIOLOGICAL LIMIT VALUES

No biological limit values have been listed for the component(s) of this product.

APPROPRIATE ENGINEERING CONTROLS: Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

GENERAL HYGIENE CONSIDERATIONS: Handle in accordance with good industrial hygiene and safety practice.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION: Safety glasses with side-shields. If splashes are likely to occur, wear goggles.

SKIN AND BODY PROTECTION: Impervious gloves.

RESPIRATORY PROTECTION: In case of mist, spray or aerosol exposure wear suitable personal respiratory protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Tan – Brown

PHYSICAL STATE: Liquid

ODOR: Characteristic

ODOR THRESHOLD: No information available

pH: 3

FLASH POINT: No information available

AUTOIGNITION TEMPERATURE: No information available

BOILING POINT: Approx. 101 °C / 214 °F

MELTING/FREEZING POINT: No information available

DECOMPOSITION TEMPERATURE: No information available

OXIDIZING PROPERTIES: Not Determined

WATER SOLUBILITY: Soluble to partly soluble

EVAPORATION RATE: No information available

VAPOR PRESSURE: 17.5 mmHg

VAPOR DENSITY: No information available

SPECIFIC GRAVITY/RELATIVE DENSITY: 1.15-1.25 (H₂O=1)

PARTITION COEFFICIENT (N-OCTANOL/WATER): No information available

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.

POSSIBILITY OF HAZARDOUS REACTIONS: Hazardous polymerization does not occur.

CONDITIONS TO AVOID: None known

INCOMPATIBLE MATERIALS: No materials to be especially mentioned.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon oxides. Carbon monoxide (CO).

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY: Based on available data, no evidence of acute toxicity.

SKIN CORROSION/IRRITATION: Based on available data, the classification criteria are not met.

SERIOUS EYE DAMAGE/EYE IRRITATION: Based on available data, the classification criteria are not met.

RESPIRATORY OR SKIN SENSITISATION: Based on available data, the classification criteria are not met.

GERM CELL MUTAGENICITY: Based on available data, the classification criteria are not met.

CARCINOGENICITY: Based on available data, the classification criteria are not met.

REPRODUCTIVE TOXICITY: Based on available data, the classification criteria are not met.

STOT – SINGLE EXPOSURE: Based on available data, the classification criteria are not met.

STOT – REPEATED EXPOSURE: Based on available data, the classification criteria are not met.

ASPIRATION HAZARD: Based on available data, the classification criteria are not met.

POTENTIAL HEALTH EFFECTS

EYES: Contact with eyes may cause irritation.

SKIN: Prolonged skin contact may cause skin irritation. Contact with product at elevated temperatures can result in thermal burns.

INHALATION: Avoid breathing vapors or mists. Health injuries are not known or expected under normal use.

INGESTION: Not for human consumption. Over exposure may cause: Gastrointestinal disturbance.

12. ECOLOGICAL INFORMATION

ECOTOXICITY: Contains no substances known to be hazardous to the environment. Contains no substances known to be degradable in waste water treatment plants.

PERSISTENCE AND DEGRADABILITY: Biodegradable.

PBT AND VPVB ASSESSMENT: No information available.

MOBILITY: Partly soluble in water.

OTHER ADVERSE EFFECTS: Nothing specific known.

13. DISPOSAL CONSIDERATIONS

Whenever possible, as rules and regulations allow, please recycle or manage materials to minimize waste.

WASTE DISPOSAL METHODS: Dispose of in compliance with the laws and regulations pertaining to this product in your jurisdiction.

CONTAMINATED PACKAGING: Empty containers should be decontaminated and taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

DOMESTIC TRANSPORT REGULATIONS (USA): DOT Not regulated.

DOMESTIC TRANSPORT REGULATIONS (CANADA): TDG Not regulated.

DOMESTIC TRANSPORT REGULATIONS (MEXICO): MEX Not regulated.

INTERNATIONAL TRANSPORT REGULATIONS: ICAO Not regulated | IATA Not regulated | IMDG/IMO Not regulated

15. REGULATORY INFORMATION

INTERNATIONAL INVENTORIES

As animal feed, this product is exempted from the following inventories: U.S.A. (TSCA). When used as “feed” defined in the Canadian feeds Act 1995 and the Feeds Regulations (SOR/83-592), this product is exempted from the following inventory: Canada (DSL).

USA

FEDERAL REGULATIONS

OZONE DEPLETING SUBSTANCES:
No Class I or Class II material is known to be used in the manufacture of, or contained in, this product.

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product is not known to contain any chemicals which are subject to the reporting requirements of the Act or regulations contained in 40 CFR 372.

CERCLA/SARA 103-302
Sections 103-302 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product is not known to contain any chemicals which are subject to the reporting requirements of the Act or regulations contained in 40 CFR 103-302.

SARA 311/312 Hazardous Categorization
Refer to the OSHA hazard classification(s) provided in section 2 of this SDS.

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CLEAN AIR ACT, SECTION 112 HAZARDOUS AIR POLLUTANTS (HAPS) (SEE 40 CFR 63)
This product is not known to contain any HAPS.

15. REGULATORY INFORMATION (CONT.)

STATE REGULATIONS

STATE RIGHT-TO-KNOW

No known components subject to "Right-To-Know" legislation in the following States.

Chemical Name	Weight %	Massachusetts	Minnesota	New Jersey	Pennsylvania
Corn, steep liquor	100	No	No	No	No

CANADA

(NPRI) CANADIAN NATIONAL POLLUTANT RELEASE INVENTORY

No known component is listed on NPRI.

MEXICO

MEXICO - GRADE Minimum risk, Grade 0

16. OTHER INFORMATION

PREPARED BY: ADM Corn Processing

ORIGINAL PREPARATION DATE: 06-November-2009

REVISION DATE: 02-May-2017

REVISION NUMBER: 1

Abbreviations and acronyms

A1 - Known Human Carcinogen
 A2 - Suspected Human Carcinogen
 A3 - Animal Carcinogen
 A4 - Not classifiable as a human carcinogen
 ACGIH TLV - American Conference of Governmental Industrial Hygienists Threshold Limit Values
 CAS - Chemical Abstract Service
 Ceiling - Ceiling Limit Value: Concentrations that should never be exceeded at any given time (instantaneous)
 CHINA - Chinese Inventory of Existing Chemical Substances (China)
 CLP - Classification, Labelling and Packaging, Regulation (EC)1272/2008
 CSA - Chemical Safety Assessment
 CSR - Chemical Safety Report
 Delisted - Substances Delisted from Report on Carcinogens
 DNEL - Derived No Effect Level
 DOT - U.S. Department of Transportation
 DSL - Domestic Substance List (Canada)
 EC - European Commission
 EC No. - European Community number
 EC50 - Half maximal effective concentration
 EINECS - European Inventory of Existing Commercial Chemical Substances (EU)
 ELINCS - European List of Notified Chemical Substances (EU)
 ENCS - Existing and New Chemical Substances (Japan) / ISHL - Industrial Health and Safety Law (Japan)
 EPCRA - Emergency Planning and Community Right-to-Know Act of 1986 (USA)
 FOSFA - The Federation of Oils, Seeds and Fats Associations
 GHS - Globally Harmonized System of Classification and Labelling of Chemicals
 Group 1 - Carcinogenic to Humans
 Group 2A - Probably Carcinogenic to Humans
 Group 2B - Possibly Carcinogenic to Humans
 Group 3 - Not Classifiable
 IARC - International Agency for Research on Cancer
 IATA - International Air Transport Association Dangerous Goods Regulations
 IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
 ICAO - International Civil Aviation Organisation
 ICL - In Commerce List (Canada)
 IDLH - Immediately Dangerous to Life or Health
 IMDG - International Maritime Dangerous Goods Code
 IMO - International Maritime Organization
 IUB - International Union of Biochemistry and Molecular Biology
 KECL - Korean Existing and Evaluated Chemical Substances (Korea)

16. OTHER INFORMATION (CONT.)

Known - Known Carcinogen
 LC50 - Lethal concentration that produces fatalities in 50% of a given test population
 LD50 - Median lethal dose of a given test population
 Marpol - International Convention for the Prevention of Pollution From Ships
 MEPC - Marine Environment Protection Committee
 MEX - NOM-002-SCT/2003 List of Hazardous Substances and Materials Most Commonly Transported
 MEXICO - Mexico Occupational Exposure Limits
 NDSL - Non Domestic Substances List (Canada)
 NFPA - National Fire Protection Association
 NIOSH - National Institute of Occupational Safety and Health
 NOAEL - No Observed Adverse Effect Level
 NTP - National Toxicology Program
 NZIoC - New Zealand Inventory of Chemicals (New Zealand)
 OECD - Organisation for Economic Co-operation and Development
 OSHA - Occupational Safety & Health Administration
 OSHA PEL - Occupational Safety and Health Administration Permissible Exposure Limits
 PICCS - Inventory of Chemicals and Chemical Substances (Philippines)
 PNEC - Predicted No-Effect Concentration
 Present - Carcinogen or potential carcinogen to be identified under OSHA's Hazard Communication Standard
 Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
 SEN - Sensitizer notation. May reflect risk of dermal and/or inhalation sensitization (consult ACGIH documentation).
 Skin notation - Potential for cutaneous absorption
 STEL - Short Term Exposure Limit: Concentrations that should not be exceeded except for short periods of time (usually 15-minutes)
 STOT - Specific Target Organ Toxicity
 STV - Short Term Value (same as STEL)
 TDG - Transportation of Dangerous Goods (Transport Canada)
 TSCA - Toxic Substances Control Act, Section 8(b) Inventory (USA)
 TWA - Time Weighted Average: Average concentration that should not be exceeded during a work day (usually 8-hours)
 Under Consideration - Under Consideration by the National Toxicology Program
 vPvB - Very Persistent and Very Bioaccumulative
 WHMIS - Workplace Hazardous Materials Information System

DATE REVISED: 05/02/2017

The information contained in this Safety Data Sheet, as of the issue date, is believed to be true and correct. However, the accuracy or completeness of this information and any recommendations or suggestions are made without warranty or guarantee. Since the conditions of use are beyond the control of the company, it is the responsibility of the user to determine the conditions of safe use of this product. The information does not represent analytical specifications.

****END OF SDS****