Safety Data Sheet

Original Preparation Date: 01-Mar-2010 **Revision Date:** *19-Feb-2018* **Revision Number:** *2*

1. Identification

Product Name:
EVO-100 ™ USP-NF/FCC Propylene Glycol
(Excipient/Food Use Only)

Product Code:
049000

Use of the Substance / Preparation:
Excipient.

Contact Manufacturer:
Archer Daniels Midland Company
4666 Faries Parkway
Decatur, IL 62526, USA
Telephone Number: (+1) 217-424-5200

Emergency response telephone number:
Chemtrec 1-800-424-9300 (CCN 1635)

2. Hazard(s) identification

Emergency Overview

Health injuries are not known or expected under normal use.

Appearance	Physical State	Odor
Clear Colorless	Viscous liquid	Odorless

This 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

Chemical Family Glycols
Molecular Formula $C_3H_8O_2$

Non-hazardous Components

Chemical Name	CAS-No	Weight %	North American Substance Hazard Class
1,2-Propylene glycol	57-55-6	99.5	None known
Water	7732-18-5	0.2	None known

4. First-aid measures

Description of first aid measures
Eye Contact Rinse thoroughly with plenty of water, also under the eyelids.
Skin Contact Wash off with warm water and soap.
Inhalation Move to fresh air.
Ingestion Clean mouth with water and afterwards drink plenty of water.
General Advice When symptoms persist or in all cases of doubt seek medical advice.

Most important symptoms and affects, both acute and delayed
Eyes Contact with eyes may cause irritation.

Skin May cause slight skin irritation. Repeated exposure may cause skin dryness or cracking. Contact with product at elevated temperatures can result in thermal burns.
Inhalation Avoid breathing vapors or mists. Inhalation of aerosol may cause irritation to respiratory tract.
Ingestion Health injuries are not known or expected under normal use. May be harmful if swallowed. (dependent on amounts)

Indication of any immediate medical attention and special treatment needed
Notes to Physician Treat symptomatically.

5. Fire-fighting measures

Flammable Properties
Material may pose fire hazard because it is dispersed (or spread) by water.

Extinguishing media
Suitable Extinguishing Media Dry powder. Alcohol-resistant foam. Carbon dioxide (CO_2) Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture

Hazardous Combustion Products	Thermal decomposition can lead to release of irritating gases and vapors, Carbon monoxide (CO), Carbon dioxide (CO_2).
Specific Hazards Arising from the Chemical	Vapors are heavier than air and may spread along floors. The pressure in sealed containers can increase under the influence of heat. Fire or intense heat may cause violent rupture of packages.
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 1
Stability and Reactivity 0
Physical hazard None known

6. Accidental release measures

Personal Precautions, Protective Equipment, and Emergency Procedures
Ensure adequate ventilation. Avoid high pressure washing or generation of aerosols. Use personal protective equipment. Material can create slippery conditions.
Environmental Precautions
Prevent further leakage or spillage if safe to do so.
Methods and Materials for Containment and Cleaning Up
Clean-up methods - small spillage. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers. Clean contaminated surface thoroughly. Clean-up methods - large spillage. Dam up. Take up mechanically and collect in suitable container for disposal.

7. Handling and storage

Handling
Ensure adequate ventilation.
Storage
Keep at temperature not exceeding 40°C / 104°F. Keep containers dry and tightly closed to avoid moisture absorption and contamination. To maintain product quality, do not store in heat or direct sunlight.

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 adequate ventilation, especially in confined areas.
General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. When using, do not eat, drink or smoke.

Personal Protective Equipment
Eye/face Protection. Safety glasses with side-shields. If splashes are likely to occur, wear goggles
Skin and Body Protection Long sleeved clothing. Protective gloves if desired. Special protective equipment is generally not required.
Respiratory Protection In case of mist, spray or aerosol exposure wear suitable personal respiratory protection.

9. Physical and chemical properties

Appearance	Clear Colorless
Physical State	Viscous liquid
Odor	Odorless
Odor Threshold	No information available
pH	Approx. 7
Flash Point	99 °C / 210 °F (Cleveland Open cup)
Autoignition Temperature	371 °C / 700 °F
Boiling point	Approx. 188 °C / 370 °F (760 torr)
Melting/Freezing Point	Approx. -60 °C / -76 °F
Decomposition temperature	No information available
Oxidizing Properties	No information available
Flammability Limits in Air	Upper: 12.6 Lower: 2.6 (25°C,760 mmHg)
Molecular Weight	76.09 g/mol
Water Solubility	Miscible
Solubility(ies)	Soluble in essential oils. Miscible with Acetone and chloroform. Immiscible with fixed oils.
Evaporation Rate	< 0.01 [Butyl acetate = 1.0]
Vapor Pressure	0.08 mmHg at 20 °C
Vapor Density	2.6 (Air = 1.0)
Specific Gravity / Relative Density	1.04 20ºC (H_2O = 1)
Partition Coefficient (n-octanol/water)	-1.07

10. Stability and reactivity

Stability Stable under normal conditions.
Possibility of Hazardous Reactions Hazardous polymerization does not occur.
Conditions to Avoid Extremes of temperature and direct sunlight.
Incompatible Materials No materials to be especially mentioned.
Hazardous Decomposition Products Thermal decomposition can lead to release of irritating gases and vapors. Carbon monoxide (CO). Carbon dioxide (CO_2).

11. Toxicological information

Information on toxicological effects

Acute toxicity	Based on available data, the classification criteria are not met.			
Chemical Name	**Weight %**	**LD50 Oral**	**LD50 Dermal**	**LC50 Inhalation**
1,2-Propylene glycol	99.5	20000 mg/kg Rat	20800 mg/kg Rabbit	>317042mg/m³ air (Rabbit)
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 May cause slight skin irritation. Repeated exposure may cause skin dryness or cracking. Contact with product at elevated temperatures can result in thermal burns.

Inhalation Avoid breathing vapors or mists. Inhalation of aerosol may cause irritation to respiratory tract.

Ingestion Health injuries are not known or expected under normal use. May be harmful if swallowed. (dependent on amounts).

12. Ecological information

Ecotoxicity

Component Information:

Chemical Name	Fresh Water Algae	Acute Fish Toxicity	Daphnia (Water flea)	Effects on micro-organisms	Other
1,2-Propylene glycol	EC50: 96h 19000 mg/L (Pseudokirchneriella subcapitata)	LC50: 96h 40613mg/L (Oncorhynchus mykiss) static	NOEC >20000mg/l Pseudomonas putida	NOEC > 20000mg/l Pseudomonas putida	Saltwater algae Skeletonema costatum EC50: 96h 19100mg/L

Chemical Name	log Kow	BCF
1,2-Propylene glycol	-1.07	

Persistence/Degradability Readily biodegradable

Mobility Miscible with water.

PBT and vPvB assessment No information available.

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.

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

Chemical Name	TSCA	DSL	NDSL	ICL	EINECS	ELINCS	AICS
1,2-Propylene glycol	Yes	Yes	No	No	Yes 200-338-0	No	Yes

Chemical Name	ENCS ISHL	CHINA	PICCS	KECL	Taiwan	Turkey	NZIoC
1,2-Propylene glycol	Yes (2)-234	Yes	Yes	Yes KE-29267	Yes	Yes 200-338-0	Yes

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.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 63)
This product is not known to contain any HAPS.

State Regulations

California Proposition 65
This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins under California Proposition 65 at levels which would require a warning under the statute.

State Right-to-Know
Component Information.

Chemical Name	Weight %	Massachusetts	Minnesota	New Jersey	Pennsylvania
1,2-Propylene glycol	99.5	No	Yes	Yes 3595	Yes

Canada

(NPRI) Canadian National Pollutant Release Inventory

Component Information

Chemical Name	Weight %	NPRI
1,2-Propylene glycol	99.5	Part 4 Substance as set out in Section 65 of the List of Toxic Substances in Schedule 1 of the Canadian Environmental Protection Act, 1999

16. Other information

Prepared By: ADM Evolution Chemicals
Original Preparation Date: 01-Mar-2010
Revision Date: 19-Feb-2018
Revision Number: 2
Reason for revision: New product name. This version replaces all previous versions.

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)
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 absorbtion
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

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

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