



# (Material) Safety Data Sheet

Transport Symbol	WHMIS	NFPA	Personal Protective Equipment
Not controlled	Not controlled		

Original Preparation Date: 09-Jul-2009

Revision Date: 11-Sep-2013

Revision Number: 2

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

**Product Name:**

USP Kosher Glycerin (Excipient)

**Product Code:**

051000

**Synonyms:**

Glycerol. CAS 56-81-5. EINECS 200-289-5. ENCS 2-0242

**Use of the Substance / Preparation:**

Food additive / 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. HAZARDS IDENTIFICATION

### Emergency Overview

Health injuries are not known or expected under normal use.

**Appearance**  
Clear Colorless

**Physical State**  
Liquid

**Odor**  
Odorless

Based on available information, this product is not known to fall into any of the specified health or physical hazard categories defined by 29 CFR 1910, amended to conform to the United Nations' Globally Harmonized System of Classification and Labelling of Chemicals (OSHA / GHS); SOR/88-66, the Canadian Controlled Products Regulations (CPR); and/or NOM-002-SCT-2003 (Mexico). No signal words, pictograms, hazard phrases or precautionary phrases are known to be applicable. However, one or more of the product component(s) is known to be listed as an OSHA 29 CFR 1910.1000 Air Contaminant. Occupational exposure limits are subsequently provided in section 8 of this SDS.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Molecular Formula**

C<sub>3</sub> H<sub>8</sub> O<sub>3</sub>

The following component(s) in this product are considered hazardous under applicable OSHA (USA), WHMIS (Canada), and/or NOM-002-SCT-2003 (Mexico) regulations

Chemical Name	CAS-No	Weight %	North American Hazard Indicator
Glycerin	56-81-5	99-100	29 CFR 1910.1000 Air Contaminant. (as respirable mist)

#### 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 soap and plenty of water.**Inhalation** Move to fresh air.**Ingestion** Clean mouth with water and afterwards drink plenty of water.**Most important symptoms and affects, both acute and delayed****Eyes** Not expected to pose health issues for the eye.**Skin** Based on available data, not, or only slightly irritating.**Inhalation** Excessive inhalation of mist may result in respiratory irritation. When in the form of an airborne mist, refer to section 8 of this sheet for exposure limits pertaining to glycerin.**Ingestion** Health injuries are not known or expected under normal use. Large oral doses may result in gastrointestinal disturbance.**Indication of any immediate medical attention and special treatment needed****Notes to Physician** Treat symptomatically.

#### 5. FIRE-FIGHTING MEASURES

**Flammable Properties**

The product may ignite if exposed to heat or open flame.

**Extinguishing media****Suitable Extinguishing Media** Alcohol-resistant foam. Dry chemical. Carbon dioxide (CO<sub>2</sub>). 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, Acrolein, Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>).**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 1  
Flammability 1

Stability and Reactivity 0  
Physical hazard None known



#### 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions**

Ensure adequate ventilation.

**Environmental Precautions**

Prevent further leakage or spillage if safe to do so.

**Methods for Clean-up**

Dam up. Soak up with inert absorbent material. Prevent product from entering drains. Pick up and transfer to properly labelled containers.



## 7. HANDLING AND STORAGE

**Handling**

Do not breathe vapors or spray mist. Handle in accordance with good industrial hygiene and safety practice.

**Storage**

Store at temperatures between 10°C- 35°C (50°F-95°F). Keep containers dry and tightly closed to avoid moisture absorption and contamination.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure Limits**

Components with workplace control parameters.

Chemical Name	ACGIH TLV	OSHA PEL	MEXICO	NIOSH
Glycerin	TWA: 10 mg/m <sup>3</sup> mist	TWA: 15 mg/m <sup>3</sup> mist, total particulate TWA: 5 mg/m <sup>3</sup> mist, respirable fraction	TWA: 10 mg/m <sup>3</sup> mist	

**Engineering Measures**

Ensure adequate ventilation, especially in confined areas. Apply technical measures to comply with the occupational exposure limits. However it is the duty of the user to verify this and follow given exposure limits at the workplace.

**General Hygiene Considerations**

Handle in accordance with good industrial hygiene and safety practice.

**Personal Protective Equipment****Eye/face Protection.**

If exposed to airborne dust, appropriate safety glasses with side-shields or safety goggles are recommended.

**Skin and Body Protection**

Long sleeved clothing. Protective gloves.

**Respiratory Protection**

In case of mist, spray or aerosol exposure wear suitable personal respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Clear Colorless
<b>Physical State</b>	Liquid
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No information available
<b>pH</b>	No information available
<b>Flash Point</b>	Approx. 199 °C / 390 °F
<b>Autoignition Temperature</b>	393 °C / 739 °F
<b>Boiling point</b>	290 °C / 554 °F
<b>Melting/Freezing Point</b>	18 °C / 64 °F
<b>Decomposition temperature</b>	No information available
<b>Oxidizing Properties</b>	No information available
<b>Molecular Weight</b>	92.09 g/mol
<b>Water Solubility</b>	Miscible
<b>Evaporation Rate</b>	No information available
<b>Vapor Pressure</b>	1.0033 hPa @ 50°C
<b>Vapor Density</b>	No information available
<b>Density</b>	1.262 g/cm <sup>3</sup> @ 20C
<b>Specific Gravity / Relative Density</b>	1.249 (minimum)
<b>Partition Coefficient</b> (n-octanol/water)	-1.76

## 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<sub>2</sub>), Acrolein.

## 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

<b>Acute toxicity</b>	Based on available data, the classification criteria are not met.			
<b>Chemical Name</b>	<b>Weight %</b>	<b>LD50 Oral</b>	<b>LD50 Dermal</b>	<b>LC50 Inhalation</b>
Glycerin	99-100	12600 mg/kg Rat	21900 mg/kg Rat	
<b>Skin corrosion/irritation</b>	Based on available data, not, or only slightly irritating.			
<b>Serious eye damage/eye irritation</b>	Based on available data, no evidence of serious eye damage / irritation.			
<b>Respiratory or skin sensitisation</b>	Based on available data, not expected to be a skin or respiratory sensitiser.			
<b>Germ cell mutagenicity</b>	There is no in vitro or in vivo data that indicates glycerol to have a genotoxic potential.			
<b>Carcinogenicity</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen.			
<b>Reproductive toxicity</b>	Based on available data, no evidence of reproductive toxicity			
<b>STOT - single exposure</b>	Based on available data, the classification criteria are not met. No evidence of toxicity.			
<b>STOT - repeated exposure</b>	Based on available data, the classification criteria are not met. Repeated oral exposure by gavage to glycerol does not induce adverse effects other than local irritation of the gastro-intestinal tract. Glycerol inhalation exposure, irritant effects have been observed at 662 mg/m <sup>3</sup> . At very high exposure levels glycerol mist may be injurious to the kidneys (Campanacci 1965/Ex. 1-1047). NIOSH (Ex. 8-47) states that, at high concentrations, exposure may cause hemolysis, hemoglobinuria, and renal failure. No other target organ involvement was identified.			
<b>Aspiration hazard</b>	Based on available data, no known aspiration hazard.			

Potential health effects

<b>Eyes</b>	Not expected to pose health issues for the eye.
<b>Skin</b>	Based on available data, not, or only slightly irritating.
<b>Inhalation</b>	Excessive inhalation of mist may result in respiratory irritation. When in the form of an airborne mist, refer to section 8 of this sheet for exposure limits pertaining to glycerin.
<b>Ingestion</b>	Health injuries are not known or expected under normal use. Large oral doses may result in gastrointestinal disturbance.

## 12. ECOLOGICAL INFORMATION

Ecotoxicity

Contains no substances known to be hazardous to the environment. Contains no substances known to be not degradable in waste water treatment plants.

Chemical Name	Fresh Water Algae	Acute Fish Toxicity	Daphnia (Water flea)	Effects on micro-organisms	Other
Glycerin		LC50: 96h 51 - 57mL/L (Oncorhynchus mykiss) static	EC50: 24h 500 mg/L (Daphnia magna)		

Chemical Name	log Kow	BCF
Glycerin	-1.76	



**Persistence/Degradability** Readily biodegradable.  
**Mobility** Miscible with water.  
**PBT and vPvB assessment** Based on the very low log Kow of -1.76, glycerol is not expected to bioaccumulate significantly.

**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. Should not be released into the environment.  
**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**

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

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	AICS	ENCS ISHL	CHINA	PICCS	KECL	NZIoC
Glycerin	Yes	Yes	No	Yes 200-289-5	No	Yes	Yes (7)-338 (2)-242	Yes	Yes	Yes KE-29297	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**

Acute Health Hazard Yes  
 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.

**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
Glycerin	99-100	Yes	Yes	Yes 3319	Yes

**Canada****WHMIS Product Classification**

Not a WHMIS controlled product.

**WHMIS Ingredient Disclosure List IDL**

No known component is listed on the WHMIS ingredients disclosure list.

**(NPRI) Canadian National Pollutant Release Inventory**

Component Information

Chemical Name	Weight %	NPRI
Glycerin	99-100	Part 4 Substance

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

**Mexico**

Mexico - Grade

Slight risk, Grade 1

16. OTHER INFORMATION
-----------------------

Prepared By: ADM Fuels & Industrials  
 Original Preparation Date: 09-Jul-2009  
 Revision Date: 11-Sep-2013  
 Revision Number: 2  
 Reason for revision: This data sheet contains changes from the previous version in section(s) 15. This version replaces all previous versions.

**Abbreviations and acronyms**

ACGIH TLV - American Conference of Governmental Industrial Hygienists Threshold Limit Values  
AICS - Australian Inventory of Chemical Substances (Australia)  
CAS - Chemical Abstract Service  
CHINA - Chinese Inventory of Existing Chemical Substances (China)  
DOT - U.S. Department of Transportation  
DSL - Domestic Substance List (Canada)  
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)  
GHS - Globally Harmonized System of Classification and Labelling of Chemicals  
IATA - International Air Transport Association Dangerous Goods Regulations  
ICAO - International Civil Aviation Organisation  
ICL - In Commerce List (Canada)  
IMDG - International Maritime Dangerous Goods Code  
IMO - International Maritime Organization  
KECL - Korean Existing and Evaluated Chemical Substances (Korea)  
LC50 - Lethal concentration that produces fatalities in 50% of a given test population  
LD50 - Median lethal dose of a given test population  
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  
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)  
STOT - Specific Target Organ Toxicity  
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)  
WHMIS - Workplace Hazardous Materials Information System  
vPvB - Very Persistent and Very Bioaccumulative

**The information provided on this (M)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.**

End of sheet