MATERIAL SAFETY DATA SHEET

SECTION: 1.1 PRODUCT IDENTIFICATION

Product Name:	**Glycerin Vegetable**
Other Name:	**Glycerin USP/FCC/NF Grade**
Synonyms:	1,2,3-Propanetriol, Glycerol
INCI Name:	Glycerin
CAS #:	56-81-5
Country of Origin:	Malaysia

SECTION: 1.2 COMPANY IDENTIFICATION

Company:	WFMED
Address:	8245 Backlick Road Lorton VA 22079 USA
Telephone No:	703-339-5388
FAX:	703-339-1999

24 HOUR EMERGENCY TELEPHONE NUMBER: (613)-996-6666 CANUTEC

SECTION: 2. COMPOSITION / INFORMATION INGREDIENTS

Constituents:	Product Name	Chemical Name	CAS#	Chemical Formula
No hazardous ingredient.	Glycerin 99.7% Min/USP Grade	1,2,3-Propanetriol	56-81-5	C_3-H_8-O_3

SECTION: 3. HAZARDS IDENTIFICATION

Potential Acute Health Effect	Hazardous in case of ingestion. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation (lung irritant).
Potential chronic health Effects	Carcinogenic Effects: N/A Mutagenic effects: N/A Teratogenic Effects: N/A Development toxicity: N/A The substance may be toxic to kidneys. Repeated or prolonged exposure to the substance can produce target organs damage.

SECTION: 4. FIRST AID MEASURES

Eye Contact:	Check for remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs. Wash
Skin Contact:	with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.
Ingestion:	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie belt or waistband. Have conscious person dink several glasses of water or milk. Seek medical attention immediately.

SECTION: 5. FIRE FIGHTING MEASURES

Products of combustion	These products are Carbon oxides (CO, CO_2), aldehyde acrolein.
Fire fighting media and instructions:	Small Fire: Use Dry chemical powder Large Fire: Use water spray, fog or foam, Do not use water jet. Qualified

	person wearing full fire-fighting suits and approved/certified self-contained breathing apparatus.
Special Remarks on Fire Hazards:	N/A
Special remarks on Explosion Hazards	Contact with CrO_3, Potassium chlorate or potassium permanganate may produce an explosive mixture. Flammable in presence of open flames and sparks.

SECTION: 6. ACCIDENTAL RELEASE MEASURES

Small spill and leak	Dilute with water and mop up, or absorb with inert dry material and place in an appropriate waste container. Finish cleaning by spreading water on the containment surface and dispose of according to local and regional authority requirements.
Large spill and leak	Combustible material. Keep away from heat. Keep away from source of ignition. Absorb with an inert material and put the spilled material in an appropriate waste deposal. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements. Splash goggles, Full suit, Vapor respirator, Boot, Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient, consult a specialist BEFORE handling this product.
Personal protection in case of large spill	

SECTION: 7. HANDLING AND STORAGE

Precaution	Keep away from heat. Keep away from source of ignition. Do not breathe gas, fumes, vapor or spray. Keep away from incompatibles such as oxidizing products.
Incompatibility	Reactive with oxidizing agents
Storage:	Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from heat and away from strong oxidizing agents.

SECTION: 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value (TLV).
Personal Protection	Eyes: Safety glasses Body: Lab coat Respiratory: No special protective clothing is required. Avoid inhalation of product. Hands: Gloves Feet: N/A
Exposure Limits:	1,2,3-propanetriol TWA: 10 (mg/m3) from ACGIH (TLV) [US] Inhalation Respirable TWA: 10 (mg/m3) from OSHA (PEL) [US] Inhalation Respirable Consult local authorities for acceptable exposure limits.

SECTION: 9. PHYSICAL AND CHEMICAL PROPERTIES

MATERIAL SAFETY DATA SHEET

Appearance:	Colorless, Liquid (Viscous)
Odor/Taste	None/Sweet
Solubility:	Easily soluble in hot & cold Water, Methanol, Acetone
Specific Gravity:	> 1.249
Flash Point:	199°C
Melting Point:	18°C
Boiling Point:	290°C (554 °F)

SECTION: 10. STABILITY AND REACTIVITY

Stability:	Chemically stable. This material presents no significant reactivity hazard.
Conditions to Avoid:	Avoid sparks, flame and excessive heat.
Materials to Avoid:	Strong oxidizing agents.
Hazardous Polymerization:	Will not occur.
Decomposition Products:	When heated to decomposition produces fumes of Carbon dioxide and carbon monoxide smoke.

SECTION: 11. TOXICOLOGICAL INFORMATION

Route of entry Absorbed through skin, Eye contact, inhalation, ingestion.

Toxicity to animals Acute oral toxicity (LD50): 4090 mg/kg [Mouse]
Acute dermal toxicity (LD50): 10946 mg/kg (Rabbit)
(Calculated value of the mixture)

Acute effect on Humans

Eyes: Slightly hazardous in case of eye contact (irritant)
Skin: Sensitization of the product: N/A
Slightly hazardous in case of skin contact (irritant) skin inflammation is characterized by itching, scaling, reddening, or, occasionally blistering.
Inhalation Slightly hazardous in case of inhalation (lung irritant)
Ingestion Hazardous in case of ingestion.

Chronic Effects on Humans

Carcinogenic Effects: N/A
Mutagenic effects: N/A
Teratogenic Effects: N/A
Development toxicity: N/A
The substance may be toxic to kidneys.
Repeated or prolonged exposure to the substance can produce target organs damage.

SECTION: 12. ECOLOGICAL INFORMATION

Possibly hazardous short term degradation products are not likely. However long term degradation products may arise. Avoid any pollution of ground, surface or underground water.

SECTION: 13. DISPOSAL CONSIDERATION

Dispose of in accordance with local, provincial and federal regulations. Check with disposal expert to ensure compliance.

SECTION: 14. TRANSPORT INFORMATION

TDG Classification:	Not regulated
IATA Shipping (Air):	Not regulated

MATERIAL SAFETY DATA SHEET

IMDG Shipping Not regulated

SECTION: 15. REGULATORY INFORMATION

WHMIS (Canada):	Not controlled under WHMIS Canada	
Regulatory Lists	CEPA DSL: 1,2,3-Propanetriole, Water	
Other Regulations	OSHA: hazardous by definition of Hazard Communication Standard (29 CFR 1910. 1200) EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.	
Other Classifications:	HCS (U.S.A.)	Class: target organ effects
	USA Regulatory Lists	TSCA 8(d) Hand S data reporting: 1,2,3-Propanetriol
	DSCL (EEC)	R16-Explosive when mixed with oxidizing substances
HMIS Rating:	Health: 0 Flammability: 0 Reactivity: 0	

SECTION: 16. OTHER INFORMATION

Revision Date: March 17, 2014

SECTION: 17. DISCLAIMER

The information contained in this Certificate of Analysis and Material Safety Data Sheet is obtained from current and reliable sources. The information contained herein is true and to the best of WFMED knowledge. Nothing herein should be interpreted as a recommendation to infringe existing patents or violate any Laws or Regulation. Final determination of the suitability of the material is the sole responsibility of the user. Customers should purchase products from ITI Inc. with the clear understanding that all products must be used at the customers own discretion and only after referencing Material Safety Data Sheets (MSDS) and all other relevant technical information specific to the product. WFMED shall not be held responsible for any damages to property or for any adverse physical effects (including injury or bodily harm) caused by insufficient knowledge or the improper use of a product. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of The products, including intellectual property rights of third parties. As with any manufacturing process, WFMED strongly recommends small lab scale testing for evaluation purposes prior to full commercial manufacturing. The information on the WFMED website is obtained from current and reliable sources but makes no representation as to its comprehensiveness or accuracy. Nothing contained herein should be considered as a recommendation by WFMED Inc. as to the fitness for any use. As the ordinary or otherwise use(s) of this product is outside the control of WFMED no representation or warranty, expressed or implied is made as to the effect(s) of such use(s) (including damage or injury), or the results obtained. The liability of WFMED Inc. is limited to the value of the goods and does not include any consequential loss. WFMED shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon.

CERTIFICATE OF ANALYSIS

Product:	**Glycerin Vegetable USP 99.5 %**
Lot No.:	16005-A65/H65
Best Before:	September, 2015 Store in air tight container; in a cool dry area; away from direct sunlight.

Properties	**Specifications**	**Results**
Appearance:	Clear, Liquid.	Complies
Odor:	None.	Complies
Taste	Sweet.	Complies
Solubility: in Water	Easily soluble in hot & cold	Complies
Solubility in Alcohol	Methanol, Acetone	Complies
Specific Gravity:	> 1.2607	1.2618
Heavy Metals:	< 5	Complies
Chloride, ppm:	< 10	5.00
Moisture, %:	< 0.5	Complies

DISCLAIMER:

The information contained in this Certificate of Analysis is obtained from current and reliable sources. New Directions Aromatics Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. As the ordinary or otherwise use(s) of this product is outside the control of New Directions Aromatics Inc., no representation or warranty, expressed or implied, is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. New Directions Aromatics Inc. expressly disclaims responsibility as to the ordinary or otherwise use(s). Furthermore, nothing contained herein should be considered as a recommendation by New Directions Aromatics Inc. as to the fitness for any use. The liability of New Directions Aromatics Inc. is limited to the value of the goods and does not include any consequential loss. New Directions Aromatics Inc. shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. New Directions Aromatics Inc. shall not be responsible for any damages resulting from use of or reliance upon this information. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties.

WFMED.

8245 Backlick Road Lorton VA 22079 USA

Tel: 703-339-5388 Fax: 703-339-1999 www.wfmed.com