Refined Glycerine 99.7% USP From Natural Tropical Palm

PRODUCT	**REFINED GLYCERINE 99.7% USP**
Chemical Identification	1,2,3 Propanetriol (Trihydroxypropane)
INCI Name / Origin	Glycerine 99.7% Min USP / Vegetable Origin
Molecular Formula	C3H8O3
CAS No.	56-81-5
EINESCS No.	200-289-5
H.S Code	**29054500**
Physical Appearance	Clear ,Colorless liquid

SPECIFICATION

REFINED GLYCERINE 99.7% USP [Complies with USP - United States Pharmacopeias]			
Parameter	**Method**	**Specified Range**	**Typical values**
Glycerine Content	**APAG-GL-009**	**99.7 % min**	**99.8 %**
Relative Density [Gravity] 20/20"C	ISO 2099	1.2623 min	1.2635
Characters	Monograph Test	Clear and Colourless	Clear and Colourless
Refractive Index n20D	APAG-GL-006	1.4731 min	1.4737
Color APHA	ASTM D1209	10 max	5
Fatty Acids & Ester (Ml 0.2N NaOH/50)	USP XXIII	1.0 Max	0.36
Sulphated ash { % }[2]	USP XXIII	0.01 max	0.004
Residue On Ignition	USP XXIII	0.01 max	<0.01
Chlorides { ppm as CI } [2]	USP XXIII	10 max	< 10
Heavy Metals { ppm as Pb } [2]	USP XXIII	5 max	< 5 ppm
Chlorinated Compounds' ppm CI	USP XXIII	30 Max	< 30
Arsenic ppm	USP XXIII	1.5 Max	< 1.5
Sulphate ppm	USP XXIII	20 Max	< 20
Identification A By IR		Pass Test As Glycerine	Pass Test As Glycerine
Identification B By GC		Pass Test As Glycerine	Pass Test AS Glycerine
Appearance Of Solution	2.2.1 PH.EUR	Meet Test	Meet Test
Diethylene Glycol DEG& Related compound	2.2.28 PH.EUR	0.1 Max	<0.1
Water %	2.5.12 PH.EUR	0.5 Max	0.20
Halogenated Compounds ppm	2008:0497 PH.EUR	35 ppm Max	<35 ppm
Assay (% Glycerine on anhydrous Basis)		99.7 % Min	99.8 %
Acidity/Alkalinity [ml]	2008:0496 PH.EUR	0.2 Max	<0.1
Sugar	APAG-GL-014-1988	Negative	Negative
Additional Parameter	E422 Specification		Standard Typical
Butantiriol %	E422 has similar requirement		=<0.2%
Acrolein,Glucose and Amonium compounds	E422 has similar requirement		Confirm
Fatty acid and esters%(m/m)(in terms of Butriric acid)	FCC & E422 have similar requirement. FA+E as butyric acid		0.03 to 0.05%
Pb Analysis	<2ppm		Not detected(0.02ppm)
Hg Analysis	<1ppm		Not detected(<0.02ppm)
Cd Analysis	<1ppm		Not Detected(<0.02ppm)
MICROBIAL ANALYSIS - REQUIRED BY COLGATE & PALMOLIVE			
Yeast & mould (cfu/ml)			not detected <10
Total aerobic count (cfu/ml)			not detected <10
S. Aureus (cfu/ml)			not detected
Gram negative bacilli (cfu/ml)			Not detected
E. Coli (MPN/ml)			not detected <3
Salmonella spp (per 25 ml)			

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REFINED GLYCERINE - END USE APPLICATIONS

► APPLICATION USES

This colourless and odorless, sweet-tasting viscous liquid and it is hygroscopic.
End-use applications for Glycerine include pharmaceutical applications, food and beverage ingredient, sweetener, Personal care items such as tooth pastes, cosmetics, soaps, polyether polyols, alkyd resins, explosives, humectants, coatings, Pet foods, lubricants, flexible foams, solid fuel, de-/anti-icers, paints, textiles, surface coating, paper and printing industry, plastics , daily chemicals, agricultural, toiletries, tobacco, rubber, lubricants , PU Forms, as good additive and many more industries.

► PHARMACEUTICAL & DRUG.

- Used in medical and pharmaceutical preparations, mainly as a means of improving smoothness, provide lubrication and humectants
- Suppositories, cough syrups, elixirs and expectorants

► PERSONAL CARE & COSMETICS

- Serves as an emollient, humectants, solvent, and lubricant in personal care products.
- Competes with sorbitol although glycerol has better taste and higher solubility.
- Toothpaste, mouthwashes, skin care products, shaving cream, hair care products and soaps

► FOODS AND BEVERAGES

- Serves as humectant, solvent and sweetener, may help preserve foods
- Solvent for flavours and food colouring
- Humectant and softening agent in candy, cakes and casings for meats and cheeses
- Manufacture of mono- and di-glycerides for use as emulsifiers
- Used in manufacture of polyglycerol esters going into shortenings and margarine
- Used as filler in low-fat food products (i.e., cookies)

► POLYETHER POLYOLS

- One of the major raw materials for the manufacture of polios for flexible foams, and to a lesser extent rigid polyurethane foams
- Glycerol is the initiator to which propylene oxide/ethylene oxide is added

► ALKYD RESINS (PLASTICS) AND CELLOPHANE

- Used in surface coatings and paints
- Used as a softener and plasticizer to impart flexibility, pliability and toughness
- Uses include meat casings, collagen casings (medical applications)and nonmeat packaging
- Plasticizer in cellophane.

► EXPLOSIVES

- Used in the production of TNT (trinitroglycerine)
- Glyceryl triacetate is a component in binders in the production of solid fuel rockets

► OTHER

- Manufacture of paper as a plasticizer, humectants and lubricant
- Humectants for pet foods to retain moisture and enhance palatability
- Used in lubricating, sizing and softening of yarn and fabric
- Used in de-/anti-icing fluids
- Patent applications have been filed for detergent softeners and surfactants based on glycerine (i.e., alkyl glyceryl ethers) instead of quaternary ammonium compounds

► **ABSOLUTE ALCOHOL** There is an absolute alcohol production process by dehydration using glycerol.

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PAKCING –SHIPPING - STORAGE AND PHYSICAL PROPERTIES

PHYSICAL & CHEMICAL PROPERTIES

Parameter	Value	
Glycerine Content	99.7 % min	
Physical State	Liquid	
Odour	Odourless	
Taste	Tangy sweet	
Colour	Colourless , Clear	
Boiling Point	Approx. 290 °C	AOCS Tr 1a-64
Melting Point	Approx. 18 °C	
Viscosity @ 50 °C	Approx. 140 mPa.s	AOCS Ja 10-87:1997
Flash Point	Approx. >180°C	DIN ISO 2592
Relative Density (20°C)	Approx. 1.263 g/cm3	No information
Vapour pressure (50°C)	0.0025 mbar	
Solubility (qualitative)	Soluble in water (20°C) 1,263 g/cm3	
Ignition temperature	429°C	DIN 51794
Stable and soluble in water and miscible with ethanol, slightly soluble with acetone. Water white, liquid,		

PACKING SHIPPING AND STORAGE	
Product	Refined Glycerine 99.7% Min USP
Packing – Steel Drum	250 Kgs. Net X 80 New Steel Expoxy Coated Drum = 20 MT Per 20 FT Full Container Load
Packing – HDPE Drum	250 Kgs. Net X 80 HDPE Plastic Drum = 20 MT Per 20 FT Full Container Load
Packing – Flexi Bag	20 MT Flexi Bag X 1 = 20 MT Per 20 FT Full Container Load.
Packing – ISO Tank	20 MT ISO Tank X 1 = 20 MT Per 20 FT Full ISO Tank Container Load.
Packing – IBC Tank	1000 Kgs. Intermediate Bulk Container [IBC] X 20 = 20 MT Per 20 FT Full Container Load
Storage :	Keep in cool and dry place, avoid extreme heat and cold, Store in clean, dry preferably stainless steel vessels, in Bulk, Stored at ambient temperature.
Payment	Confirmed Irrevocable 100% L/C @ Site.
Shipping Mark	Company Standard OR Customer's request.
Country Of Origin	Malaysia
Loading Sea Port	Malaysia
STANDARD SHIPPING DOCUMENT	
1	CERTIFICATE OF MALAYSIAN ORIGIN LEGALLISED BY CHAMBER OF COMMERCE
2	B/L - SHIPPING BILL OF LADING
3	PACKING LIST
4	COMMERCIAL INVOICE
5	CERTIFICATE OF ANALYSIS
6	SALES CONTRACT

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