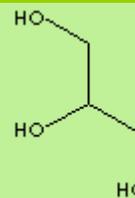


GLYCEROL

PRODUCT IDENTIFICATION

CAS NO.	56-81-5
EINECS NO.	200-289-5
FORMULA	$\text{CH}_2(\text{OH})\text{CH}(\text{OH})\text{CH}_2\text{OH}$
MOL WT.	92.09
H.S. CODE	1520.10
TOXICITY	Oral rat LD50: 12,600 mg/kg
SYNONYMS	Glycerol; 1,2,3-Propanetriol; Glyceritol; Glycic Alcohol; 1,2,3-Trihydroxypropane; Trihydroxypropane; Clyzerin, Wasserfrei; Glyrol; Glysarin; Grocolene;
DERIVATION	
CLASSIFICATION	



GENERAL DESCRIPTION

Glycerine (glycerin, glycerol, or 1,2,3-propanetriol) is the simplest trihydric alcohol. Pure glycerine, with a specific gravity of 1.26, is a colorless, odorless, sweet, viscous liquid melting at 17.8 C boiling at 290 C. It decomposes at boiling point and produce corrosive fumes of acrolein. It is miscible in water and forms a solution in any proportion. It is also soluble alcohol but only partially soluble in common organic solvents such as ether and ethyl acetate. It resists freezing. It is hygroscopic, which favors as a humectant to retain moisture in cosmetics. It reacts violently with acetic anhydrides in the presence of a catalyst. It is obtained as a byproduct when fats and oils are hydrolyzed to yield fatty acids or soaps. Glycerol is also commercially synthesized from propylene (Dow Chemical). Glycerol can also be obtained based on a proprietary fermentation processing. Glycerol is widely used; as a solvent, food additive, sweetening agent and emollient and emulcent with magnesium sulphate used in the treatment of septic wounds and boils; in the manufacture of alkyd resin, cellophane, ester gums, plasticizer, dynamite, nitroglycerine, cosmetics, liquid soap, perfume and toothpaste (good solubility and taste give glycerine an edge on sorbitol in toothpastes, which are estimated to make up almost one-third of glycerine's market in personal care products); as a component of antifreeze mixtures; to keep fabrics pliable, to preserve printing on cotton, to keep frost from windshields; as a source of nutrients for fermentation cultures in the production of antibiotics; as a preservative in some pharmaceutical and biological preparations and in non-alcoholic extracts and tinctures. It has many other applications.

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Clear oily liquid
MELTING POINT	18 C
BOLING POINT	290 (Decomposes)
SPECIFIC GRAVITY	1.26
SOLUBILITY IN WATER	Miscible
pH	
VAPOR DENSITY	3.17
AUTOIGNITION	370 C
NFPA RATINGS	Health: 1 Flammability: 1 Reactivity: 0
REFRACTIVE INDEX	

FLASH POINT	199 C
STABILITY	Stable under ordinary conditions
APPLICATIONS	
Drugs and personal care, toothpaste, foods and beverages, tobacco, polyether polyols for urethanes, alkyd resins, cellophane, explosives ,plasticizer, humectant and lubricant uses	
SALES SPECIFICATION	
APPEARANCE	Clear oily liquid
GLYCEROL CONTENT	99.5% min
SPECIFIC GRAVITY	1.2606 min
COLOUR (APHA)	10 max
ASH	0.01% max
CHLORIDE	10ppm max
SULPHATE	20ppm max
ARSENIC	1.5ppm max
HEAVY METALS	5ppm max
CHLORINATED SUBSTANCES	30ppm max
FATTY ACID AND ESTERS	1.0 max (ml of 0.5N NaOH/50g)
TRANSPORTATION	
PACKING	250kgs in Drum
HAZARD CLASS	Not regulated
UN NO.	
OTHER INFORMATION	