

1. DESIGNATION

Chemical name	:	GLYCEROL
CAS No.	:	56-81-5
EC no.	:	200-289-5
Origin	:	vegetable (rapeseed, sunflower, palm)
EU Food additive no.	:	E 422 - GLYCEROL
INCI Name	:	GLYCERIN
Qualifications	:	Halal; FSSC 22000; Ecocert; Kosher (available on request)

2. SPECIFICATIONS

<u>CHARACTERISTICS (CoA)</u>	<u>UNITS</u>	<u>VALUES</u>	<u>METHODS</u>
Refractive Index at 20°C	None	1.473 - 1.474	Eur.Ph.
Assay	%(m/m)	≥ 99	USP-NF
Glycerol Content	%(m/m)	≥ 99.7	APAG-GL-009
Colour APHA	None	≤ 10	ISO 2211
Water	%(m/m)	≤ 0.3	ISO 760
Relative Density (25°C/25°C)	None	≥ 1.257	USP-NF
Readily carbonizable substances	None	conform	USP-NF/JECFA
Identification - Acroleine test	None	conform	Eur.Ph.
Chlorides	mg/kg	≤ 10	Eur.Ph.
Heavy metals	mg/kg	≤ 5	Eur.Ph.
Sulfated Ash	%(m/m)	≤ 0.01	ISO 1616
Fatty acids & esters as butyric acid	%	≤ 0.1	USP-NF
Chlorinated compounds	mg/kg	≤ 30	USP-NF
Butantriols	%	≤ 0.2	HR-GC/MS
3-monochloropropane-1,2-diol	mg/kg	≤ 0.1	GC/MS
Acrolein, glucose and ammonium compounds	None	conform	APAG-GL-011
Cadmium (Cd)	mg/kg	≤ 1	ICP-MS
Arsenic (As)	mg/kg	≤ 3	ICP-MS
Lead (Pb)	mg/kg	≤ 2	ICP-MS
Mercury (Hg)	mg/kg	≤ 1	ICP-MS
<u>CHARACTERISTICS (guaranteed)</u>			
Candida albicans	None	absence	Eur.Ph.2.6.12/13
Clostridia	None	absence	Eur.Ph.2.6.12/13
Escherichia Coli	None	absence	Eur.Ph.2.6.12/13
Enterobacteriaceae	None	absence	Eur.Ph.2.6.12/13
Listeria monocytogenes	None	absence	Eur.Ph.2.6.12/13
Pseudomonas aeruginosa	None	absence	Eur.Ph.2.6.12/13
Salmonella	None	absence	Eur.Ph.2.6.12/13
Staphylococcus aureus	None	absence	Eur.Ph.2.6.12/13

Total anaërobic count	<i>cfu/g</i>	≤ 100	Eur.Ph.2.6.12/13
Total aerobic microbial count-TAMC	<i>cfu/g</i>	≤ 100	Eur.Ph.2.6.12/13
Total yeasts/moulds count-TYMC	<i>cfu/g</i>	≤ 10	Eur.Ph.2.6.12/13
Any organochlorine pesticide	<i>mg/kg</i>	≤ 0.05	GC-MS
Any organophosphorus pesticide	<i>mg/kg</i>	≤ 0.05	GC-MS
Any organonitrogen pesticide	<i>mg/kg</i>	≤ 0.5	GC-MS
Any pyrethroid insecticide	<i>mg/kg</i>	≤ 0.05	GC-MS
Any acid herbicide	<i>mg/kg</i>	≤ 0.6	GC-MS
Any other pesticide	<i>mg/kg</i>	≤ 0.5	GC-MS
Benzo (a) pyrene	<i>µg/kg</i>	≤ 1.0	GC/MS
Sum PAH4	<i>µg/kg</i>	≤ 1.0	GC/MS
Sum of Dioxins (PCDD/F-TEQ)	<i>pg/g</i>	≤ 0.75	HRGC/HRMS
Sum of dioxins and dioxin-like PCBs	<i>pg/g</i>	≤ 1.25	HRGC/HRMS
Non dioxin-like PCBs (ICES-6)	<i>ng/g</i>	≤ 40	HRGC/HRMS

PROPERTIES (indicative values)

Flash point	°C	ca. 199
Self ignition temperature	°C	ca. 370
Density	at 20°C	<i>kg/m³</i> ca. 1261
Viscosity	at 20°C	<i>mPa.s</i> ca. 1150

3. PROVISIONS

STANDARD PACKAGING

Bulk (RTC, as liquid).

Drums (250 kg net weight).

IBC (1250 kg net weight).

TOTAL SHELF LIFE

24 months in sealed drums or IBC's; 12 months in bulk.

COMPLIANCY NOTICE

This product complies with the component's monograph as described in the current edition of the European Pharmacopoeia (Ph. Eur.).

Conforms to the FCC requirements and the JECFA specification.

Listed as GRAS substance (Generally recognized as safe) under CFR Title 21 Part 182 (§182.1320).

PARTICULAR PROPERTIES

Clear, colourless hygroscopic syrupy liquid with not more than a slight characteristic odour, which is neither harsh nor disagreeable.

Solubility: miscible with water and with ethanol 96%, slightly soluble in acetone, practically insoluble in fatty oils and in essential oils.

Hygroscopic.

SAFETY & REGULATORY DATA

Please refer to the relevant Safety Data Sheet for more information.

STORAGE RECOMMENDATIONS

The shelflife is guaranteed provided the goods are stored in original drums/liquabins or stainless steel containers/tanks, in dark, temperature min.20°C and max.60°C, under nitrogen blanketing with oxygen content <0.1%.

MAIN APPLICATION(S)

Food additive.