Glycerol

one product – unlimited applications

Glycerine is miscible with water and ethanol 96 %, practically insoluble in fats and essential oils.

Qualities & Usage

We carry Glycerol in the following qualities for you

Art.-Nr.	Quality	Cosmetics	Food	Pharmaceutics
601005	Glycerol 85% vegetable Ph. Eur.	Yes	Yes	Yes
602005	Glycerol 99 % vegetable Ph. Eur.	Yes	Yes	Yes

Glycerine is used without limits. It is used in the household, for example, it is added to the water of Christmas trees to keep them fresh longer. Furthermore, the moisturizing effect of glycerol is used in leather care products and shoe polishes. In cigarette and pipe tobacco glycerine extends storage times and prevents drying out. In shisha tobacco, a significantly higher quantity is added to prevent the tobacco from burning and to produce denser steam.

In industry, glycerine is used as an antifreeze, lubricant and softener.

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The glycerol

Glycerol is the simplest of the trivalent alcohols and also called Glycerine. Glycerol is the trivial name and common name for the alcohol propane-1,2,3-triol. We offer two levels of content: Glycerol 99% and glycerol 85%. The content is always related to the anhydrous substance.

As a component of fatty acid esters, glycerine is widely found in all fats and oils in nature.

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Origin

Glycerine is chemically bound in all vegetable oils and other natural fats and fatty oils. It is an intermediate product of various metabolic processes. Thus, glycerine is found in coconut oil (17%), palm oil (11%) and soya oil (10%) and is therefore a normal component of our daily food. Furthermore, it is found as lecithin in egg yolk, brain, blood cells, bile and nerve tissue. During alcoholic fermentation, glycerine is formed in a minor amount and is therefore contained in wine in small quantities. The body also forms glycerol when breaking down fats.

Background / history

In 1779 glycerine was discovered by the German chemist Scheele during the saponification of olive oil with lead oxide. In 1811 the French chemist Chevreul introduced the term "glycerine", derived from the Greek glykys (sweet).

When synthetic detergents became popular in the 1940s, especially in the USA, the original extraction of glycerine as a by-product of fat saponification was no longer sufficient. Synthesis processes were therefore developed.

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Glycerol

85% vegetable Ph. Eur.

Article number:
601005

INCI name:
Glycerin

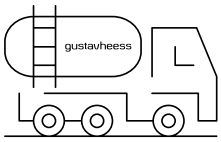
CAS number:
56-81-5

Usage:
Cosmetics, Food, Pharmaceutics

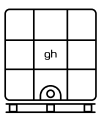
Certificates:
Kosher

Origin:
The botanical origin of glycerine is formed by vegetable oils of various origins, mainly rapeseed, soybean, palm, palm kernel, coconut and linseed oil.

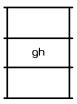
Our packaging



25,000 kg Tank truck



1,250 kg IBC



250 kg Drum

30 kg Canister

General durability:

IBC, drum & canister 12 months

Nutritional values

Nutritional value	**(per 100g)**
Energy	1,525 kJ / 365 kcal
Fat	max. 0.1 g
Saturated fatty acids	max. 0.1 g
Carbohydrates	85 g
Sugars	max. 0.1 g
Polyols	85 g
Protein	max. 0.1 g
Salt	max. 0.1 g

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Production & description

In the past, the following methods were used to obtain glycerine:

- by synthesis starting from propene (petroleum processing) = conventional glycerine
- hydrolysis of carbohydrates with subsequent catalytic hydrogenation (glycerogen)
- chemical as a by-product of the saponification of natural fats and oils (fatty acid ester cleavage)
- biotechnologically by fermentation e. g. alcoholic fermentation

However, all of the above methods have been replaced by the cheaper production of glycerine as a by-product of biodiesel production through transesterification of triglycerides. These are catalytically treated with methanol to form methyl esters of triglycerides and glycerol. In the next step, the crude glycerol is converted into purified glycerol 99%. The glycerine obtained is diluted to 85% with treated purified water according to Ph. Eur.

A syrupy liquid, unctuous to the touch, colourless or almost colourless, clear, very hygroscopic with a sweet taste.

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Gustav Heess

Glycerol 85% vegetable Ph. Eur.

As a natural component of fats and oils, our glycerine is also obtained exclusively from vegetable oils and fats. Therefore, the extraction of glycerine from animal products is excluded and our glycerine is 100% kosher. The production of pharmaceutical glycerol is even more complex than the general steps described above. Organic components and salts are separated from the raw glycerine by vacuum distillation. In order to refine the glycerine to pharmaceutical quality, it additionally passes through bleaching, treatment with activated carbon and filtration. The pharmaceutical quality of our glycerol guarantees highest purity, because the dilution with purified water according to Ph. Eur. prevents contamination e.g. by chlorine and the formation of aldehydes.

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Usage

Cosmetics

- used as a humectant, as it is able to bind water molecules to itself, infiltrate the skin and store them there. This makes the skin smooth and it does not dry out.
- particularly suitable for hand and face care products
- ointment base
- cleansing products such as shower gel, cleansing milk or shampoo, glycerine is added because glycerine penetrates deeper into the horny layer and is not so easily washed off

Food

- sweetening of beverages
- humectants for tobacco
- humidification of foods such as chewing gum or dates
- as a food additive it has the abbreviation E 422

Pharmaceutics

- consistency enhancers, solvents, moisturizers, auxiliaries and ointments
- glycerine cannot be administered parenterally or intravenously, as this leads to the dissolution of the red blood cells

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Sustainability & responsibility

The glycerol we offer is generally only a by-product of biodiesel production. Since the 2010 harvest, only biomass that has been demonstrably sustainably produced may be used for biofuels and bioelectricity. This is prescribed by the Biofuel Sustainability Regulation and the Biomass Electricity Sustainability Regulation issued to implement EU law (Directive 2009/28). The two regulations apply to biomass from Germany as well as from other countries if it is recorded against the biofuel quota, a tax reduction or remuneration under the Renewable Energy Sources Act (EEG) in Germany.

These sustainability regulations for the biomass electricity and biofuel sectors are an important part of the German government's policy for implementing the energy and climate protection targets.

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Glycerol

99 % vegetable Ph. Eur.

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602005

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Usage:
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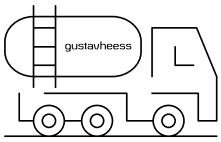
Certificates:
Kosher

Our packaging



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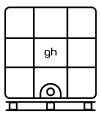

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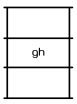

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30 kg Canister

General durability:

IBC, drum & canister 12 months

gustavheess
group of companies since 1897

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Nutritional values

Nutritional value	**(per 100g)**
Energy	1,580 kJ / 378 kcal
Fat	max. 0.1 g
Saturated fatty acids	max. 0.1 g
Carbohydrates	99 g
Zucker	max. 0.1 g
Polyole	99 g
Protein	max. 0.1 g
Salt	max. 0.1 g

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