

# Castor oil

The oil of the miracle tree



The extraordinary castor oil is almost colourless and tasteless. Castor oil has a very high content of ricinoleic acid. The oil has a constant viscosity.

## Qualities & Usage

We carry Castor oil in the following qualities for you

Art.-Nr.	Quality	Cosmetics	Food	Pharmaceutics
740031	Castor oil refined Ph. Eur.	Yes		Yes
740032	Castor oil refined low moisture Ph. Eur.	Yes		Yes
740023	Castor oil virgin Ph. Eur.	Yes		Yes
740060	Castor oil virgin low acid value Ph. Eur.	Yes		Yes
740320	Organic castor oil cold pressed	Yes		Yes

As castor oil has a largely independent, constant viscosity and strong adhesive power, it is used as a lubricating oil for aircraft, ships, jet engines, hydraulic pumps, brake fluid and as a plasticizer in the plastics industry. Another important field of application is its use as a raw material for the production of paints and varnishes, in the rubber, textile, leather, plastics (polyamide 11) and cleaning agent industries.



# Castor oil

The oil of the miracle tree



## Castor oil plant & castor oil seed

Castor oil is produced from the shelled seeds of the castor oil plant, which is also known as the miracle tree (Latin *Ricinus communis* L.) or *Ricinus communis*. Castor oil plant belongs to the spurge family (Euphorbiaceae) of the genus *Ricinus*. The castor oil plant is not actually a tree, but an annual to perennial herbaceous shrub. Every year in autumn it dies down to its roots. In the following year, it sprouts again from these roots under appropriate sunlight.

In the temperate climate zones, it grows as an annual herbaceous plant, in the tropics as a perennial. Castor oil plant is a fast-growing plant and under ideal conditions it can grow to a height of up to 6 meters in just three to four months, which is why the plant is also known as a miracle tree. Perennial plants can grow to a height of up to 10 meters and have a life span of approx. 4 years. The hand-shaped leaves of the wonder tree are between 30 and 70 cm long and dark green or reddish in colour.

The flowering time of the miracle tree is between August and October. The inconspicuous inflorescences are fleshy and 30 to 40 cm long. The female red flowers are on top, the male white to light yellow flowers are in the lower part.

The flowers form brown, walnut-sized fruits which can be harvested in autumn. These contain 7 to 14 mm long and 6-8 mm wide, bean-shaped, shiny seeds. The seed coat is thin, hard, brittle and easy to remove. The average weight of a thousand grains is about 200-450 grams.

Since castor seeds contain ricin, our gentle cold pressing process ensures that our castor oil is free of toxic substances.

Depending on the variety, the soil conditions and the climate, between 450 kg and 2,000 kg of oil can be obtained per hectare. The seeds contain 40-55 % oil.



# Castor oil

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## Cultivation & yield

The miracle tree is cultivated worldwide. More than 80 percent of the world market production comes from India, Brazil and China, where the plant flourishes.

In autumn, when the plant is fully ripe, it is harvested. Harvesting is done mechanically for large areas and manually only for small areas. During this process the capsules are cracked and dried. After drying, the seeds are peeled, and the valuable castor oil is obtained by pressing. Worldwide, approx. 600,000 tons of castor oil are consumed annually, of which approx. 38,000 tons are consumed in Germany. The consumption of castor oil represents about 0.4% of the total vegetable oil consumption.

## Background / history

Seeds of the plant were found in Egyptian graves dating back to 4000 BC, but it is not clear whether castor oil plant originally came from India or Africa. The fast-growing miracle tree was already mentioned in the Bible. In the Book of Jonah of the Old Testament, it says that God made a castor plant grow overnight. The next morning "God sent a worm to gnaw the castor plant so that it withered.

Even in ancient Egypt and the Orient, this ancient crop plant was cultivated for its oily seeds and was used not only for cosmetics but also for wound treatment and technical purposes. Both ancient Egyptian texts and the Bible itself tell of the healing power and effectiveness of the castor oil plant.

At the end of the 18th century it was discovered that castor oil plant can be used as a laxative.

In the 1960s, castor oil plant production in the USA was heavily subsidized in order to make it less dependent on raw material imports. Since 1990, however, cultivation in the USA has no longer had any economic significance.





# Castor oil

refined Ph. Eur.

**Article number:**

740031

**INCI name:**

Ricinus Communis Seed Oil

**CAS number:**

8001-79-4

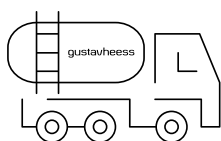
**Botanical name:**

Ricinus communis L

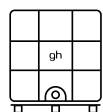
**Usage:**

Cosmetics, Pharmaceuticals

## Our packaging



25,000 kg Tank truck



900 kg IBC



200 kg Drum



27 kg Canister

## General durability:

IBC & canister 12 months, drum 24 months



## Composition

C18:1 Oleic acid	2.5 – 6 %
C18:2 Linoleic acid	2.5 – 7 %
C18:1 Ricinoleic acid	85 – 92 %



# Castor oil

refined low moisture Ph. Eur.

**Article number:**

740032

**INCI name:**

Ricinus Communis Seed Oil

**CAS number:**

8001-79-4

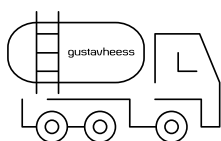
**Botanical name:**

Ricinus communis L

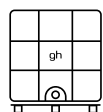
**Usage:**

Cosmetics, Pharmaceuticals

## Our packaging



25,000 kg Tank truck



900 kg IBC



200 kg Drum



27 kg Canister

## General durability:

IBC & canister 12 months, drum 24 months



# Castor oil

refined low moisture Ph. Eur.

## Composition

C18:1 Oleic acid	2.5 – 6 %
C18:2 Linoleic acid	2.5 – 7 %
C18:1 Ricinoleic acid	85 – 92 %



# Castor oil

virgin Ph. Eur.

**Article number:**

740023

**INCI name:**

Ricinus Communis Seed Oil

**CAS number:**

8001-79-4

**Botanical name:**

Ricinus communis L

**Usage:**

Cosmetics, Pharmaceuticals

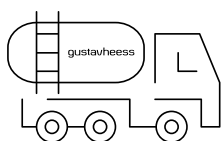
**Certificates:**

NATRUE

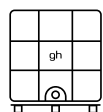
**Origin:**

We obtain our high-quality castor oil virgin Ph. Eur. from India.

## Our packaging



25,000 kg Tank truck



900 kg IBC



200 kg Drum



27 kg Canister

**General durability:**

IBC & canister 12 months, drum 24 months





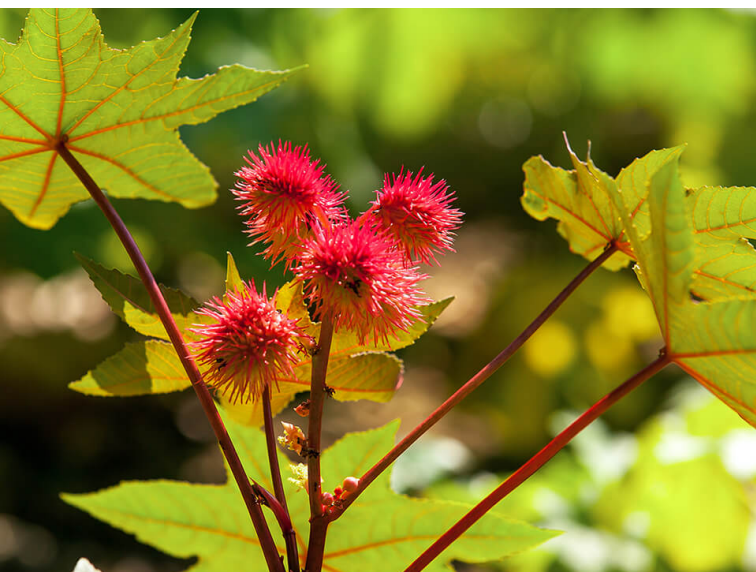
## Composition

C18:1 Oleic acid	2.5 – 6 %
C18:2 Linoleic acid	2.5 – 7 %
C18:1 Ricinoleic acid	85 – 92 %



# Castor oil

virgin Ph. Eur.



## Production & description

Castor Oil is the fatty oil obtained by cold expression from the seeds of *Ricinus communis* L.. During the expression step, the temperature of the oil must not exceed 50°C.

Clear at 40°C, slightly yellow, viscous, hygroscopic liquid. Slightly soluble in light petroleum, miscible with ethanol 96% and with glacial acetic acid.



# Castor oil

virgin Ph. Eur.

Gustav Heess

## Castor oil virgin Ph. Eur.

We obtain our high-quality castor oil virgin from India. We have a longstanding partnership with our Indian partners. Since castor oil may be toxic if produced incorrectly, it requires special attention to the production processes when selecting producers.

Through our long-standing partnership and extensive audits, we can clearly trace the production process and through extensive analyses we can ensure that only the peeled seeds are used for oil production. After gentle pressing of the hulled castor beans, they are then further refined. All production steps and analyses comply with the requirements of the Pharmacopoeia Europaea (Ph. Eur.).



## Usage

- Castor oil is often used for the care of eyelashes and eyebrows
  - Castor oil makes the hair shiny and is therefore used in hair care.  
Hair shampoos contain up to 30% castor oil
  - Castor oil is valued for its viscosity and is often used in lip gloss, lipsticks and bath oils
  - Castor oil is used generously as a basic substance in care and decorative cosmetics
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- Castor oil has a laxative effect and is therefore used in human and veterinary medicine as a natural laxative
  - In the external application it is used for scars, skin scales and age spots

### Cosmetics

### Pharmaceutics





## Sustainability & responsibility

The miracle tree, from whose seeds castor oil is extracted, is a frugal plant and therefore able to meet the challenges of climate change. In India, the miracle tree is cultivated by many small farmers and secures their livelihood. Through framework contracts, we provide the Indian oil mills with planning security.





# Castor oil

virgin low acid value Ph. Eur.

**Article number:**

740060

**INCI name:**

Ricinus Communis Seed Oil

**CAS number:**

8001-79-4

**Botanical name:**

Ricinus communis L

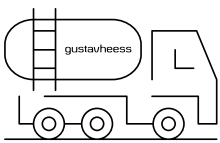
**Usage:**

Cosmetics, Pharmaceuticals

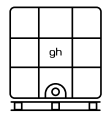
**Certificates:**

NATRUE

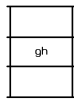
## Our packaging



25,000 kg Tank truck



900 kg IBC



200 kg Drum



27 kg Canister

**General durability:**

IBC & canister 12 months, drum 24 months



# Castor oil

virgin low acid value Ph. Eur.

## Composition

C18:1 Oleic acid	2.5 – 6 %
C18:2 Linoleic acid	2.5 – 7 %
C18:1 Ricinoleic acid	85 – 92 %



# Organic castor oil

cold pressed

**Article number:**

740320

**INCI name:**

Ricinus Communis Seed Oil

**CAS number:**

8001-79-4

**Botanical name:**

Ricinus communis L

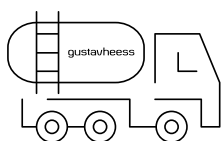
**Usage:**

Cosmetics, Pharmaceuticals

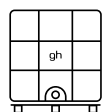
**Certificates:**

NOP

## Our packaging



25,000 kg Tank truck



900 kg IBC



200 kg Drum



27 kg Canister

**General durability:**

IBC & canister 12 months, drum 24 months



# Organic castor oil

cold pressed

## Composition

C18:1 Oleic acid	2.5 – 6 %
C18:2 Linoleic acid	2.5 – 7 %
C18:1 Ricinoleic acid	85 – 92 %

