

TECHNICAL DATASHEET

Cosphaderm® KG

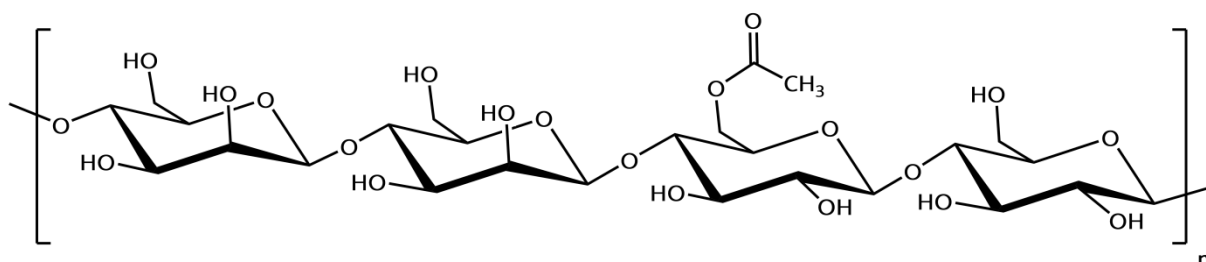
1.1 General information

Trade name:	Cosphaderm® KG
Item no.:	06-001-xxxx
Supplier	Cosphatec GmbH Hopfenmarkt 33 20457 Hamburg Germany
Chemical name:	Konjac gum
Other names:	Amorphophallus konjac, Amorphophallus rivieri, Konjac mannan, Glucomannan, E 425
INCI name (Europe):	Amorphophallus Konjac Root Extract
INCI name (Asia):	Glucomannan
CAS No.:	37220-17-0
EINECS/ EC No.:	253-404-6
IECIC:	Glucomannan

1.2 Product composition

INCI name	CAS No.
Amorphophallus Konjac Root Extract/ Glucomannan	37220-17-0

1.3 Chemical structure



1.4 Product short description

Cosphaderm® KG is a NON GMO, food approved glucomannan derived from Konjac flour. The water-soluble high-molecular-weight polysaccharide glucomannan consists of D-mannose and D-glucose units at a molar ratio of 1.6:1.0, connected by $\beta(1-4)$ -glycosidic bonds. Shorter side chains are attached through $\beta(1-3)$ -glycosidic bonds and acetyl groups occur randomly in a ratio of about 1 per 9 to 19 sugar units.

Konjac Gum has a long tradition of application in the food industry. In Japan coagulated Konjac gum is called "konnyaku", in Korea "gonyak". Chinese have used konjac glucomannan for over 2,000 years to treat conditions such as asthma, cough, hernia, breast pain and burns as well as hematological and skin diseases. The leaves have also been used as an insect repellent.

For cosmetic applications Cosphaderm® KG is of high interest because of its strong thickening efficiency and gel formation properties. A concentration of 1 % in water yields viscosities from at least 20,000 cP to more than 40,000 cP, higher than any other thickening agent. It reacts synergistically with Cosphaderm® X 34 and Cosphaderm® X soft and forms stable and highly elastic gels even with emulsions. These gels can be used for example to produce masks without any tissues.

1.5 Application

Recommended concentration: 0.3 %

Conditions: Water soluble

Hints: Lump formation can be avoided if Konjac Gum is dispersed in non-solutes like Propanediol before addition of water.

2.1 Specified data analyzed per batch

Appearance:	White powder		
Glucomannan content:	min. 95 %		
Viscosity (30 °C):	≥ 36 000 mPa*s (1%, Brookfield RVDV-II, Rotor 7, 12 rpm)		
Loss on drying:	max. 10 %		
pH:	5.0 – 7.0 (1 % aqueous solution)		
Transmittance:	min. 60 %		
Total ash:	max. 3 %		
Heavy metals:	Arsenic max. 2.0 ppm		
	Lead max. 0.8 ppm		
Microbiological data:	Total plate count	≤ 1000	cfu/g
	Yeasts and Molds	≤ 100	cfu/g
	E. coli	negative	cfu/25 g

2.2 Specified data analyzed periodically

Particle size:	90 % pass through 120 mesh
SO ₂ :	≤ 0.3 g/ kg

3.1 Physical and chemical properties

Molecular weight:	500 kDa – 2.000 kDa
Appearance:	white powder
Odour:	slight characteristic odour
Solubility:	soluble in water

3.2 Packing and Storage conditions

Packing sizes:	20 kg steel drum
Storage conditions:	may oxidize upon exposure to air and light, resulting in gradual darkening. Nitrogen blanketing and protection from light, heat and alkaline environment are recommended. Keep the product between 15°C and 30°C.
Shelf life:	unopened under proper conditions 24 month

4.1 Regulatory compliance

Food additive: approved as EU Food Additive (E 425)

Amorphophallus Konjac Root Extract (CAS: 37220-17-0) is included/listed in the following international inventories:

EINECS (Europe); TCSI (Taiwan); DSL (Canada); NZIoC (New Zealand);

4.2 Regulatory status for cosmetic application

Product complies with Regulation (EU) No. 1223/2009 in all the defined requirements.

4.3 Additives

Product contains only the specified ingredients. No other substances like preservatives, antioxidants, fragrances, colorants or other are added.

4.4 Impurities

	Not expected*	Present [#]	ppm
BSE/TSE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Dioxin	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Formaldehyde	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Gluten	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Lactose	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Pesticides	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Phthalates	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Residual solvents	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ethanol: < 5000
Heavy metals	ppm		
	total	≤ 10	
	Arsenic (As) ⁺	≤ 0.5	
	Lead (Pb) ⁺	≤ 0.5	
	Mercury (Hg) ⁺	≤ 0.1	
	Cadmium (Cd) ⁺	≤ 0.5	

4.5 Allergens

Product does not contain any of the 26 allergenic flavors or fragrances listed in Regulation (EC) No. 1223/2009 Annex III.

The product may contain Sulphur dioxide > 10 mg/kg Annex II of Regulation 1169/2011.

4.6 VOC

Product does not contain any volatile organic compound.

4.7 CMR

Product is not rated as CMR (category 1A, 1B and 2) and does not contain any ingredient rated as CMR according to Regulation (EC) No. 1223/2009 in association with Regulation (EC) No. 1272/2008/EC.

4.8 SVHC

Product is neither listed as SVHC substances nor contains any material with is listed as SVHC substance.

4.9 Nanomaterial

Product is not embraced by article 16 Regulation (EC) No. 1223/2009.

4.10 Animal testing

The Cosphatec GmbH has not conducted any animal testing for cosmetic purpose since March 11th 2009.

4.11 Irradiation

Product has not been irradiated in any step of the entire production process.

4.12 Origin

Substances (INCI name)	Synthetic	Vegetal	Biotechnology
Amorphophallus Konjac Root Extract or Glucomannan	<input type="checkbox"/>	<input checked="" type="checkbox"/> Name of the plant: <i>Amorphophallus konjac</i> Plant part used: Roots Origin: China	<input type="checkbox"/> Microorganism used:

4.13 GMO

The product is not subject to labelling according to Regulations (EC) No. 1829/2003 and 1830/2003.

4.14 Certifications

COSMOS

ECOCERT

Other Information

This information and our technical application advice are given to the best of our knowledge, but they are for information purposes only and given without responsibility. The advice doesn't exempt you from doing your own testing, particularly with regard to the qualification of our products for its intended processes and purposes. Application, use and handling of our products take place out of our control and are solely your responsibility. The sale of our products occurs according to our current general sales terms and delivery conditions.

*not expected to be present due to raw materials, production process and used equipment. Not regularly analysed.

#expected to be present due to raw materials, production process and used equipment. Periodically analysed.

+analysis results of a representative batch