

## TECHNICAL DATASHEET

### Cosphaderm® Propanediol natural

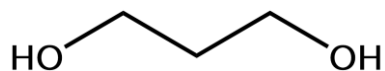
#### 1.1 General information

Trade name:	Cosphaderm® Propanediol natural
Item no.:	01-21-xxx-086
Supplier	Cosphatec GmbH Drehbahn 7 20354 Hamburg Germany
Chemical name:	1,3-Propanediol
Other names:	1,3-Dihydroxypropane, 1,3-Propylenediol, Propane-1,3-diol, Trimethylene Glycol
INCI name:	Propanediol
CAS No.:	504-63-2
EINECS/ EC No.:	207-997-3
IECIC:	Propanediol
REACH:	Ref. No. 01-2119489383-28-xxxx

#### 1.2 Product composition

INCI name	CAS No.	%
Propanediol	504-63-2	min 99.5

#### 1.3 Chemical structure



## 1.4 Product short description

Cosphaderm® Propanediol natural is a pure and colourless diol derived from the fermentation process of palm oil. It is therefore an ideal solution for creating formulations without petrochemical ingredients. Its polar character mediated by the two hydroxy substituents causes the unlimited solubility in water. This characteristic is strongly related to its most common cosmetic use as moisturizing and conditioning agent for both skin care and hair care formulations. It can also be applied as an emollient or solvent. At the same time Cosphaderm® Propanediol natural can help to prevent your water containing formulation from uncontrolled growth of bacteria and yeast. However, the antimicrobial efficiency of Propanediol is lower in comparison to diols with a longer carbon chain like Cosphaderm® Pentiol natural or Cosphaderm® Octiol (caprylyl glycol).

We recommend to use Cosphaderm® Propanediol natural as a booster for alternative preservation and to combine it with other Cosphaderm® Multifunctionals.

## 1.5 Application

Recommended concentration:	as a booster (2 – 10 %)
Conditions:	water soluble
Hints:	add recommended concentration to the water phase of your formulation

## 2.1 Specified data analyzed per batch

Appearance:	transparent clear liquid (visual)
Purity:	min 99.5 [A]% (GC-FID)
Water:	max 0.5 % (Karl Fischer titration)
Colour:	max 10 (APHA spectrophotometer Hunterlab)
Density:	1.040 – 1.060 (Pycnometric)
Refractive Index:	1.425 – 1.445 g/cm <sup>3</sup> (Refractometric)

## 3.1 Physical and chemical properties

Molecular formula:	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>
Molecular weight:	76.10 g/mol
Appearance:	colourless viscous liquid
Odour:	odourless, very slightly alcoholic
Melting point:	-27°C
Boiling point:	210-211°C (lit.)
Flash point	131°C (lit.)

Solubility: completely water miscible

### 3.2 Packing and Storage conditions

Packing sizes: 25 kg cans and 200 kg drums

Storage conditions: The product should be stored in the air-tight original sealed container protected from direct sunlight, moisture and heat.

Shelf life: Unopened under proper conditions 24 month

### 4.1 Regulatory compliance

Propanediol (CAS: 504-63-2) is included/listed in the following international inventories:

EINECS (Europe); TCSI (Taiwan); ENCS (Japan); TSCA (USA); DSL (Canada); KECI (Korea); IECSC (China); AICS (Australia); PICCS (Philippines); 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 <sup>#</sup>	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 checked="" type="checkbox"/>	<input type="checkbox"/>	

Heavy metals	ppm	
	total	≤ 10
	Arsenic (As)	≤ 0.5
	Lead (Pb)	≤ 0.25
	Mercury (Hg)	≤ 0.1
	Cadmium (Cd)	≤ 0.25

#### 4.5 Allergens

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

#### 4.6 VOC

Product does not contain any additional volatile organic compounds.

#### 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 11<sup>th</sup> 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
Propanediol	<input type="checkbox"/>	<input checked="" type="checkbox"/> Name of the plant: Oil palm Plant part used: Fruits Origin: Malaysia	<input checked="" type="checkbox"/> Microorganism used: <i>Klebsiella</i>

## 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

Dr. rer. nat. Carsten Dietz

R&D/Quality Director

**Cosphatec**  
COMPONENTS OF BEAUTY

### Other Information

This information and our technical application advice occur to the best of knowledge but it's for information only and without responsibility. The advice doesn't exempt you from doing your own testing particularly in regard to the intended purposes. Application, use and handling of our products take place out of our control and are only your responsibility. The sales of our products occur according to the 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.