

1,3-Propanediol



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1,3-PROPANEDIOL SPECIFICATIONS

Description: 1,3-Propanediol can act as a multipurpose ingredient: emollient, humectant, booster, solvent, viscosity enhancer and carrier for actives. 1,3-Propanediol is a high purity ingredient produced from 100% renewable sources GMO-free.

1,3-Propanediol is ideal especially in ECOCERT/COSMOS products and formulations.

Assay (%): 99,8 min

Colour (APHA): 10 max

Water (%): 0,1 max

FORMULATION AND RECOMMENDATIONS

Pure 1,3-Propanediol has a pH close to 7 and even at concentrations higher than 70% there is no skin irritation or sensitization.

1,3-Propanediol is made from natural Glycerol and is an excellent natural alternative to petroleum-based Glycols (Propylene glycol, 1,3-Butylene glycol or Methylpropanediol) and Glycerin. 1,3-Propanediol is also miscible with the majority of glycols and alcohols, as well as water.

Compared to standard Glycols, 1,3-Propanediol gives better performance both in skin moisturizing (no tackiness and filming, soft feeling) and hair moisturizing (higher water absorption, increased smoothness and softness). 1,3-Propanediol has a synergistic effect in combination with glycerin giving a long lasting moisturizing effect.

Actives like Allantoin, Glycolic acid and several Antioxidants show a high solubility in 1,3-Propanediol and better performance compared to water based solutions.

BENEFIT

Produced from 100% renewable sources

GMO-free

Excellent booster for preservative systems

Improve moisturizing efficiency

Non skin sensitizing or irritating

Excellent sensory profile

FUNCTION

Emollient

Humectant

Solvent

Botanical extract

Viscosity enhancer

Carrier for actives

Booster



APPLICATIONS

Cosmetics: Skin care - Make up - Hair care - Deodorant - Toiletries - Cleansers - Sun care - Baby care

Fragrances

Pharmaceuticals

Natural extracts

EFFICACY

1,3-Propanediol is not considered as a preservative itself, but can act as booster in many preservative systems. The pure product shows antibacterial activity as reported below:

Test Method: hygienic standard for disposable sanitary products GB 15979-2002.

Bacteria	Concentration (CFU/ml)	Antibacterial rate (%)	Evaluation
Staphylococcus aureus	6.9×10^5	94.2	Significant
Escherichia coli	7.8×10^5	>99.9	Significant

1,3-Propanediol is an efficient booster especially in Phenoxyethanol based formulations against bacteria (both gram positive and negative) and yeasts. The use of 1,3-Propanediol can reduce significantly the amount of preservatives needed in the formulation.

PACKAGING

25 kg drums / 200 kg drums / 1000 kg IBC

GLOBAL REGULATORY

EU: EINECS listed (207-997-3)

USA: TSCA listed (504-63-2)

Canada: DSL listed

Japan: Listed (ENCS (2)-234 and ISHL (2)-234)

China: IECSC listed

South Korea: KECI listed (KE-29268)

Philippines: PICCS listed

Australia: AICS listed

New Zealand: HSNO listed (HSR006355)

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