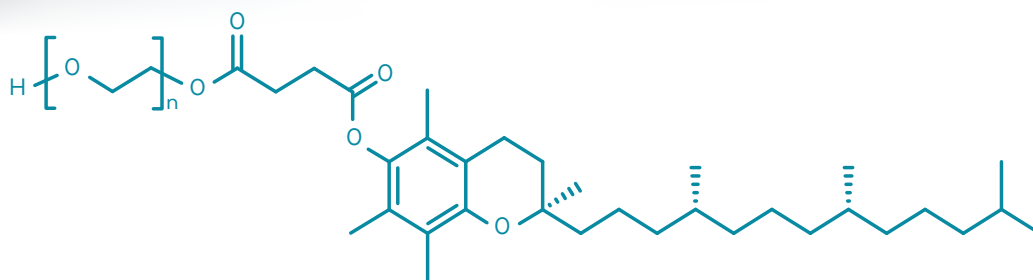




# isodel™ VITAMIN E TPGS

Pharma (NF) and Food Grade



**CHEMICAL NAME**  
D- $\alpha$ -tocopheryl polyethylene glycol 1000 succinate

**SYNONYMS/ACRONYMS**  
Tocofersolan  
Tocophersolan  
TPGS / Vit-E-TPGS

**CAS #** 9002-96-4  
**US DMF#** 23883  
**C DMF#** 20190000289

## APPLICATION

Vit-E-TPGS has proven properties to improve bioavailability of poorly soluble drugs, vitamins, micronutrients and functional properties in advanced formulation technologies.

Isodel™ TPGS: used in several marketed drug products  
**(Functional Excipient or API)**

### FORMULATION / ADMINISTRATION

Oral  
Parenteral  
Topical  
Ophthalmic  
Nasal

### APPLICATION FIELD

Pharmaceutical  
Human Nutritional supplements  
Cosmetic & Personal care  
Animal nutrition  
Food and beverage

TPGS: Functional ingredient of **Self-Emulsifying Drug Delivery System (SEDDS)** and stabilizer of **amorphous solid dispersions (ASDs)**. **Plasticizer/binder** for innovative technologies in the pharmaceutical industry such as **hot melt extrusion**. Efficient source of natural Vitamin E for both **therapeutic and nutraceutical** purposes.



# VITAMIN E TPGS

## Pharma (NF) and Food Grade

### PROPERTIES

#### DRUG BIOAVAILABILITY

- > Solubilizer of poorly water-soluble drugs
- > Enhancer of drug permeability by P-glycoprotein efflux inhibition
- > Stabilizer of amorphous drug dispersion

#### FUNCTIONAL INGREDIENT

- > Emulsion vehicle
- > Ingredient for self-emulsifying formulations
- > Thermal binder in melt granulation/extrusion processing

#### WATER SOLUBLE SOURCE OF VITAMIN E

Isodel TPGS is also used as an efficient source of natural Vitamin E, both for therapeutic and nutrition purposes.

### THE PRODUCT

**Chemical Abstract Index name:** Vitamin E polyethylene Glycol Succinate or  $\alpha$ -[4-[[[(2R)-3,4-dihydro-2,5,7,8-tetramethyl-2-[[4R,8R)-4,8,12-trimethyltridecyl]-2H-1-benzopyran-6-yl]oxy]-1,4-dioxobutyl]- $\omega$ -hydroxy-poly(oxy-1,2-ethanediyl)]

**Empirical formula:**  $C_{33}O_5H_{54}(CH_2CH_2O)_n$

**Molecular weight:**  $\approx$  1500 Da

**Physical form:** waxy solid

**Melting point:** 36-42 °C

**Color:** white to light tan

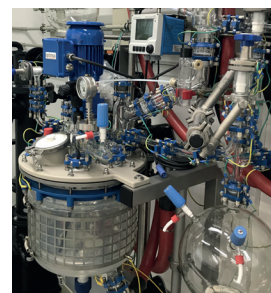
**Vitamin E content:** 25%-30%

**Solubility in water w/v %:** 20% at 20 °C

**Aspect:** forms gels (>20 in water)

**HLB (hydrophile/lipophile balance):** 13

**CMC (Critical Micelle Concentration):** 0.02 wt% at 37 °C



### ISODEL® TPGS

13+ years of GMP production and supply of TPGS as functional excipient and drug substance.

- > ISODEL® TPGS (USP compliant):  
API grade, NF & food grade
- > Active DMF (US, China)
- > 100 mt capacity & manufacturing under GMP in 2 FDA-approved sites (in Europe)
- > 100 g sample for proof of concept
- > Packaging 1, 5, 20 and 100 kg GMP

- > Robust partner for innovation and regulatory approval
- > Retest date: 4 years
- > Supporting information: Upon request
  - Material safety data sheet
  - Quality documentations and statements BSE/TSE, non-GMO, Kosher, ...)
  - Technical data sheet
  - Handling standard operating procedure

### CONTACT



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