

# Technical Data Sheet

## POLYGLYKOL P 41/300

Base oil component for industrial applications

<b>Composition</b>	random, branched ethylene oxide/ propylene oxide copolymer $H(OCH_2CH_2)_n(OCH_2CHCH_3)_m$ m OH n:m = 4:1
<b>Product properties <sup>1</sup></b>	
<b>Appearance (20°C)</b>	Clear viscous liquid
<b>Color index [APHA] EN 1557</b>	Max. 100
<b>Refractive index (20°C) DIN 51432</b>	Approx. 1.465 -1.469
<b>Molecular weight</b>	Approx. 5000 g/mol
<b>Water content DIN 51777</b>	Max. 0.5 %
<b>pH value (10% w/w in water) DIN EN 1262</b>	Approx. 7.0 – 9.5
<b>Contact angle V2A steel (5% in aq.*)</b>	Approx. 40.5 °
<b>Surface tension (5% in aq. **)</b>	Approx. 38.1 mN/m
<b>Density (20°C) DIN 51757</b>	Approx. 1.092 – 1.096 g/cm <sup>3</sup>
<b>Viscosity (40°C) DIN 51562</b>	Approx. 450 mm <sup>2</sup> /s
<b>Viscosity (100°C) DIN 51562</b>	Approx. 75 mm <sup>2</sup> /s
<b>Viscosity index ASTM D2270</b>	Approx. 231
<b>Cloud point (1% in aq.)</b>	Approx. 94°C
<b>Cloud point (5g in 25g 25% BDG)</b>	Approx. 81°C
<b>Pour point ISO 3016</b>	Approx. -10°C
<b>Flash point DIN 51376</b>	Approx. 270°C
<b>Ignition temperature DIN 51794</b>	Approx. 310°C
<b>Sodium / potassium content</b>	Max. 40 ppm
<b>Four ball test DIN 51350/3B (60min. / 300N)</b>	Approx. 0.25 mm
<b>Seizure / welding load</b>	Approx. 1500 / 1800 N
<b>FZG load stage DIN 51354</b>	Approx. >12

<sup>1</sup> These characteristics are for guidance only and not to be taken as product specifications. The tolerances are given in the product specification sheet. For further product properties, specifications, safety and ecological data, please refer to the MSDS.

\*) Contact angle of water on V2A steel: 64°

\*\*) Surface tension of water: 71.6 mN/m

## Profile

### Product properties

Polyglykol P 41/300 is a clear, neutral viscous liquid at room temperature. Polyglykol P 41/300 is soluble in water and polar organic solvents like acetone or methanol at room temperature. It is insoluble in pure hydrocarbons. Polyglykol P 41/300 displays typical chemical reactions of alcohols/polyols. The solidification point of Polyglykol P 41/300 is  $-10^{\circ}\text{C}$ .

### Application

Based on their physical and chemical characteristics P 41-type polyglycols are used for a wide variety of applications.

Fields of industrial application:

- Reactive polyol/polyether component in polyester or polyurethane resins as crosslinker
- Component of auxiliaries for leather and textile processing
- Lubricant and mold release agent for rubber and elastomer processing
- Component of lubricant formulations
- Water soluble, lubricating, and thickening component of metalworking fluids, e.g. fully synthetics
- Humectant for paper, wood, and cellulose films
- Solvent and humectant for dyes and inks
- Modifier for production of regenerated viscose
- Humectant and plasticizer for adhesives
- Heat transfer medium

### Safety

Please see Material Safety Data Sheet before handling the material.

### Storage behaviour

When stored in a cold, dry place in a closed container Polyglykol P 41/300 can be kept for at least two years.

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