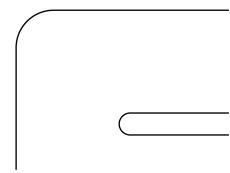


POLYGLYKOL B 01/150

# **Technical Data Sheet**



# POLYGLYKOL B 01/150

# Base oil component for industrial applications

Composition

Polypropylene glycol monobutylether

CH<sub>3</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CHCH<sub>3</sub>)<sub>n</sub> OH

Product properties <sup>1</sup> Appearance (20°C)

Color index [APHA] EN 1557 Refractive index (20°C) DIN 51432

Molecular weight

Water content DIN 51777

pH value (10% in EtOH/water 1:1)

Density (20°C) DIN 51757 Viscosity (40°C) DIN 51562 Viscosity (100°C) DIN 51562

Viscosity index ASTM D 2270 Pour point ISO 3016 Flash point DIN 51376

Ignition temperature DIN 51794 Four ball test DIN 51350/3B

(60min. / 300N)

Seizure / welding load

FZG load stage DIN 51354

Clear viscous liquid

Max. 100

Approx. 1.450

Approx. 3300 g/mol

Max. 0.25 %

Approx. 5.0 - 7.0

Approx. 1.019 - 1.023 g/cm<sup>3</sup>

Approx. 224 mm<sup>2</sup>/s

Approx. 37 mm<sup>2</sup>/s Approx. 217

Approx. -38°C

Approx. 240°C

Approx. 370°C

Approx. 0.45 mm

Approx. 1200 / 1800 N

Approx. 12

### Profile

### **Product properties**

Polyglykol B 01/150 is a clear neutral, viscous liquid at room temperature. Polyglykol B 01/150 is insoluble in water but soluble in many polar organic solvents like acetone or methanol. Polyglykol B 01/150 can be dispersed much better in pure hydrocarbon solvents than the more hydrophilic B 11-type polyglycols. Polyglykol B 01/150 displays a

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#### Issue

May 2023

Publisher

<sup>&</sup>lt;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.



very low solidification point of -38°C and no evaporation loss even at temperatures as high as 100°C. Polyglykol B 01-types have a very low hygroscopy compared to other Polyglykol-types.

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# Solubility

Table 2

	Water	Naphthenic	Rapeseed	Sunflower	Paraffinic
Solubility		mineral oil*	oil	oil	mineral oil*
	-	✓	✓	✓	-
	Trimelliate	TMP Triole-	PAO*		
	ester	ate ester			
	✓	✓	-		

- ✓ Soluble
- Insoluble
- \* Low viscous

## Thermo-oxidative degradation

To increase the thermo-oxidative stability, Lubricant Additive 1655 (LA 1655) can be used:

Table 3: Results of thermo-gravimetric analysis (TGA)

Addition of LA 1655	Temperature 5% mass loss	Temperature 10% mass loss	Center point T	Inflection point T	Residue
	°C	°C	°C	°C	%
none	202.22	213.39	249.16	269.5	0
+ 3% LA 1655	278.09	282.76	301.27	308	0

Pyrolysis under air flow (30 ml/min) from RT to 400 °C, heating rate: 10 °C/min

### **Application**

Based on their physical and chemical characteristics B 01-type polyglycols are used for a wide variety of applications.

Fields of industrial application:

- Base oil component for high performance lubricants with low friction coefficients, excellent wear properties and good thermal stability
- · Lubricant for refrigeration compressors
- · Lubricating component of metalworking fluids
- · Component of auxiliaries for leather and textile processing
- Component for defoamer formulations
- · Reactive alcohol component in chemical reactions
- Solvent for dyes and inks
- Dispersant for pigments

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# Application example: Base oil for grease formulations

Polyglykol B 01/150 can be used as a base oil component to formulate greases. As Polyglykol B01/150 is HX-1 registered for food grade lubricants with incidental food contact, it is an ideal component to formulate food grade greases. An example of a food grade grease formulated with Polyglykol B 01/150 as the oil component, silica as a thickener, and PTFE as an additive is shown below:

Table 4: Grease formulation

Material	NLGI 2	NLGI 2
	Amou	nt (wt %)
Polyglykol B 01/150	80	75.5
Pyrogenic silica	20	22.0
PTFE additive (Ceridust 9202 F)	-	2.5

Table 5: Properties of the greases

	Property	Method	Silica	Silica
			B 01/150	B 01/150
				PTFE
Grease	NLGI grade	ASTM D-217	2	2
	Consistency (1/10mm)	ASTM D-217	285	283
	Worked penetration - 100000 strokes (1/10mm)	ASTM D-217	285	-
	Oil separation (168h-40°C, %)	ASTM D-1742	0.82	-
	Water wash out (4g / 600 rpm / 79°C, %		5.1	2.6
-	not determined			

### Storage instructions

When stored in a cold, dry place in a closed container Polyglykol B 01/150 can be kept for at least two years.

# Safety

Further information on handling, storage and dispatch is given in the safety data sheet.

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