STABUTHERM GH 461, 462

High-temperature lubricating greases

Benefits for your application

- **Reduction of lubricant costs due to lower consumption**
- **Reduced waste water disposal costs due to excellent water resistance**
- **Considerable reduction of rolling bearing costs due to good wear protection, good load- carrying capacity and excellent corrosion protection**
- **Trouble-free operation of machines due to good pumpability and metering in central lubrication systems**
- **Low wear at high temperatures**

Description

STABUTHERM GH 461 and STABUTHERM GH 462 are high-temperature lubricating greases based on mineral oil and polyurea. They have a wide service temperature range and can be applied in rolling bearings up to 180°C. If the lubricant is used in central lubrication systems, operating temperatures up to 200°C are possible. STABUTHERM GH 461 and STABUTHERM GH 462 feature highly effective anti-wear properties. The greases are very adhesive and resistant to water both under static and dynamic load. STABUTHERM GH 461 and STABUTHERM GH 462 are resistant to oxidation and provide reliable protection against corrosion.

Application

STABUTHERM GH 461 and STABUTHERM GH 462 are particularly suitable for applications in smelting works and rolling mills, especially for high-temperature lubrication points supplied through a central lubrication system, e.g.

- drive rollers in continuous casting installations (slabs and billets)
- conveyor rollers in continuous furnaces

Lubricants for such applications must meet extremely high requirements regarding operating temperature, scaling, water and ensuing corrosion.

STABUTHERM GH 461 and STABUTHERM GH 462 are also suitable for other high-temperature applications, such as:

- annealing furnaces, drying stoves
- plain bearings in foundry cranes
- hot rolls in cardboard manufacturing plants
- road tarmacking machines
- shut-off gates in bulk material installations
- cooling beds, conveyor systems
- rotary kilns
- machines and installations in the automotive, beverage, glass and ceramics industries

Application notes

STABUTHERM GH 461 and STABUTHERM GH 462 can be pumped through all common types of lubrication systems.

Pipe friction values were determined in order to assess the pumpability in central lubrication systems.

The results obtained at different temperatures are illustrated in diagrams 1 and 2 on pages 3 and 4.

Diagram 1 shows the resistance to pumping per meter of pipe with a diameter of 7 mm; diagram 2 shows the values of a pipe with a diameter of 16 mm.

The pipe friction values were measured with a Shell DELIMON rheometer system.

Material safety data sheets

Material safety data sheets can be requested via our website www.klueber.com. You may also obtain them through your contact person at Klüber Lubrication.

Pack sizes	STABUTHERM GH 462	STABUTHERM GH 461
Cartridge 400 g	+	-
Bucket 25 kg	+	-
Drum 180 kg	+	-

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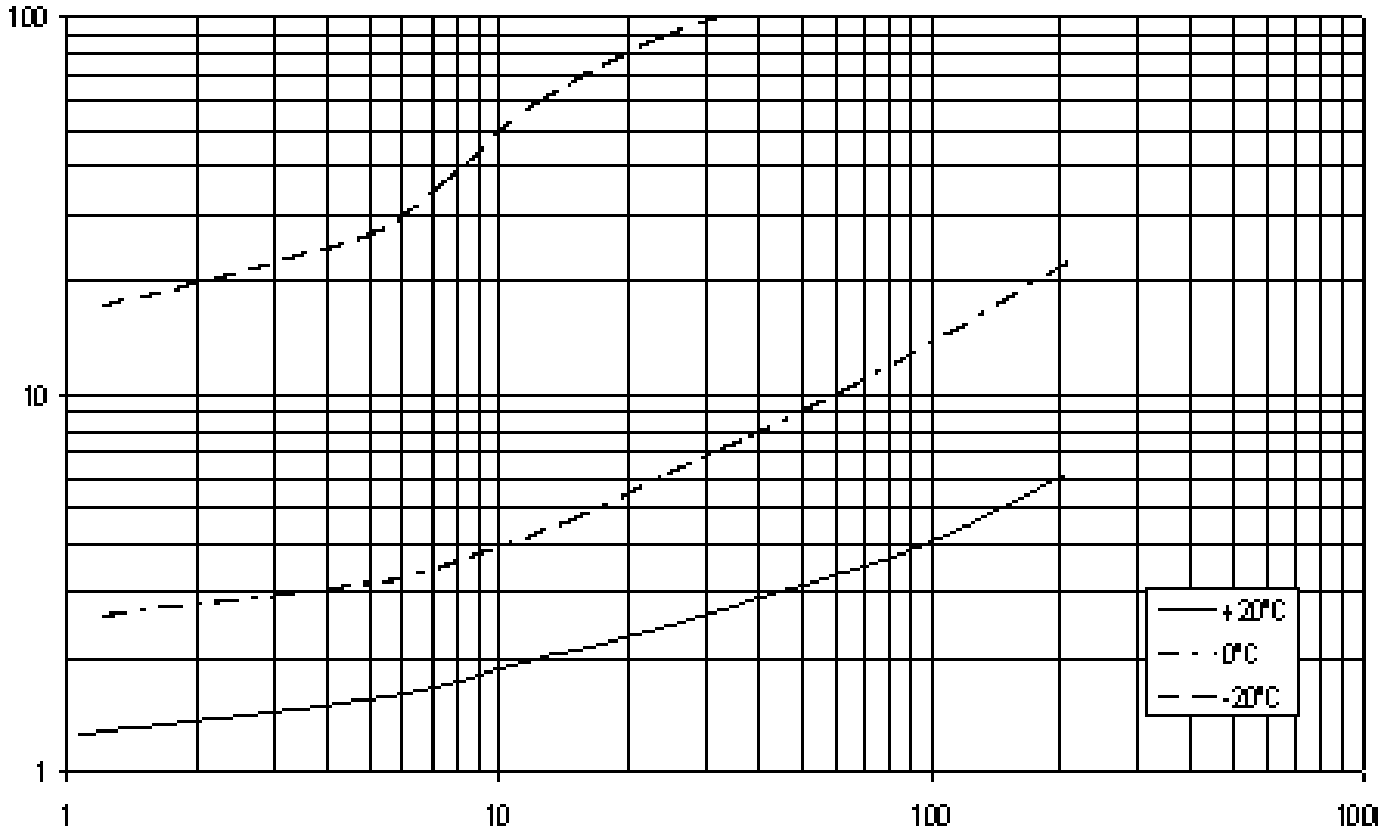
Product data	STABUTHERM GH 461	STABUTHERM GH 462
Article number	020500	020511
NLGI grade, DIN 51818	1	2
Chemical composition, type of oil	mineral oil	mineral oil
Chemical composition, thickener	polyurea	polyurea
Lower service temperature	-20 °C / -4 °F	-10 °C / 14 °F
Service temperature, upper limiting value for continuous lubrication	180 °C	180 °C
Colour space	beige	beige
Appearance	transparent	
Texture	homogeneous	homogeneous
Texture	long-fibred	long-fibred
Kinematic viscosity of the base oil, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 40 °C	approx. 490 mm²/s	approx. 490 mm²/s
Kinematic viscosity of the base oil, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 100 °C	approx. 31.5 mm²/s	approx. 31.5 mm²/s
Corrosion inhibiting properties of lubricating greases, DIN 51802, (SKF-EMCOR), test duration: 1 week, distilled water	0 corrosion degree	<= 1 corrosion degree
Copper corrosion, DIN 51811, (lubricating grease), 24h/120 °C	1 - 120 corrosion degree	1 - 120 corrosion degree
Flow pressure of lubricating greases, DIN 51805, test temperature: -10 °C		<= 1 400 mbar
Flow pressure of lubricating greases, DIN 51805, test temperature: -20 °C	<= 1 400 mbar	
Drop point, DIN ISO 2176, IP 396	>= 240 °C	>= 240 °C
Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx.	36 months	36 months

Pipe friction values

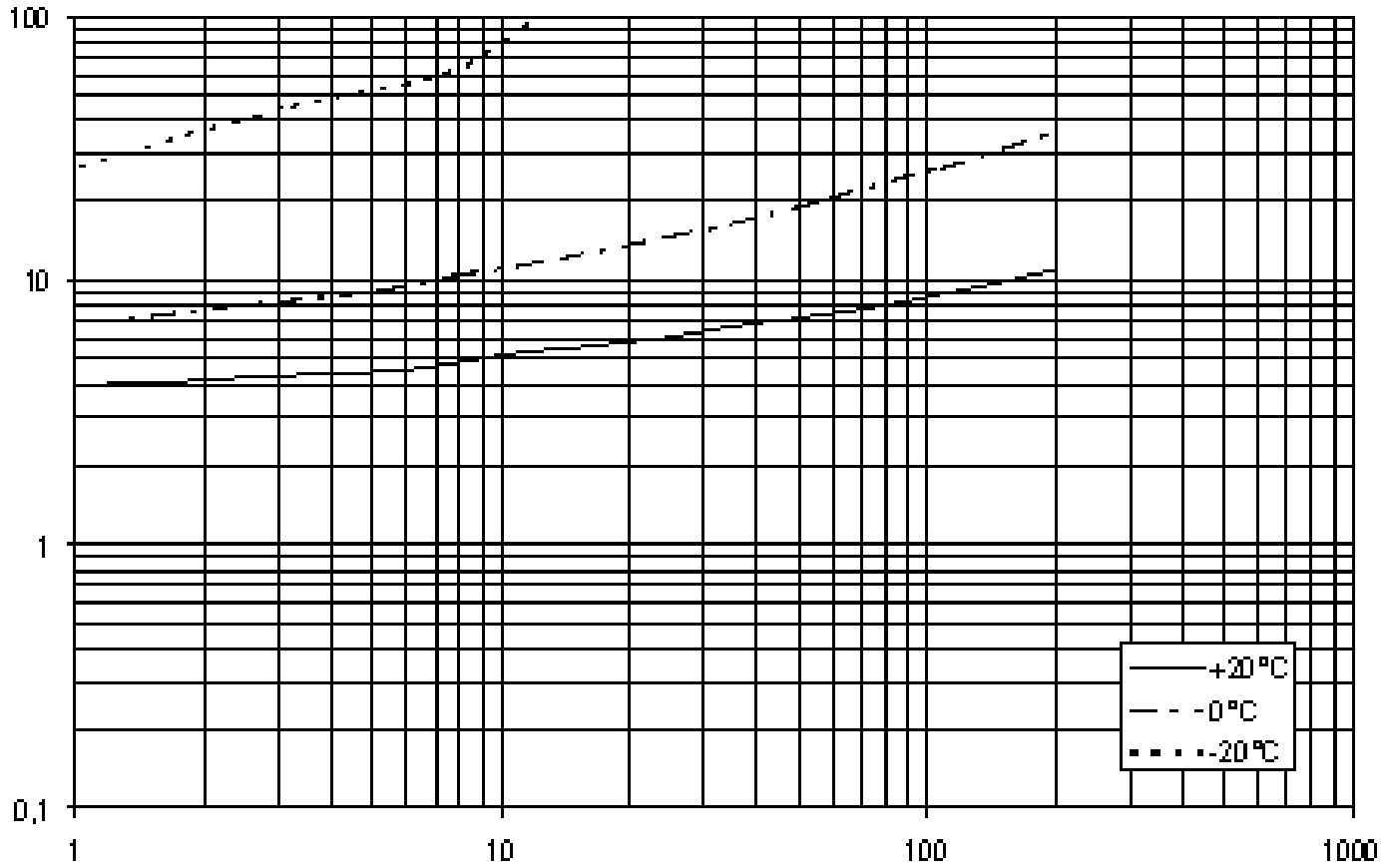
measured with Shell-DELIMON rheometer



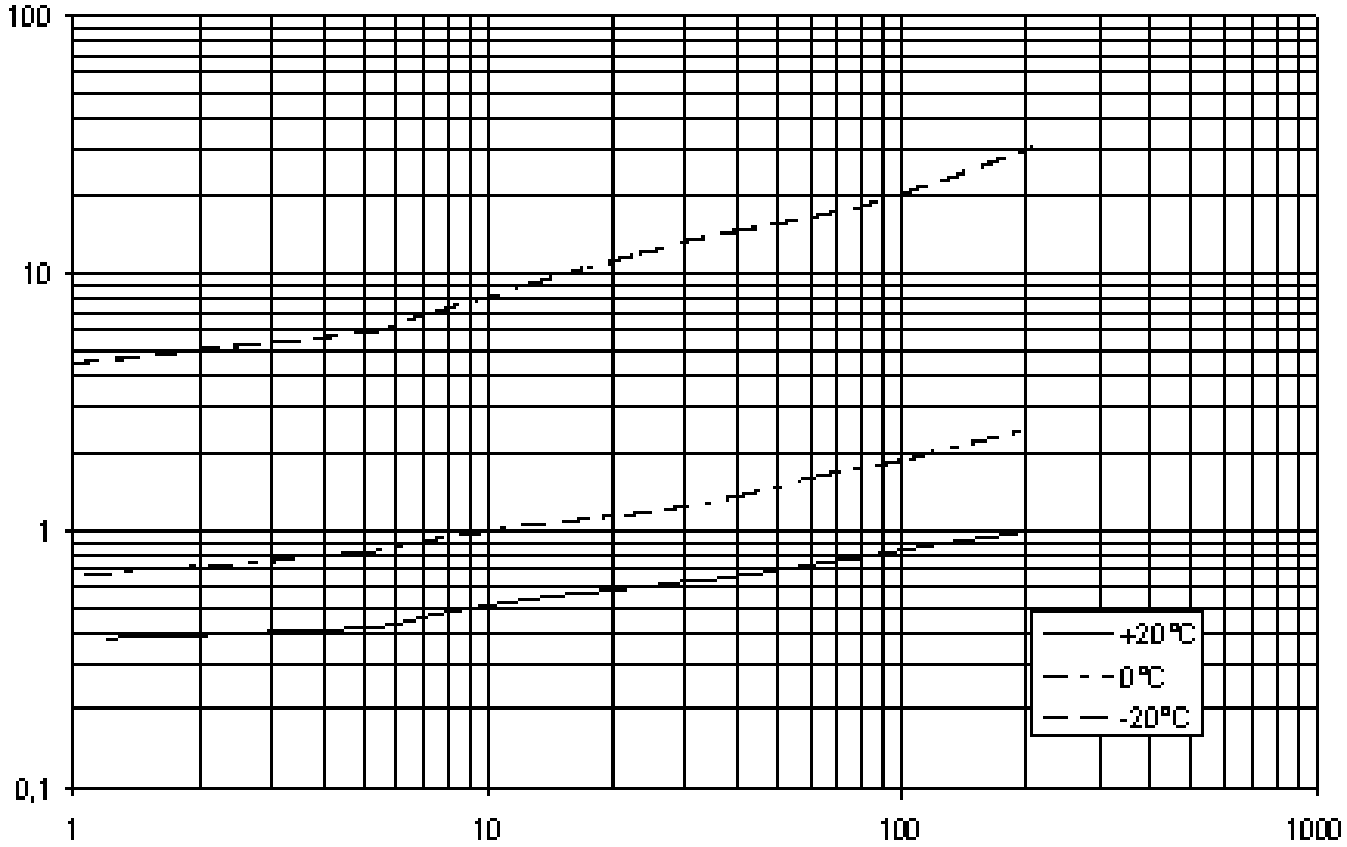
STABUTHERM GH 461 Temperature	Pipe diameter 7mm Throughput		
	1 g/min	10 g/min	100 g/min
-20 °C	18 bar	48 bar	> 100 bar
0 °C	2,6 bar	4 bar	14.5 bar
+20 °C	1.2 bar	1.9 bar	4.1 bar

STABUTHERM GH 461, 462

High-temperature lubricating greases



STABUTHERM GH 462 **Temperature**	**Pipe diameter 7mm** **Throughput**		
	1 g/min	10 g/min	100 g/min
-20 °C	28 bar	78 bar	> 100 bar
0 °C	7 bar	12 bar	26 bar
+20 °C	4 bar	5.2 bar	8.8 bar



STABUTHERM GH 461 Temperature	Pipe diameter 16mm Throughput		
	1 g/min	10 g/min	100 g/min
-20 °C	4.5 bar	8 bar	20 bar
0 °C	0.65 bar	1 bar	1.9 bar
+20 °C	0.38 bar	0.5 bar	0.5 bar

STABUTHERM GH 461, 462

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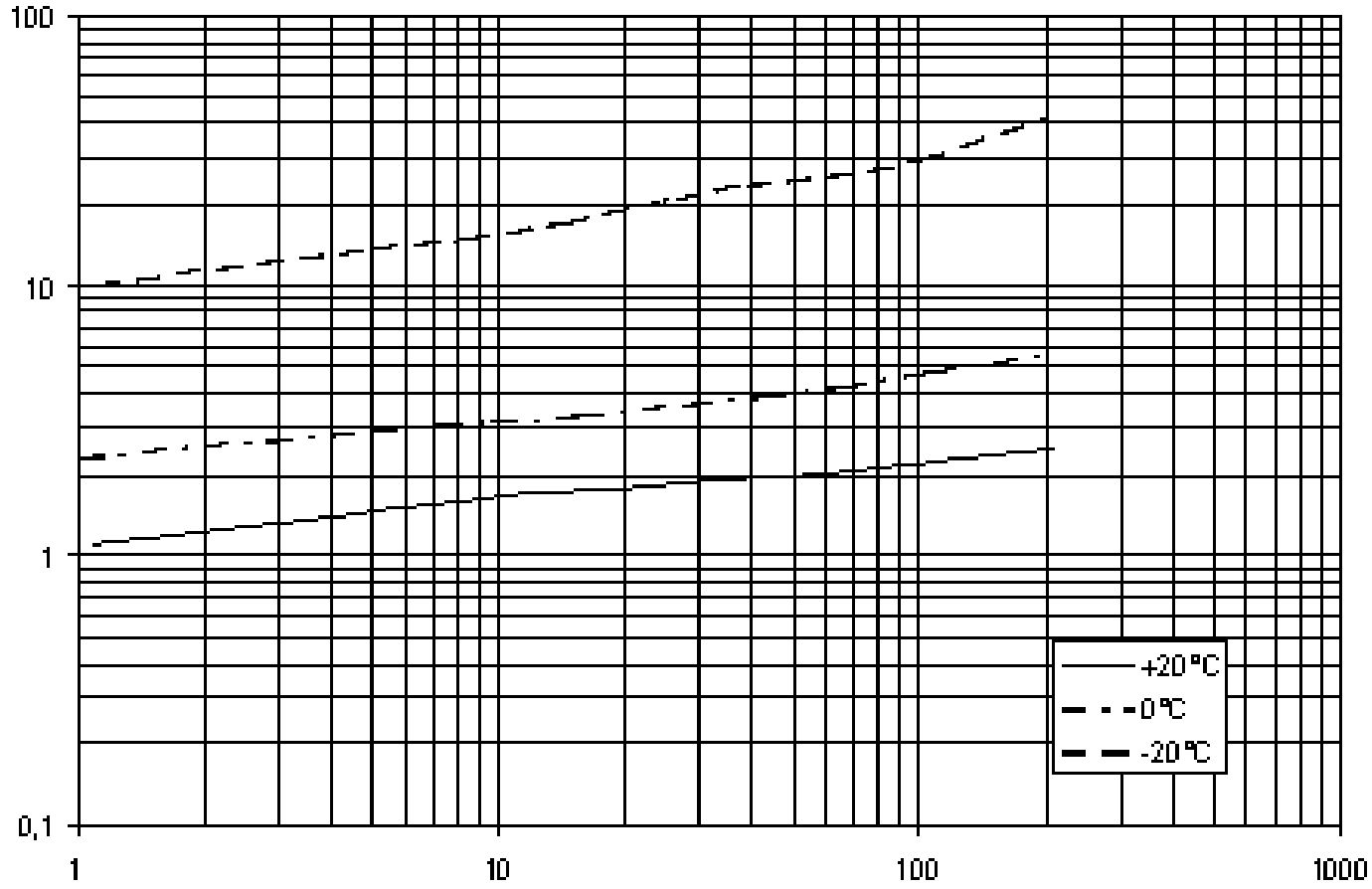

STABUTHERM GH 462 **Temperature**	**Pipe diameter 16mm** **Throughput**		
	1 g/min	10 g/min	100 g/min
-20 °C	10 bar	17 bar	29 bar
0 °C	2.3 bar	3.2 bar	4.8 bar
+20 °C	1.2 bar	1.7 bar	2.2 bar

Product information

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Klüber Lubrication – your global specialist

Innovative tribological solutions are our passion. Through personal contact and consultation, we help our customers to be successful worldwide, in all industries and markets. With our ambitious technical concepts and experienced, competent staff we have been fulfilling increasingly demanding requirements by manufacturing efficient high-performance lubricants for more than 80 years.

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