

# STABUTHERM GH 461

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## 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 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 and have a good load-carrying capability due to special EP additives. 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 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.



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The results obtained at different temperatures are illustrated in diagrams 1 and 2 on pages 4 and 5.

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.

### Pack sizes

STABUTHERM GH 461  
25 kg bucket  
180 kg drum  
10 cartridges PE 400 g

STABUTHERM GH 462  
25 kg bucket  
50 kg bucket  
180 kg drum

### Minimum shelf life

The minimum shelf life is approx. 36 months if the product is stored in its unopened original container in a dry, frost-free place.

### Material Safety Data Sheets

Material safety data sheets can be downloaded or requested via our website [www.klueber.com](http://www.klueber.com). You may also obtain them through your contact person at Klüber Lubrication.

### Product data

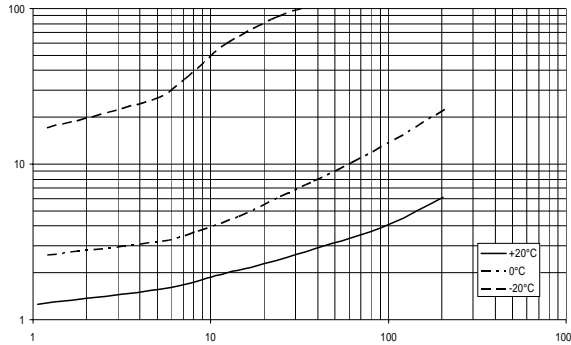
	STABUTHERM GH 461	STABUTHERM GH 462
Composition, oil type	mineral oil	mineral oil
Composition, thickener	polyurea	polyurea
Service temperature range*, [°C]	-20 to 180	-10 to 180
Colour, aspect	light beige-brownish, transparent	beige-light yellow
Texture	homogeneous, long-fibred	homogeneous, fibred
Consistency grade, DIN 51818 (NLGI)	1	2
Corrosion protection on copper, DIN 51811, 24 h/120 °C	1 - 120	1 - 120
Corrosion protection with distilled water, DIN 51802	0	1
Flow pressure at -20 °C, DIN 51805, [mbar]	≤ 1,400	
Flow pressure at -10 °C, DIN 51805, [mbar]		≤ 1,400
Drop point, DIN ISO 2176, [°C]	≥ 240	≥ 240

\* Service temperatures are guide values which depend on the lubricant's composition, the intended use and the application method. Lubricants change their consistency, apparent dynamic viscosity or viscosity depending on the mechano-dynamical loads, time, pressure and temperature. These changes in product characteristics may affect the function of a component.

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## High-temperature lubricating greases

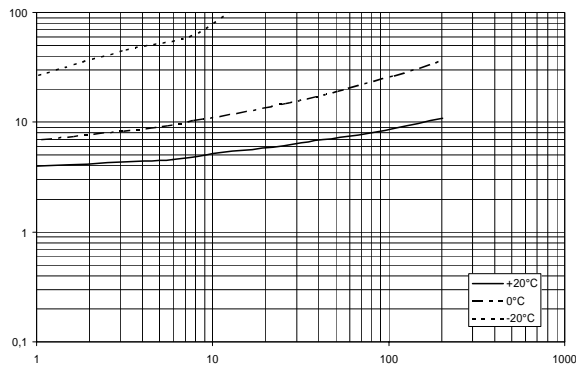
DIAGRAM 1 – Additional data  
Pipe diameter 7 mm



**Pipe friction values**  
measured with Shell-DELIMON rheometer\*\*\*

### STABUTHERM GH 461

Temperature	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 462

Temperature	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

\*\*\* The a.m. data are based on one-time measurements and serve as nonbinding information only.

\*\* The products can normally be applied by means of centralised lubricating systems. Please note, however, that due to different system configurations and a pplication conditions the pumpability of the products has to be confirmed for each individual application. We will be pleased to provide assistance in this matter.

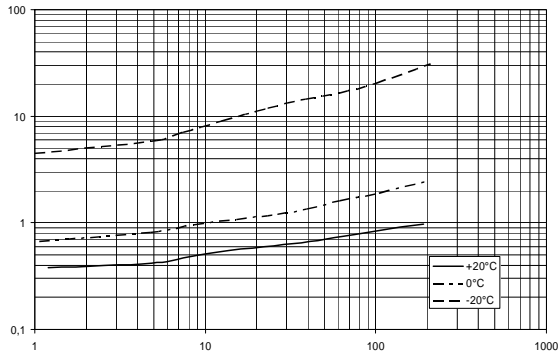


# STABUTHERM GH 461

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## High-temperature lubricating greases

DIAGRAM 2 – Additional data  
Pipe diameter 16 mm

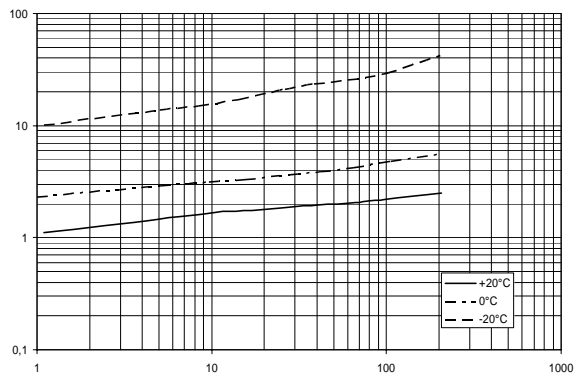


### Pipe friction values

measured with Shell-DELIMON rheometer\*\*\*

#### STABUTHERM GH 461

Temperature	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	0.85 bar



#### STABUTHERM GH 462

Temperature	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

\*\*\* The a.m. data are based on one-time measurements and serve as nonbinding information only.

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[www.klueber.com](http://www.klueber.com)

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