

## **Divinol greases**

High-performance products for industry and aftersales





## **Divinol greases**

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Please take a look at the current MSDS for all products offered.

The MSDS are always available on demand.

## **Divinol greases**

### High-quality greases for a wide range of industrial applications and aftersales

The tribology of consistent greases is sometimes significantly different from that of liquid lubricants. Zeller+Gmelin has recognised this many years ago and has focused on the specific requirements. In our research and development department, our own team deals exclusively with all questions relating to the subject of grease. All experiences finally lead to the development of new products. Zeller+Gmelin masters all important thickening technologies and at the same time it is able to develop specialised products application-related and in cooperation with our customers.

Our Divinol greases offer you advantages:

- + High quality greases
- + An extensive product portfolio for different requirements and purposes
- + Many years of experience in the development and production of greases
- + Development of customised products in close cooperation with the industry
- + Observance of the current chemical legislation
- + Fast cooperation on lubrication problems and new challenges



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## Lithium soap greases

- + For roller and sliding bearings and as other applications
- + Working stable
- + Water resistant
- + Dropping point > 180 °C

Product	Item no.	NLGI class	Base oil mm²/s	Temperature range		
Divinol Fett WEP 3	22140	3	mineral 220	−25 °C to +130 °C		
	+ With solid	lubricant ole for oscillati	cally loadable grease ng and shock loads			
Divinol Fett L 3	85560	3	mineral 100	−30 °C to +130 °C		
	<ul> <li>Description</li> <li>EP grease of NLGI class 3</li> <li>Especially suitable for lubricating transport rollers and wheels</li> <li>Used, among others, in motor vehicles, construction machines, agricultural machines and industrial machines</li> <li>DIN 51825: KP 3 K-30</li> </ul>					
Divinol Fett L 2	85440	2	mineral 100	−30 °C to +130 °C		
Fett L 3  Divinol	Description + EP grease + Especially + Used, amo agriculture + DIN 51825:	of NLGI class ( suitable for Iul ing others, in n al machines ar KP 3 K-30	100  3 bricating transport rol notor vehicles, constru nd industrial machines mineral	lers and wheels action machines,		

#### Description

- + EP grease of NLGI class 2
- + For many rolling and sliding bearing applications with increased mechanical load
- + Used, among others, in motor vehicles, construction machines, agricultural machines and industrial machines
- + DIN 51825: KP 2 K-30

Product	ltem no.	NLGI class	Base oil mm²/s	Temperature range			
Divinol Mehrzweckfett 2	22971	2	mineral 110	−30 °C to +120 °C			
	<ul> <li>Description</li> <li>Multipurpose grease for various purposes in industry, trade and commerce</li> <li>For lubrication of rolling and slide bearings under normal load</li> <li>Approvals: Federal Army Austria</li> <li>DIN 51825: K 2 K-30</li> </ul>						
Divinol Fett L 283	21120	2	mineral 100	−35 °C to +130 °C			
	<ul> <li>Description</li> <li>Versatile EP grease</li> <li>In particular for use in commercial vehicles</li> <li>Good conveying properties in centralised lubrication systems</li> <li>Approvals: MAN 283 Li-P 2</li> <li>DIN 51825: KP 2 K-30</li> </ul>						
Divinol Fett EP 2	85430	2	mineral 220	-30 °C to +130 °C			
	<ul> <li>Description</li> <li>+ Multipurpose EP grease for various purposes in industry, trade and commerce</li> <li>+ Suitable for use with increased mechanical load</li> <li>+ Approvals: MB sheet 267.00, Baier + Köppel, others</li> </ul>						

+ DIN 51825: KP 2 K-30

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## Lithium soap greases

- + For roller and sliding bearings and as other applications
- + Working stable
- + Water resistant
- + Dropping point > 180 °C

Product	Item no.	NLGI class	Base oil mm²/s	Temperature range				
Divinol Fett Fibrous 2	96840	2	mineral 220	−25 °C to +130 °C				
	<ul><li>Long-tern</li><li>Extra long</li><li>Suitable for</li></ul>	<ul> <li>Description</li> <li>Long-term grease with EP properties</li> <li>Extra long-fibrous grease with strong adhesion capability</li> <li>Suitable for use with increased mechanical load</li> <li>DIN 51825: KP 2 K-20</li> </ul>						
Divinol Fett MTS 2	08951	2	semi-synthetic 30	−50 °C to +120 °C				
	<ul> <li>Description</li> <li>+ Semi-synthetic low-temperature grease</li> <li>+ Due to the low base oil viscosity suitable for very fast rotating bearings</li> <li>+ DIN 51825: K 2 K-50</li> </ul>							
Divinol Mehrzweckfett graphitiert	85000	2	mineral 100	−30 °C to +130 °C				

#### Description

- + Black multipurpose EP grease with graphite
- + Very suitable for oscillating and shock loads
- + The contained solid lubricant gives emergency running properties
- + DIN 51825: KPF 2 K-30

Product	Item no.	class	mm²/s	Temperature range		
Divinol Fett LM 2	85800	2	mineral 100	−30 °C to +130 °C		
	<ul> <li>Description</li> <li>Black EP multipurpose grease with molybdenum disulphide</li> <li>Very suitable for oscillating and shock loads</li> <li>The contained solid lubricant gives emergency running properties</li> <li>DIN 51825: KPF 2 K-30</li> </ul>					
Divinol Fett LR 2 EP	25770	2	mineral 800	−20 °C to +140 °C		
	<ul> <li>Description</li> <li>Bright, solid lubricant-containing EP grease</li> <li>For heavily loaded lubrication points thanks to high pressure capacity</li> <li>With strong adhesion properties</li> <li>DIN 51825: KPF 2 N-20</li> </ul>					
Divinol Fett F 14 EP	85750	1	mineral 100	-40 °C to +120 °C		
	Description					

+ Very soft EP-grease of NLGI class 1

+ DIN 51825: KP 1 K-40

+ For mechanically loaded lubrication points

+ Good pumpability in centralised lubrication systems

NLGI

## Lithium soap greases

- + For roller and sliding bearings and as other applications
- + Working stable
- + Water resistant
- + Dropping point > 180 °C

Product	Item no.	NLGI class	Base oil mm²/s	Temperature range
Divinol Fett EP 1	28510	1	mineral 220	−30 °C to +120 °C
	commerce	r use with incr	for various purposes in increased mechanical load	dustry, trade and
Divinol Fett L 0	20240	0	mineral 100	-40 °C to +120 °C
	+ Suitable fo + Good low t	r use with incr emperature p mp in centrali	or gear lubrication reased mechanical load roperties sed lubrication systems wi	th long line routes
Divinol Fett ZSA	23970	00	semi-synthetic 68	-40 °C to +120 °C

- + EP fluid grease with good low-temperature properties
  + For lubrication of mechanically loaded gearboxes and lubrication points
- + In particular for the lubrication of commercial vehicles
- + Easy to convey via centralised lubrication systems with long line routes + Approvals: MB sheet 264.00, MAN 283 Li-P 00/000, W. Vogel AG
- + DIN 51826: GP 00 K-40



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## Lithium-calcium soap greases

- + For roller and sliding bearings and as other applications
- + For normal to elevated operating temperatures
- + With good oil separation capacity
- + Very good water resistance
- + Working stable

Product	Item no.	NLGI class	Base oil mm²/s	Temperature range		
Divinol Fett LC 2 EP	27860	2	mineral 500	−20 °C to +140 °C		
	<ul> <li>Description</li> <li>+ High-pressure grease with lithium-calcium soap</li> <li>+ Very good pressure absorption capacity for mechanically loaded lubrication points</li> <li>+ With high resistance to washout</li> <li>+ Preferably at slow to medium rotational speeds</li> <li>+ DIN 51825: KPF 2 N-20</li> </ul>					
Divinol Ecogrease LC 2 EP	28130	2	synthetic 300	−35 °C to +140 °C		



#### Description

- + Biodegradable grease based on lithium-calcium soap
- + Preferred use in agriculture, forestry, construction and water management
- + Biodegradability according to OECD 301 B
- + With reliable wear and corrosion protection
- + DIN 51825: KPF 2 N-30

Divinol Grease LC 1 EP 21860 2 mineral -20 °C to +140 °C 500

#### Description

- + Special lithium-calcium soap grease
- + Easily conveyable in long lubrication lines or at low temperatures
- + Very good pressure absorption capacity for mechanically loaded lubrication points
- + With high resistance to washout
- + DIN 51825: KPF 1 N-20

Product	Item no.	class	mm²/s	Temperature range
Divinol Synthogrease 1	28090	1	synthetic 20	-60 °C to +120 °C
	+ Very good + For fast ru	special grease I low temperatu Inning bearing n electrical cor	based on polyalphaol ure properties applications and lifeti nponents, small gears,	me lubrication
Divinol Fett LC 00 EP	28550	00	mineral 170	−35 °C to +120 °C

NLGI

#### Description

+ EP fluid gear grease for mechanically loaded lubrication points

- + With good pressure absorption and reliable wear protection
- + Very good resistance to washout by water
- + Preferably at slow to medium rotational speeds
- + DIN 51826: GP 00 K-30

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### Lithium complex soap greases

- + For roller and sliding bearings and as other applications
- + Operating temperatures up to +160 °C
- + Working stable
- + Water resistant
- + Dropping point > 220 °C

Product	Item no.	NLGI class	Base oil mm²/s	Temperature range
Divinol Lithogrease 3	21990	3	mineral 220	−20 °C to +150 °C
	+ For thermo	ole for wheel b	anically highly loaded earing lubrication on	d lubrication points a commercial vehicles
Divinol Langzeitachsenfett HT 260	27310	2	mineral 240	−30 °C to +150 °C
	<ul><li>Long-term</li><li>For therm</li></ul>	ally and mecho MAN 284 Li-H	g grease for trailer ax anically highly loaded 2	
Divinol Lithogrease 2B	21711	2	mineral 220	−30 °C to +150 °C

#### Description

- + EP multipurpose grease for lubrication points under high thermal load
- + For a wide range of lubrication tasks, with both thermal and mechanical load
- + Typical applications in truck axles, generators, electric motors, etc.
- + DIN 51825: KP 2 N-30

Product	Item no.	class	mm²/s	Temperature range		
Divinol Lithogrease G 421	20160	2	semi-synthetic 130	−35 °C to +160 °C		
Litnogrease & 421	<ul> <li>Description</li> <li>+ Highly-additive, semi-synthetic high-temperature grease</li> <li>+ The very good wear protection works in a wide temperature range</li> <li>+ Typical application in commercial vehicle wheel hubs, armoured tracked vehicles, etc.</li> <li>+ Approvals: Federal Armed Forces TL 9150-0075, NATO code G-421, Schaeffler, Baier + Köppel, W. Vogel AG, Bielomatik</li> <li>+ DIN 51825: KP 2 P-30</li> </ul>					
Divinol Lithogrease 2500 MO	26390	2	mineral 500	−20 °C to +150 °C		
-	viscosity + With very + Preferred + The contai + Very suita	ack lithium complex soap grease with solid lubricant and high base oil				
Divinol Lithogrease 7000	27630  Description	2	mineral 500	−20 °C to +150 °C		
	<ul> <li>Bright lithium complex soap grease with PTFE and high base oil viscosity</li> </ul>					

+ Exceptionally high pressure absorption capacity

+ Also very suitable for plastic lubrication

+ DIN 51825: KPF 2 N-20

+ The PTFE ensures a significant reduction in friction

+ For thermally and mechanically highly loaded rolling and sliding bearings

+ Typical applications include rolling bearings in rolling and galvanising lines in the steel industry, as well as in construction machinery and cranes

NLGI

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## Lithium complex soap greases

- + For roller and sliding bearings and as other applications
- + Operating temperatures up to +160 °C
- + Working stable
- + Water resistant
- + Dropping point > 220 °C

Product	Item no.	NLGI class	Base oil mm²/s	Temperature range			
Divinol Lithogrease Synth 2/1	28520	1.5	synthetic 460	−40 °C to +160 °C			
	<ul> <li>Pescription</li> <li>Fully synthetic grease based on lithium complex soap</li> <li>Very high oxidation stability despite continuous temperatures of up to 160 °C</li> <li>The high proportion of EP and AW additives ensures a very good pressure absorption capacity combined with very good anti-wear properties</li> <li>The synthetic base fluid gives a very good start-up behaviour at low temperatures</li> <li>High suitability for many industrial applications with a high requirement profile for a special lubricant</li> <li>DIN 51825: KPF 1.5 P-40</li> </ul>						
Divinol Lithogrease 1	29900	1	mineral 150	−30 °C to +150 °C			
	<ul> <li>Description</li> <li>Soft lithium complex soap grease with good all-round character</li> <li>For lubrication points with thermal and mechanical load</li> <li>Easily conveyable even at low temperatures and long line routes</li> <li>DIN 51825: KPF 1 N-30</li> </ul>						
Divinol Lithogrease 0	21140	0	mineral 320	−30 °C to +140 °C			
	<ul> <li>Description</li> <li>Semi-liquid gear lubricant grease NLGI class 0</li> <li>High proportion of EP active substances for lubrication of mechanically heavily loaded gear units and other lubrication points</li> <li>Approvals: Bielomatik</li> <li>DIN 51826: GP 0 N-30</li> </ul>						

Product	Item no.	NLGI class	Base oil mm²/s	Temperature range		
Divinol Lithogrease 00	20480	00	mineral 200	−30 °C to +140 °C		
	<ul><li>+ High prop heavily lo</li><li>+ E.g. or lub</li><li>+ Approvals</li></ul>	id gear lubricar portion of EP ac aded gear units rication not oil-	nt grease NLGI class C tive substances for Iul s and other Iubrication tight industrial gearb chneeberger, W. Vogel	orication of mechanically n points oxes		
Divinol Lithogrease 000	22320	000	mineral 380	−30 °C to +140 °C		
	Special lumachine     High propheavily lo     Approvals	id gear lubricar bricant for lubr tools portion of EP ac aded gear units	nt grease NLGI class C rication of linear guide tive substances for Iul s and other lubrication	es and screw jacks in orication of mechanically		
Divinol Lithogrease 000/150	23030	000	mineral 150	−30 °C to +140 °C		
	Description + Semi-liquid gear lubricant grease NLGI class 000					

+ Special lubricant for lubrication of linear guides and screw jacks in

heavily loaded gear units and other lubrication points

+ High proportion of EP active substances for lubrication of mechanically

machine tools

+ DIN 51826: GP 000 N-30



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### Calcium soap greases

- + For static applications and slightly moving lubrication points
- + Upper service temperatures from +60 to +110 °C
- + Especially for lubrication points in humid or wet environment
- + Water repellent
- + With high corrosion protection

Product	Item no.	NLGI class	Base oil mm²/s	Temperature range			
Divinol Abschmierfett 3	85120	3	mineral 46	−30 °C to +60 °C			
	<ul> <li>Description</li> <li>+ Higher solid consistency for low moving lubrication points</li> <li>+ Also as water pump grease in motor vehicles</li> <li>+ To ensure proper functionality in cold seasons</li> <li>+ To avoid, e.g. jamming by corrosion</li> <li>+ DIN 51825: K 3 C-30</li> </ul>						
Divinol Abschmierfett 2	85051	2	mineral 36	-40 °C to +60 °C			
	Pescription Convention With good It provides DIN 51825:	slide bearings					
Divinol Fett G-460	23920	2	mineral 110	−30 °C to +100 °C			
	Description						

- + Seawater resistant grease for marine applications
- + For lubrication of bearings, bolts, joints, chains, winches, open gears, screws, hinges, etc.
- + Especially if contaminated by water, sea air or seawater
- + High resistance to washout by water
- + With exceptionally good corrosion protection
- + Approvals: Federal Armed Forces TL 9150-0060, Nato Code G 460
- + DIN 51825: K 2 G-30

Product	Item no.	class	mm²/s	Temperature range			
Divinol Fett TOP 2003	23980	2	semi-synthetic 1000	−30 °C to +110 °C			
	<ul> <li>Description</li> <li>Long-term grease with extreme adhesion capacity</li> <li>For use in mechanically loaded bearings and lubrication points</li> <li>Especially suitable for outdoor applications</li> <li>Very high resistance to washout by water</li> <li>DIN 51825: KP 2 G-30</li> </ul>						
Divinol Profi Lube SL	62301	2	semi-synthetic 1000	−30 °C to +110 °C			
	<ul> <li>Description</li> <li>+ Sprayable long-term lubricant for outdoor applications</li> <li>+ For long re-lubrication intervals at hard-to-reach lubrication points</li> <li>+ High resistance to washout by water</li> <li>+ For use in mechanically loaded bearings and lubrication points</li> <li>+ DIN 51825: KP 2 G-30</li> </ul>						
Divinol Hydrantenfett	85010	1	mineral 36	-40 °C to +60 °C			

+ Lubricant for greasing hydrants, screws, bolts, valves, etc.

+ Very good ease of movement at low temperatures

+ Protects reliably against corrosion

+ DIN 51825: K 1 C-40

+ Easy processing with roller or brush

+ Permanent protection against jamming or freezing of components

NLGI

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## Calcium complex soap greases

- + For highly loaded rolling bearings and lubrication points
- + At upper service temperatures of up to +150 °C
- + Very high dropping points greater than +250 °C
- + With high corrosion protection

Product	Item no.	NLGI class	Base oil mm²/s	Temperature range				
Divinol Fett CaX 2	24730	2	mineral 100	−30 °C to +150 °C				
	<ul><li>Preferred</li><li>Reliable w</li><li>Good resis</li></ul>	<ul> <li>Pescription</li> <li>Rolling bearing grease for thermally highly loaded lubrication points</li> <li>Preferred use in heavy industry, e.g. continuous casting</li> <li>Reliable wear protection to ensure process reliability</li> <li>Good resistance to washout by water</li> <li>DIN 51825: KP 2 N-30</li> </ul>						
Divinol Fett HT-F	27400	2	mineral 150	−30 °C to +150 °C				
	+ The conta + For ensuri + Use in the	<ul> <li>Description</li> <li>+ High pressure grease containing solid lubricant for highest loads</li> <li>+ The contained solid lubricant gives emergency running properties</li> <li>+ For ensuring lubrication in critical lubrication conditions</li> <li>+ Use in the steel industry in cold rolling mills in difficult rolling processes</li> <li>+ DIN 51825: KPF 2 N-30</li> </ul>						
Divinol Fett CaX 1.5	28530	1.5	mineral 100	−30 °C to +150 °C				

#### **Description**

- + Rolling bearing grease for thermally highly loaded lubrication points
- + Softer setting for optimised conveying behaviour
- + E.g. in use in continuous casting plants or other hot applications
- + Reliable wear protection to ensure process reliability
- + DIN 51825: KP 1.5 N-30

## Calcium sulfonate complex soap greases

Description

Good conveying propertiesDIN 51825: KP 1.5 N-40

- + Very well suited for the highest mechanical loads
- + For highly loaded rolling bearings and lubrication points
- + With excellent corrosion protection
- + High process reliability due to very good resistance to water, steam and aggressive media

Product	Item no.	NLGI class	Base oil mm²/s	Temperature range			
Divinol Multitherm 2	29880	2	mineral 180	−25 °C to +140 °C*			
	<ul> <li>Description</li> <li>Highly loadable EP grease with medium-viscosity base oil</li> <li>Very high pressure absorption capacity</li> <li>For demanding lubrication tasks e.g. in the heavy industry</li> <li>E.g. for the lubrication of blowers, pumps, presses, motors, calenders, etc.</li> <li>With high corrosion protection</li> <li>DIN 51825: KP 2 N-20</li> </ul>						
Divinol Multitherm 1.5-460	31430	1.5	mineral 460	−20 °C to +150 °C*			
	<ul> <li>Description</li> <li>Highly loadable grease with high-viscosity base oil</li> <li>With a high pressure absorption capacity</li> <li>For demanding lubrication tasks e.g. in the heavy industry</li> <li>High resistance to washout by water</li> <li>DIN 51825: KP 1.5 N-20</li> </ul>						
Divinol Synthogrease CaSX 2-1	30110	1.5	synthetic 80	-40 °C to +140 °C*			

+ Synthetic special grease for original equipment in the automotive industry

+ For a variety of industrial applications in a wide temperature range

+ For thermally and mechanically demanding lubrication tasks



## Aluminium complex soap greases

- For rolling bearings, slider bearings and other applications
  For elevated operating temperatures
- Very good water resistanceWorking stable

Product	Item no.	NLGI class	Base oil mm²/s	Temperature range			
Divinol Aluplex 2	06560	2	mineral 300	−25 °C to +150 °C			
	<ul> <li>Description</li> <li>Versatile EP grease with very good water resistance</li> <li>For highly loaded rolling bearings or lubrication points</li> <li>With good high pressure properties</li> <li>With reliable protection against wear and corrosion</li> <li>DIN 51825: KP 2 N-20</li> </ul>						
Divinol Fett AL R 0	96480	0	mineral 320	−20 °C to +130 °C			
	<ul> <li>Description</li> <li>Solid lubricant-containing fluid grease</li> <li>With very high pressure capacity for heavily loaded lubrication p</li> <li>Very suitable for vibrations and intermittent loads</li> <li>Resistant to washout e.g. through water</li> <li>DIN 51826: GPF 0 K-20</li> </ul>						
Divinol Fett AL 867	08670	00	mineral 220	−25 °C to +140 °C			

- Soft fluid grease with good pumping properties
  Reliable lubrication properties in a wide temperature range
  E.g. for lubrication of production and assembly systems in assembly manufacturing
- + DIN 51826: G 00 N-20



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## Soap-free gel greases

- + Dropping point-free greases based on fumed silica
- + For plastic lubrication and for other special applications
- + At high storage temperatures up to +160 °C
- + Well suited for slow to medium speed applications

Product	Item no.	NLGI class	Base oil mm²/s	Temperature range		
Divinol Hochtemperaturfett Z 2	85260	2	mineral 480	−20 °C to +150 °C		
	<ul> <li>Description</li> <li>+ Temperature-stable and oxidation-resistant gel grease</li> <li>+ Very suitable for plastic lubrication</li> <li>+ Also for hot air ventilators, road construction machines, etc.</li> <li>+ At normal speeds and elevated operating temperatures</li> <li>+ With very high water resistance</li> </ul>					
Divinol Hochtemperaturfett Z 1	85220	1	mineral 480	−20 °C to +150 °C		
	<ul> <li>Description</li> <li>+ Soft-set, oxidation-resistant gel grease</li> <li>+ At normal speeds and elevated operating temperatures</li> <li>+ Very suitable for plastic lubrication</li> <li>+ With very high water resistance</li> </ul>					

Product	Item no.	class	mm²/s	Temperature range			
Kontaktfett 2054	20540	n.a.	mineral 80	−35 °C to +160 °C			
	<ul> <li>Description</li> <li>+ Corundum-containing contact lubricant for use in electrical applications</li> <li>+ For lubrication of electrical aluminium connectors</li> <li>+ The soft consistency allows a simplified grease application</li> <li>+ Well tolerated against non-ferrous metals</li> </ul>						
Kontaktfett 988K	85270	n.a.	mineral 80	−35 °C to +160 °C			
	<ul> <li>Description</li> <li>+ Corundum-containing contact lubricant for use in electrical applications</li> <li>+ For lubrication of electrical aluminium connectors</li> <li>+ The soft consistency allows a simplified grease application</li> <li>+ Well tolerated against non-ferrous metals</li> </ul>						
Kontaktfett P 1	91120	n.a.	mineral 80	−35 °C to +160 °C			

NLGI

#### Description

- + Aging stable contact lubricant
- + For the protection of the connecting elements in electrical networks
- + It protects the contact point reliably against corrosion, water, dust, etc.

Base oil

+ Well tolerated against various plastics and non-ferrous metals



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### **Greases for machine tools**

- + High-performance lubricants for economical metalworking
- + High process reliability when operating machine tools
- + Proven lubricants for first filling and re-lubrication
- + Special lubricants with high machine compatibility
- + Developed in close cooperation with the machine manufacturers

Product	Item no.	NLGI class	Base oil mm²/s	Temperature range		
Divinol Lithogrease 000	22320	000	mineral 380	−30 °C to +140 °C		
	<ul> <li>Pescription</li> <li>Fluid gear grease with medium viscosity base oil viscosity</li> <li>Excellent for lubrication of linear guides and screw jacks in machine tools</li> <li>Very good conveying properties in centralised lubrication systems</li> <li>With high wear and corrosion protection</li> <li>Approvals: DMGMoriSeiki, W. Vogel AG, MAG Powertrain (FFG Group), BMW AG</li> <li>DIN 51826: GP 000 N-30</li> </ul>					
Divinol Lithogrease 000/150	23030	000	mineral 150	−30 °C to +140 °C		
	<ul> <li>Description</li> <li>Special fluid gear grease with medium base oil viscosity</li> <li>Excellent for lubrication of linear guides and screw jacks in machine tools</li> <li>Very good conveying properties in centralised lubrication systems</li> <li>With high wear and corrosion protection</li> <li>DIN 51826: GP 000 N-30</li> </ul>					
Divinol Fett L 800	26490	000	mineral 750	−20 °C to +120 °C		

#### Description

- + EP fluid gear grease with high viscosity base oil viscosity
- + Preferably for machine lubrication in special machine tool types with stick-slip effects on mounted NC rotary tables
- + Very good conveying properties in centralised lubrication systems
- + With high wear and corrosion protection
- + DIN 51826: GPF 000 K-20

Product	Item no.	class	mm²/s	Temperature range
Divinol Paste SF	24440	n.a.	mineral 120	−30 °C to +250 °C
	<ul> <li>Description</li> <li>+ Bright grease paste with solid lubricants</li> <li>+ Particularly adherent</li> <li>+ With high pressure capacity</li> <li>+ It provides a very good corrosion protection</li> <li>+ Approvals: Schunk, Hainbuch</li> </ul>			
Divinol Profi Lube SL	62301	2	semi-synthetic 1000	−30 °C to +110 °C

NLGI



#### Description

- + Sprayable long-term lubricant with high resistance to washout
- + Suitable for lubrication of linked tool change systems in machine tools

- + For long re-lubrication intervals at hard-to-reach lubrication points
- + DIN 51825: KP 2 G-30



Page 36 · Divinol greases · Greases for the automotive industry

## Greases for the automotive industry

- + High quality lubricants in original equipment manufacturer quality
- + Proven lubricants for initial filling and re-lubrication
- + Developed in close cooperation with manufacturers and suppliers
- + Special lubricants, designed for machines and applications

Product	Item no.	NLGI class	Base oil mm²/s	Temperature range		
Divinol Synthogrease CaSX 2-1	30110	1.5	synthetic 80	−40 °C to +140 °C		
	<ul> <li>Description</li> <li>Synthetic grease based on calcium sulfonate complex soap</li> <li>For thermally and mechanically loaded lubrication points</li> <li>For lubrication of vehicle components in the automotive industry</li> <li>With excellent corrosion protection and very high water resistance</li> <li>DIN 51825: KP 1.5 N-40</li> </ul>					
Divinol Synthogrease 1	28090	1	synthetic 20	−60 °C to +120 °C		
	<ul><li>With very god</li><li>It can be use</li></ul>	ithium-calcium mixed soap sture properties I lubrication of e.g. electrica at high speeds				
Divinol Synthogrease 1 FP	31290	1	synthetic 20	−60 °C to +120 °C		

#### Description

- + Synthetic grease based on lithium-calcium mixed soap
- + Fluorescent pigmented for the optical detection of grease application
- + With very good low temperature properties
- + It can be used for long-term lubrication of e.g. electrical components and small gears, especially at high speeds
- + DIN 51825: K 1 K-60

Product	Item no.	NLGI class	Base oil mm²/s	Temperature range
Divinol Synthogrease LF 1 MA	28920	1	synthetic 20	-60 °C to +120 °C

- + Synthetic special grease for lifetime lubrication
- + With excellent low temperature properties
- + Promotes a light start-up behaviour of mechatronic components
- + With friction-reducing solid lubricant package
- + DIN 51825: KPF 1 K-60



# Greases for workshops as well as constructions agriculture and forestry

- + High-performance greases for all areas of applications
- + High quality products for extended lubrication intervals
- + Developed according to the specifications of leading manufacturers
- + Proven in many years of use in practice

Product	ltem no.	NLGI class	Base oil mm²/s	Temperature range		
Divinol Kupferpaste	21740	2	mineral 300	−30 °C to +1.100 °C		
	Description  High temperature paste for protection against welding or burning seizing-up Simplified dismantling of components after a long period of operation For use in the hot area in the vehicle such as exhaust bolts, spark plugs, etc. Also suitable as assembly paste on bolts, nuts, valves of all kinds Also suitable as chisel paste in hydraulic percussion drill in the construction industry Protects reliably against corrosion Very good resistance to washout by water Please observe the manufacturer's instructions regarding the use of copper-containing products!					
Divinol Keramikpaste	30040	2	synthetic 100	−30 °C to +1.400 °C		
	<ul> <li>Description</li> <li>Synthetic ceramic paste</li> <li>As assembly paste for specific brake components, screw connections, etc.</li> <li>High efficiency at high temperatures and pressures as well as corrosive influences</li> <li>With high corrosion protection</li> <li>Highly resistant washout out by water or emulsions</li> </ul>					
Divinol Fett L 3	85560	3	mineral 100	−30 °C to +130 °C		
rett L 3	100  Description  + Higher consistent grease of NLGI class 3  + Universally applicable for rolling and slider bearings and comparable applications					

+ E.g. in motor vehicles, construction machinery and agricultural machinery

+ It complies with the requirements of the VW standard TL 735

+ DIN 51825: KP 3 K-30

Product	Item no.	class	mm²/s	Temperature range			
Divinol Polfett	85050	2	mineral 36	-40 °C to +60 °C			
	<ul> <li>Description</li> <li>Grease specifically for the care of the battery poles and cable lugs</li> <li>It protects against corrosion, oxidation and salt formation</li> <li>With water repellent character</li> <li>Resistant to washout due to cold and hot water</li> <li>DIN 51825: K 2 C-40</li> </ul>						
Divinol Fett Top 2003	23980	2	semi-synthetic 1000	−30 °C to +110 °C			
	<ul> <li>Description</li> <li>EP long-life lubricant based on special calcium soap</li> <li>For extended lubrication intervals on motor vehicles, construction &amp; agricultural machinery</li> <li>With extreme adhesion properties</li> <li>Particularly resistant to washout from the lubrication points</li> <li>It protects reliably against wear and corrosion</li> <li>DIN 51825: KP 2 G-30</li> </ul>						
Divinol Mehrzweckfett 2	22971	2	mineral 110	−30 °C to +120 °C			

& agricultural machinery

+ DIN 51825: K 2 K-30

+ With good wear and corrosion protection

NLGI

Base oil

+ Multipurpose grease for a variety of uses in motor vehicles, construction

+ For lubrication points under normal thermal and mechanical loads

# Greases for workshops as well as constructions agriculture and forestry

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Product	Item no.	NLGI class	Base oil mm²/s	Temperature range	
Divinol Mehrzweckfett graphitiert	85000	2	mineral 100	−30 °C to +130 °C	
	<ul> <li>Description</li> <li>+ Black, solid lubricant-containing lithium soap gre</li> <li>+ For lubricating stressed lubrication points with os and shock loads</li> <li>+ E.g. for lubrication of gear rims, saddle plates, kin</li> <li>+ DIN 51825: KPF 2 K-30</li> </ul>				
Divinol Fett Garant 2000 EP Plus	85431	2	mineral 220	−30 °C to +130 °C	
Er Flus	and forest + Especially	ry for mechanica : MB sheet 267.	for use in motor vehically higher loaded lub 00, Baier+Köppel, oth		
Divinol Fett LM 2	85800	2	mineral 100	−30 °C to +130 °C	
	Description				

- + Black EP grease with molybdenum disulphide
- + With high pressure capacity and so-called emergency running properties
- + Very suitable for oscillating and shock loads
- + E.g. for cardan shafts, saddle plates and similarly loaded lubrication points
- + DIN 51825: KPF 2 K-30

Product	Item no.	class	mm²/s	Temperature range		
Divinol Fett L 283	21120	2	mineral 100	−35 °C to +130 °C		
	<ul> <li>Description</li> <li>Lithium saponified EP high performance grease</li> <li>Optimised low temperature behaviour</li> <li>For lubrication of wheel bearings in commercial vehicles and other lubrication points</li> <li>Easily conveyable via central lubrication systems</li> <li>With reliable wear and corrosion protection</li> <li>Approvals: MAN 283 Li-P 2, Renault 03-80-200 / P, category 47 - A, others</li> <li>DIN 51825: KP 2 K-30</li> </ul>					
Divinol Lithogrease 2 B	21711	2	mineral 220	−30 °C to +150 °C		
	<ul><li>With high</li><li>Well suited</li></ul>	perature greas pressure abso d for wheel huk term lubricant	e for highly loaded lub rption capacity for hig o lubrication in comme for extended re-lubric	gh mechanical loads ercial vehicles and trailers		
Divinol Langzeitachsenfett HT 260	27310	2	mineral 240	−30 °C to +150 °C		
H1 200	Description + Long-term		g grease based on lith	ium complex soap		

+ Very good corrosion and wear protection

Oxidation and water resistant
Approvals: MAN 284 Li-H 2
DIN 51825: KP 2 N-30

NLGI

Base oil

+ For use in heavily loaded wheel bearings in trailer and semitrailer axles

# Greases for workshops as well as constructions agriculture and forestry

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- + Developed according to the specifications of leading manufacturers
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Product	ltem no.	NLGI class	Base oil mm²/s	Temperature range
Divinol Lithogrease 7000	27630	2	mineral 500	−20 °C to +150 °C
	<ul><li>With outst</li><li>Preferred trucks, etc</li></ul>	anding EP propuse in constructs: m lubrication ir	perties and strong adhe ction machines such c	est difficult lubrication tasks esion as articulated loaders, dump and for other lubrication points
Divinol Fett F 14 EP	85750	1	mineral 100	-40 °C to +120 °C
	+ For use in	motor vehicles oved cooling a	e grease for a variety on a specie of the second construction & agricated and conveying propert	ultural machinery
Divinol Getriebefett N 0	85550	0	mineral 220	−20 °C to +100 °C

#### Description

- + EP fluid gear grease based on sodium soap
- + For lubrication of spur, bevel and worm gear units under normal to heavy mechanical load
- + Good adhesion to the gears thanks to the long-fibre soap structure
- + E.g. for non-oil-tight, slow running gears in rotary harrows
- + DIN 51826: GP 0 H-20

Product	Item no.	class	mm²/s	Temperature range
Divinol Fett ZSA	23970	00	mineral 68	-40 °C to +120 °C
	+ For lubrica + Easily con + Approvals	rease with very ation of various aveyable in cen	good low-temperature s lubrication points in c tral lubrication system 00/000; MB sheet 264	S
Divinol Getriebefett N 00	96341	00	mineral 220	−20 °C to +100 °C

NLGI

#### Description

- + Softer set EP fluid gear grease based on sodium soap
- + For lubrication of gears under normal to heavy load
- + Good adhesion to the gears thanks to the long-fibre soap structure

Base oil

+ DIN 51826: GP 00 H-20



Page 48 · Divinol greases · Greases for steel, rolling and tube mills

## Greases for steel, rolling and tube mills

- + Reliable greases for high demands in the steel industry
- + Developed in close cooperation with our customers
- + Special lubricants, designed for machines and applications
- + For difficult operating conditions due to high temperatures, heavy water contamination or high pollution

Product	Item no.	NLGI class	Base oil mm²/s	Temperature range
Divinol Fett HT-F	27400	2	mineral 150	−30 °C to +150 °C
	+ Use at har + Lubricatio	bour cranes fon n of large bea y high pressur	sed calcium complex s or unloading coal, ores rings in bridge bucket e absorption capacity	, scrap, etc. wheel reclaimer
Divinol Fett CaX 2	24730	2	mineral 100	−30 °C to +150 °C
	+ For lubrica + It offers ve	ntion of loaded ry good anti-w ble corrosion p	vear properties	n complex soap continuous casting lines essure absorption capacity
Divinol Fett LR 2 EP	25770	2	mineral 800	−20 °C to +140 °C

#### Description

- + Lithium soap grease for general maintenance and service tasks
- + For mechanically loaded lubrication points
- + Lubrication of bearing points and couplings of the overhead cranes
- + With high base oil viscosity for a strong adhesion
- + DIN 51825: KPF 2 N-20

Product	Item no.	NLGI class	Base oil mm²/s	Temperature range
Divinol Lithogrease LiX 2	28600	2	mineral 220	−30 °C to +150 °C
	+ For the luk points + Mainly use + Very good	ormance lithiur orication of the ed for lubrication I lubrication ev istant and with	m complex soap greasermally and mechanic on of rolling bearings en with strong influence reliable protection ag	ally highly loaded lubrication in the hot rolling mill ce of process water
Divinol Lithogrease 7000	27630	2	mineral 500	−20 °C to +150 °C

- + Lithium complex soap grease with highest pressure absorption capacity
- + With solid lubricant PTFE
- + Resistant to high thermal loads
- + For lubrication of the deflection rollers in galvanising lines
- + Lubrication of the take-up reel in the finishing and packaging line
- + DIN 51825: KPF 2 N-20

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## Greases for steel, rolling and tube mills

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- + For difficult operating conditions due to high temperatures, heavy water contamination or high pollution

Product	Item no.	NLGI class	Base oil mm²/s	Temperature range				
Divinol Fett LC 2 EP	27860	2	mineral 500	−20 °C to +140 °C				
	<ul><li>For lubrice</li><li>With solid</li><li>Optimised</li></ul>	<ul> <li>Description</li> <li>EP grease based on a lithium-calcium mixed soap thickener</li> <li>For lubrication of roll axis bearing in seamless tube systems</li> <li>With solid lubricant additive to protect against shock loads</li> <li>Optimised resistance to process lubricants and cooling water</li> <li>DIN 51825: KPF 2 N-20</li> </ul>						
Divinol Fett CaX 1.5	28470	1.5	mineral 100	−30 °C to +150 °C				
	<ul> <li>+ For lubrice</li> <li>+ Also suitales</li> <li>seamless</li> <li>+ Softer setten</li> <li>+ Alternative</li> <li>+ It offers ver</li> </ul>	ation of loaded ble for transpo tube production ting, in particu ely for use in co ery good anti-vole corrosion p	ort roller lubrication of on lar to improve the con older climates or in wil vear properties	continuous casting lines the push bench in the veying properties				
Divinol Fett LR 1.5 EP	28580	1.5	mineral 600	−25 °C to +140 °C				

- + Solid lubricant containing lithium soap grease with high base oil viscosity
- + Well conveyable all year round even with long delivery lines outdoors
- + Usable for bearing lubrication in conveyor belts in raw material preparation
- + With a very high pressure absorption capacity
- + DIN 51825: KPF 1.5 N-20

Product	Item no.	NLGI class	Base oil mm²/s	Temperature range
Divinol Lithogrease Synth 2-1	28520	1.5	synthetic 460	-40 °C to +160 °C
	+ For lubrice + E.g. for lubrice of wire roce + Excellent + Excellent + Very good	netic lithium co ation of very he pricating the tro d thermal stabilit anti-wear and	eavily loaded lubrication	ng sections in the production ance ies
Divinol Grease 3033	30331	1	mineral 500	−20 °C to +150 °C
	+ For lubrica + High temp	hium complex ation of drive s perature and p veying propert	soap grease with solid pindles in rolling mills ressure resistance ies	lubricant PTFE
Divinol Lithogrease EP 1	26470	1	mineral 500	−20 °C to +150 °C

+ Water-resistant, walk-stable lithium complex soap grease

+ Lubrication of the work and support roller bearings in the cold rolling mill

Description

+ Very good anti-wear properties

+ DIN 51825: KPF 1 N-20

+ Corrosion and oxidation resistant



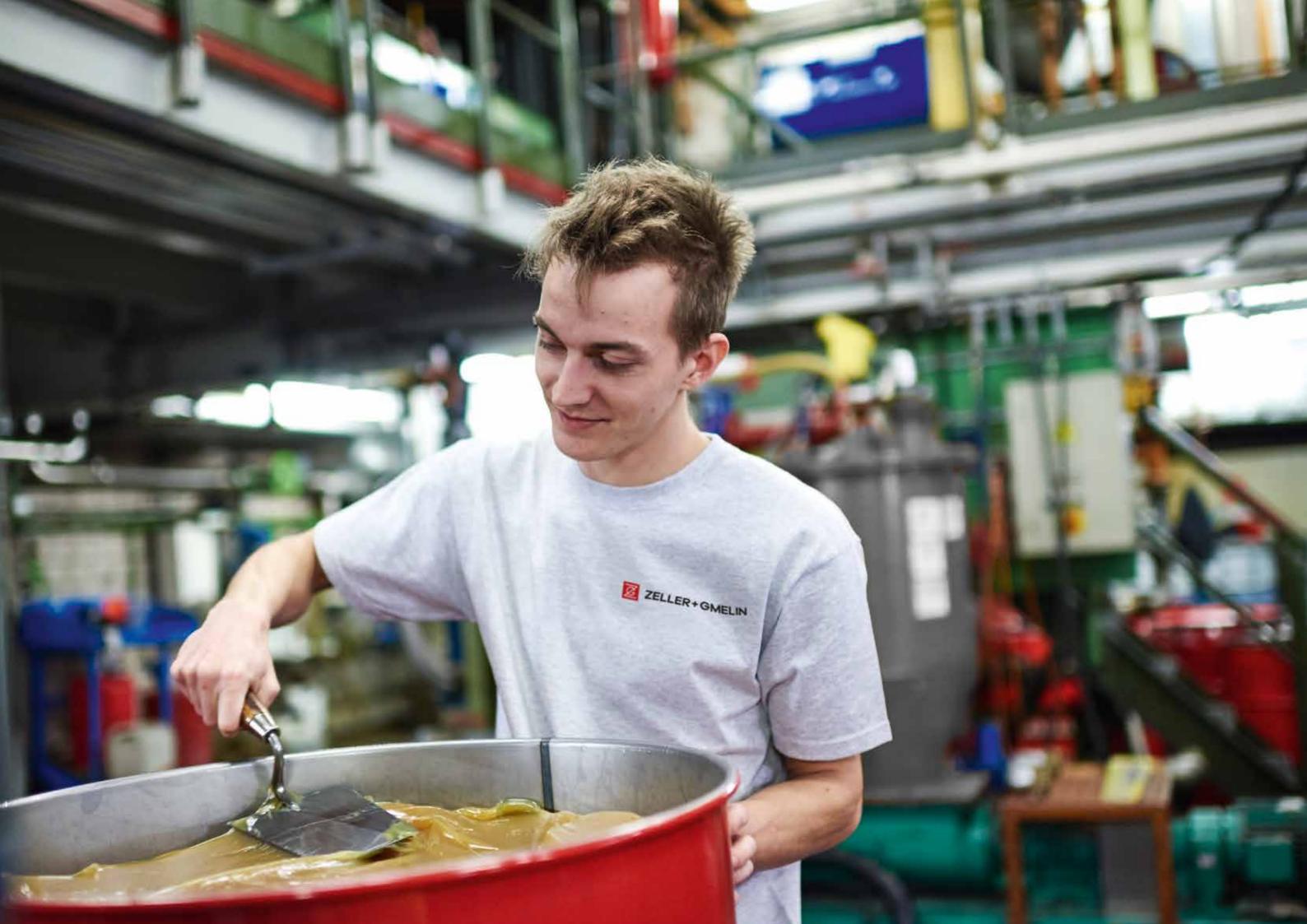
## Greases for steel, rolling and tube mills

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- + For difficult operating conditions due to high temperatures, heavy water contamination or high pollution

Product	Item no.	NLGI class	Base oil mm²/s	Temperature range
Divinol Grease LC 1 EP	21860	1	mineral 500	−20 °C to +140 °C
	+ For mecho + In particul + Very good	inically heavily ar, for the lubr resistance to veyable even v	9	high water contamination rt rollers in the hot rolling mill ater
Divinol Lithogrease 1	29900	1	mineral 150	−30 °C to +150 °C
	<ul><li>+ Easily con</li><li>+ For lubrice production</li></ul>	veyable even v iting the transp n ly suitable for a	·	
Divinol Lithogrease 00	20480	00	mineral 200	−30 °C to +140 °C
	Description			

- + Special transmission fluid gear grease with good load carrying capacity
- + Especially for transmission lubrication of the overhead cranes
- + For reducing the usual oil loss in non-oil-tight gearboxes
- + DIN 51826: GP 00 N-30





Page 59 · Divinol greases · Labelling according to DIN 51502

## Labelling according to DIN 51502

Application example for the labelling of lubricants					
<b>Code letter</b> (type of greases) from Table 1	Additional code letter from Table 2	Consistency index (NLGI class) from Table 3	Additional code letter from Table 4	Additional code number from Table 5	
К	P	2	К	-30	

#### Table 1: Marking of greases according to DIN 51825 or 51826

The greases are classified according to this standard by code letters. (Excerpt from table)

Grease type	Code letters
Greases for rolling bearings, slide bearings and sliding surfaces according to DIN 51825	K
Greases for closed gears to DIN 51826	G
Greases for open gears, gears (adhesive lubricants without bitumen)	og
Greases for sliding bearings and seals <sup>1)</sup>	М
Synthetic oil-based greases have their basic properties marked on mineral oil basis	Add like the above Code letters

 $<sup>^{\</sup>mbox{\tiny 1)}}$  Lower requirements than in case of greases K

### **Table 2: Additional code letters for greases according to DIN 51825 or 51826** (Excerpt from table)

Additional code letter	Lubricants
F	For lubricants with solid lubricant additive (such as graphite, molybdenum disulphide)
Р	For lubricants with active ingredients to reduce friction and wear in the mixed friction area and/or to increase the load capacity

#### Table 3: Consistency classification for greases according to DIN 51818

The classification of the greases takes place according to the walk penetration in NLGI classes and serves to mark the lubricating greases according to their consistency

Consistency indicator NLGI classes according to DIN 51818	Walk penetration according to DIN ISO 2137	Condition	Use	
000	445 to 475	highly fluid	Gear greases	
00	400 to 430	fluid	_	
0	355 to 385	semi-fluid	_	
1	310 to 340	very soft	Rolling bearing	
2	265 to 295	soft	Slide bearing grease	
3	220 to 250	smooth	_	
4	175 to 205	almost solid	_	
5	130 to 160	solid	Block greases	
6	85 to 115	very solid	_	

<sup>1) 1</sup> unit = ^ 0,1 mm

## Labelling according to DIN 51502

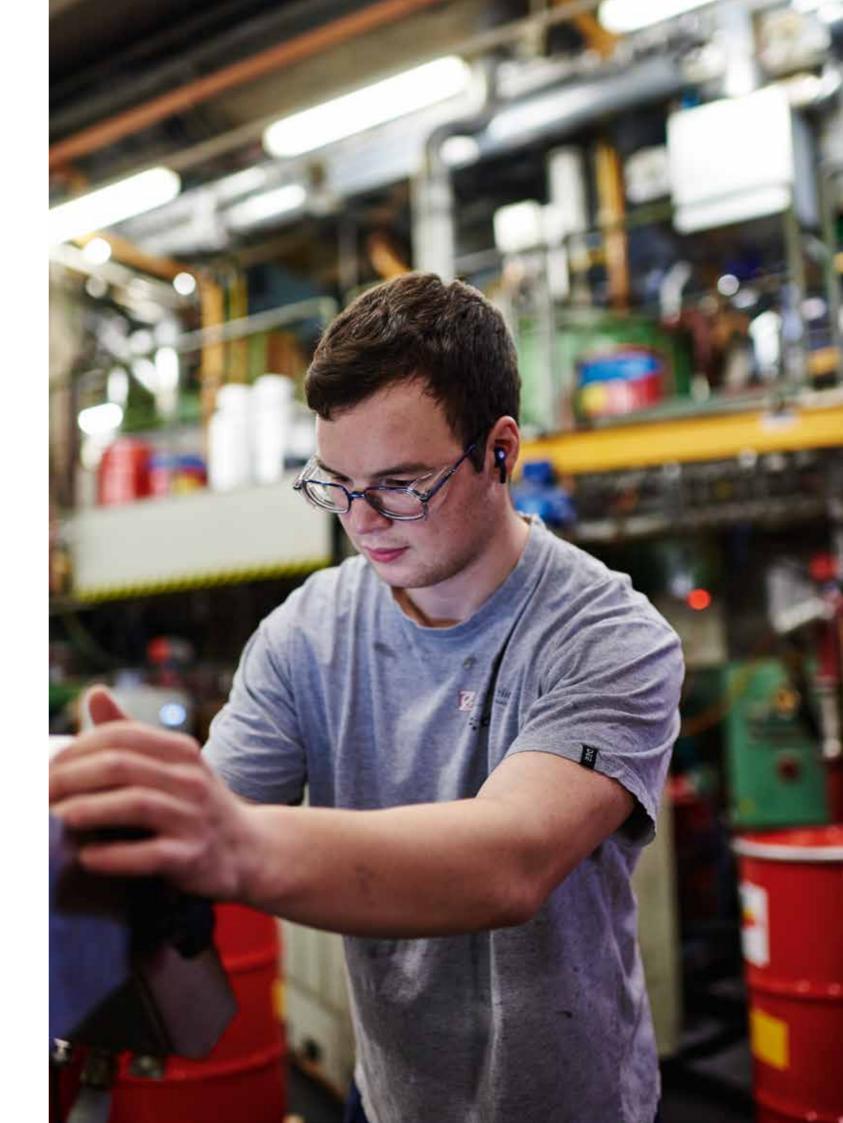
Table 4: Additional code letters for greases according to DIN 51825 or 51826

Additional code letter	upper service temperature according to DIN 51821	Behavior towards water according to DIN 51807 Part 1 Evaluation level DIN 51807 <sup>1)</sup>
С	+60 °C	_0-40 or 1-40
D		2-40 or 3-40
E	+80 °C	0-40 or 1-40
F		2-40 or 3-40
G	+100 °C	0-90 or 1-90
н		2-90 or 3-90
К	+120 °C	0-90 or 1-90
М		2-90 or 3-90
N	+140 °C	by agreement
Р	+160 °C	
R	+180 °C	
S	+200 °C	
Т	+220 °C	
U	over +220 °C	

 $<sup>^{1)}\,\</sup>mathrm{O}$  means no change  $\,$  1 means little change  $\,$  2 means moderate change  $\,$  3 means big change

Table 5: Additional code numbers for greases according to DIN 51825 or 51826

Additional code number	lower service temperature	
	10.10.100 10.11.10	
<b>-10</b>	−10 °C	
-20	−20 °C	
-30	-30 °C	
-40	-40 °C	
-50	–50 °C	
-60	−60 °C	



## At home + Abroad

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Zeller+Gmelin has got offices worldwide, plus its head office in Eislingen in Baden-Württemberg. Our name stands for reliability and quality, at all times. Our subsidiaries and partners with all their employees ensure this on a worldwide basis.

The distinct expertise of our sites and our smooth cooperation are beneficial not just to us, the company as a whole – but also to you, the customer.

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### **EXPERTLY DONE.**

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