

**Brugarolas**



# HIGH PERFORMANCE LUBRICATING GREASES





# LUBRICATING GREASES

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There are many variables to consider when selecting a lubricating grease since there are many factors that must be integrated to later find the appropriate tribological solution, that is, the ideal technical-economic solution.

**A grease is defined as a homogeneous and stable mixture of three basic components; a lubricating fluid, a thickener and a package of additives.**

The lubricating function lies in the oil used, while the thickener fulfills an oil carrier function. The additives optimize the general behavior of the grease, being its main functions to improve the antioxidant capacity, anticorrosive, anti-wear and extreme pressure of the grease, as well as other properties such as adhesion and greasiness.

With a suitable additive it is possible to increase the resistance of the lubricating film, giving the grease a greater resistance to aging and a greater anticorrosive capacity for the different metals on which it is applied.

The main functions of a grease are listed below, although they do not have to be all at once:

- **Reduce friction**
  - **Reduce wear**
  - **Sealant**
  - **Corrosion protection**
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*In the attached documentation we give you information on the "Aguila" and "Beslux" of lubricating greases. This information may be extended by consulting the product technical data sheet.*

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# MULTIPURPOSE

Multipurpose greases for general industry applications where do not exist extreme conditions.

NAME	Thickener	Base oil	Consistency NLGI	Drop point (°C)	Temperature range (°C)	Properties	
G.A. A-410	Calcium	M	1	150	-20 to 90	Multipurpose	
G.A. A-420			2				
			3				
G.A. ADX	M	M	2	150	-40 to 100	Low temperature multipurpose	
			3				
G.A. N.90	Lithium	M	2	190	-20 to 120	Multipurpose	
			3				
G.A. N.95		M	3	190	-30 to 120	Low temperature multipurpose	
G.A. N.80		M	1	190	-30 to 120		
			2				
G.A. N.85		M	2	190	-30 to 120	Anticorrosive protection	
G.A. N.70 EP		M	M	1	185	-20 to 120	Multipurpose EP
				2			
				3			
G.A. N.850 EP		M	M	1	190	-25 to 120	Multipurpose EP
	2						
	3						
G.A. AUREA-2	M	M	2	190	-25 to 120	Multipurpose EP	
G.A. N.800 TF	M	M	2	190	-30 to 120	With PTFE	
G.A. 485 EP	Calcium Lithium	SS	0	160	-20 to 120	Multipurpose EP	
			1				
			2				
			3				
G.A. XAZ	Aluminium complex	SS	1/2	250	-10 to 160	Multipurpose EP for severe conditions	
			2				
G. BESLUX white bearing grease	Lithium	M	2	190	-30 to 120	White grease for clean lubrication	

**M** = Mineral  
**SS** = Semisynthetic  
**S** = Synthetic  
**PFPE** = Polifluoroethylene, fluorinated oil



# HIGH LOADS - EP

Greases for applications subjected to high loads and wear conditions.



NAME	Thickener	Base oil	Consistency NLGI	Drop point (°C)	Temperature range (°C)	Welding point (kgf)	Properties
G.A. PLEX-20152	Calcium complex	M	2	270	-25 to 150	340	Multipurpose EP, pumpable and water resistant
G.A. PLEX-20200		M	1	290	-25 to 150	350	Multipurpose EP, pumpable and water resistant
			1/2				
			2				
G.A. PLEX 40600/1-2	M	1/2	280	-10 to 150	350	Multipurpose EP, pumpable and water resistant	
G.A. PLEX	Lithium complex	M	1	260	-20 to 150	450	Multipurpose EP
			1/2				
			2				
G.A. PLEX 2/3 AZUL	M	2/3	280	-30 to 150	500	Blue multipurpose EP	
G.A. ALPLEX H	Aluminium complex	M	1	240	-15 to 160	400	Severe load conditions, high adherence
			2				

G. BESLUX PLEX H	Lithium complex	M	1	270	-10 to 150	450	Adherent multipurpose EP	
G. BESLUX PLEX EH-2			2					
G. BESLUX ALCO M-1	Aluminium complex	M	1	230	-20 to 150	280	Severe load conditions	
G. BESLUX ALCO EH MF			2					
G. BESLUX KOMPLEX M	Polyurea	M	1	250	-20 to 150	300	Long-life EP	
			1/2					
G. BESLUX KOMPLEX H		M	1	250	-20 to 150	300		
			1/2					
G. BESLUX PLEX BAR H-2/EP	Barium complex	M	2	250	-15 to 150	700	Very high loads and aggressive environment	
G. BESLUX SULPLEX 2/3 AZUL	Calcium sulfonate	M	2/3	285	-30 to 160	700	Very high loads and water resistant	
G. BESLUX SULPLEX L- PLUS			0					
			1					
G. BESLUX SULPLEX M-PLUS			M					2
								1
G. BESLUX SULPLEX H-PLUS	M	2						
		1						

# HIGH SPEEDS

Greases for high revolutions applications that require a lubricant able to ease the spin and not slow the bearing. Low viscosity base oils are needed.



NAME	Thickener	Base oil	Consistency NLGI	Base oil viscosity (cSt)	Temperature range (°C)	Speed Factor	Properties
G. BESLUX PLEX L-2 EP	Lithium special	SS	2	125	-40 to 160	600.000	For electric motors, high temperatures and contact with water
G. BESLUX PLEX L-2/S	Lithium complex	S	2	12	-55 to 150	1.000.000	Very high speeds
G. BESLUX KOMPLEX L-2 AZUL	Polyurea	M	2	100	-20 to 150	700.000	For sealed applications
G. BESLUX KOMPLEX ALFA		S	0/1		-50 to 180	700.000	Long-life greases for electric motors
G. BESLUX KOMPLEX BETA II			2		-40 to 180		Long-life grease for electric motors and EP additives
G. BESLUX PLEX BAR L-2/S	Barium complex	S	2	22	-50 to 150	1.000.000	Electric motors and aggressive environments

# REDUCER

Greases for cranc-case lubrication.



NAME	Thickener	Base oil	Consistency NLGI	Temperature range (°C)	Properties
G. BESLUX PLEX RBT-00	Lithium	SS	00	-25 to 135	Industrial robots lubrication
G. BESLUX SINCART M-00		S (PAG)	00	45 to 150	Long-life grease for cranc-case lubrication
G. BESLUX GEARLUB EH-00	Lithium complex	M	00	-10 to 100	Cranck-case grease with excellent EP properties
G. BESLUX SINGEAR M-00	Inorganic	SS	00	-30 to 140	Cranck-case grease with high adherence
G. BESLUX KOMPLEX 400 SW	Polyurea	S	00	-40 to 200	Long-life grease for cranc-case lubrication at high temperatures and EP conditions



# HIGH TEMPERATURES

Greases with thermal resistance for constant high temperature conditions.

NAME	Thickener	Base oil	Consistency NLGI	Drop point (°C)	Rango de T <sup>a</sup> (°C)	Properties
G.A. UNIVERSAL B-2	Inorganic	M	2	-	-10 to 150	Multipurpose for high temperatures
G.A. UNIVERSAL B-33			3			
G.A. UNIVERSAL H			1/2 2			Adherent grease for high temperatures

G. BESLUX PLEX H-2/S	Lithium complex	S	2	260	-30 to 180	High temperatures	
G. BESLUX TF M-2/S	Inorganic	S	2	-	-40 to 200	Grease for high temperatures with PTFE	
G. BESLUX VHT		M	2	-	-10 to 180	With MoS <sub>2</sub>	
G. BESLUX VHT/S		S			-35 to 200		
G. BESLUX VHT/S NE	Polyurea	SS	1	250	-20 to 160	High temperatures and high loads	
G. BESLUX KOMPLEX HT-S			1/2 2	250	-20 to 200	Long-life grease for high temperatures	
G. BESLUX KOMPLEX LONG LIFE			S	2	250	-30 to 180	Long-life grease for high temperatures
G. BESLUX KOMPLEX 412 SW			S	1/2	275	-35 to 200	Long-life grease for high temperatures and high loads
G. BESLUX BESSIL M-1/TF PLUS	Inorganic	Silicone	1	300	-50 to 250	Extreme temperatures with PTFE	
G. BESLUX FLUOR HT	Organic	PFPE	1	-	-60 to 280	Long-life greases for extreme temperatures, aggressive environments, presence of oxygen and high loads	
			2		-40 to 280		



# WET/ AGRESSIVE ENVIRONMENT

Greases for applications where there is water, steam or chemicals that can affect the characteristics of the grease.

NAME	Thickener	Base oil	Consistency NLGI	Drop point (°C)	Temperature range (°C)	Properties
G.A. AUREA H-2 GREEN	Lithium Calcium	M	2	185	-20 to 120	Green multipurpose grease for wet ambients
G.A. AUREA EH-2 GREEN						
G.A. JET-70	Calcium Lithium	SS	2	155	-10 to 110	Adherent grease for wet/marine environment
			3			
G.A. RUST KEEPER 70		SS	3	150	-10 to 110	Protective and anticorrosive grease, resistant to water and steam

G. BESLUX WHITE M-2	Barium complex	M	1/2	250	-15 to 150	White grease for clean lubrication in aggressive ambients
G. BESLUX PLEX BAR L-2		M	2	250	-15 to 150	Greases for wet and aggressive ambients with EP properties
G. BESLUX PLEX BAR M-			1/2			
			2			
G. BESLUX PLEX BAR H-			1			
	1/2					
G. BESLUX SULPLEX 2/3 AZUL	Calcium sulfonate	M	2/3	280	-30 to 160	High loads and water resistant
			0	285	-30 to 160	
G. BESLUX SULPLEX L- PLUS			1			
			2			
G. BESLUX SULPLEX M- PLUS			1	285	-25 to 160	
			2		-20 to 160	
			0	270	-15 to 160	
G. BESLUX SULPLEX H- PLUS			1			
			2			
G. BESLUX SULPLEX ROPE-00				M	00	
G. BESLUX KBL	Inorganic	M	00	-	-10 to 150	





# BIODEGRADABLE

For applications with loss-lubrication where the use of biodegradable greases makes possible to reduce or eliminate the polluting impact of the discharge.

NAME	Thickener	Base oil	Consistency NLGI	Drop point (°C)	Temperature range (°C)	Biodegradability test	Properties
G. BESLUX BIOGREASE M- HT	Lithium	Ester	0	160	-25 to 120	CEC-L-33-A-94	Multipurpose biodegradable grease
G. BESLUX ECOGREASE M-2 HT			1	180			
G. BESLUX ECO RGB-153			2				
G. BESLUX BIOMATIC M-000/G		Ester	2/3	200	-30 to 180	OECD 310 F	Biodegradable grease for high loads
G. BESLUX BIOGREASE M- /G		Ester	000	-	-20 to 80	CEC-L-33-A-93	Fluid grease with solid additives for the lubrication of curved railway sections
		Ester	00	170	-20 to 80		
			0		-30 to 80		
			1				
G. BESLUX ECOGREASE L-000		Ester	000	-	-30 to 120	OECD 301 B	Biodegradable and self-extinguishing grease for railway lubrication. Meets UNE-EN 16028
G. BESLUX TRIBORAIL M-000		Ester	000	-	-40 to 100	CEC-L-33-A-93	Wheel flange lubrication. S-252 locomotives
G. BESLUX BIOGREASE L-000/G	Inorganic	Ester	000	-	-30 to 90	CEC-L-33-A-93	Graphitized wheel flange lubrication with high anti-wear properties
G. BESLUX BIOGREASE M-000/G			000	-	-30 to 80	CEC-L-33-A-93	
G. BESLUX BIOGREASE M-2 FG		Ester	2	-	-25 to 120	CEC-L-33-A-93	Biodegradable and non-toxic grease. NSF-H1 n° 146511
G. BESLUX GRAFOL AL FLUID		Ester	000	-	-30 to 100	CEC-L-33-A-93	Fluid lubricant paste with high solid content



# GREASES WITH SOLID LUBRICANTS



Greases with solid additives that provide emergency lubrication capacities and higher EP and anti-wear capacities.

NAME	Thickener	Base oil	Consistency NLGI	Drop point (°C)	Temperature range (°C)	Solids	Properties
G.A. CALCICA GRAF. N	Calcium	M	00	-	-10 to 90	Graphite	Graphitized greases for railway applications
			1	150			
			2				
G.A. VIAS M-2/G		M	2	150	-40 to 100	Graphite	Graphitized grease for the lubrication of cables and railway
G.A. BESMOLY 132	Calcium Lithium	SS	2	160	-20 to 120	Graphite + MoS2	Grease with solids for emergency lubrication and CV joints
G.A. BESMOLY L-220		M	1	190	-20 to 110	MoS2	Multipurpose grease with MoS2 for applications where emergency lubrication may be needed
			2				
			3				
G.A. BESMOLY DGB		M	1/2	190	-20 to 120	Graphite + MoS2	High solid content
			2				
G.A. BESMOLY CE		M	1/2	190	-20 to 120	Graphite + MoS2	CV joints lubrication
			2				
G.A. BESMOLY PLUS		M	2	190	-30 to 120	MoS2	3% MoS2 content
G.A. BESMOLY 09-21		M	2	190	-20 to 120	MoS2	5% MoS2 content
G.A. BESMOLY H-2		M	2	190	-25 to 140	MoS2	Adherent greases with solids
G.A. BESMOLY EH-2		M			-25 to 130		
G.A. VIAS M-00/G		M	00	160	-20 to 120	Graphite	Fluid grease for lubrication of curved railway section
G.A. ALPLEX H- G	Aluminium complex	M	0/1	240	-20 to 160	Graphite	Multipurpose grease with solids for severe applications
			1/2		-15 to 160		
G.A. ALPLEX EH- G		M	1	250	-10 to 160	Graphite	Adherent grease with solids for severe applications
			2				
G. BESLUX PLEX 778A HD	Lithium	S	2	210	-55 to 150	White solids	Synthetic grease with white EP solid lubricants
G. BESLUX PLEX H- KT		M	1	220	-20 to 150	Graphite	Adherent grease for mining machinery. Meets Komatsu requirements
			2				
G. BESLUX PLEX M- TRUCK 5	Lithium special	M	1	220	-20 to 150	MoS2	Grease for heavy machinery for civil work and mining
			2				
G. BESLUX PLEX EH-/G		M	1	230	-15 to 150	Graphite	Very adherent grease for severe works
			2				

NAME	Thickener	Base oil	Consistency NLGI	Drop point (°C)	Temperature range (°C)	Solids	Properties	
G. BESLUX BMX H-1	Lithium complex	M	1	220	-15 to 130	MoS2	High MoS2 content for shock efforts	
G. BESLUX PLEX M-2/BM		M	2	260	-20 to 150	MoS2	Multipurpose grease with MoS2 for emergency lubrication	
G. BESLUX LIPILEX L-1/2 STF		S	1/2	290	-50 to 170	PTFE	Grease with PTFE for low coefficient friction	
G. BESLUX LIPILEX L-2 STF PLUS			2					
G. BESLUX GFG	Inorganic	SS	1	-	-10 to 150	Graphite	High viscosity and graphite content for open gears	
G. BESLUX CROWN M FLUID	Aluminium complex	SS	000	190	-15 to 130	Graphite	Grease with high content of graphite for open gears. Application by immersion bath	
G. BESLUX CROWN M FLUID PLUS								
G. BESLUX CROWN H-00/R		M	00	190	-10 to 150	Graphite	Running lubricant for open gears by automatic application	
G. BESLUX CROWN H-1/R		SS	1	190	-10 to 150	Graphite	Impregnation grease for open gears with high content in graphite by manual application	
G. BESLUX CROWN H-0		M	0	190	-10 to 150	Graphite	Grease for open gears applied by pulverization	
G. BESLUX CROWN H-0 PLUS								
G. BESLUX CROWN H-3000		SS	0	200	-10 to 150	Graphite	High viscosity grease for open gears and high content in graphite. Sprayable	
G. BESLUX CROWN H-6000			00	220	-15 to 150			
G. BESLUX CROWN WHITE EH-2 WM		M	1/2	250	-30 to 150	TiO2	White grease for open gears. Sprayable	
G. BESLUX CROWN HEAVY MILL		SS	00	190	0 to 150	Graphite	High viscosity grease for open gears in mining and cement plants. Very adherent	
G. BESLUX CROWN HEAVY MILL PLUS II					5 to 120			
G. BESLUX PLEX BAR LH-1/2 G		Barium complex	SS	1/2	250	-10 to 150	Graphite	For severe conditions and aggressive ambients
G. BESLUX KOMPLEX HT-2/G		Polyurea	S	2	250	-30 to 230	Graphite	Grease for high temperature with graphite for emergency lubrication
G. BESLUX SULPLEX H- /SBF		Calcium sulfonate	M	1	290	-15 to 160	TiO2	White grease for clean lubrication in presence of water and high loads
	2							
G. BESLUX SULPLEX 151/G5	M		1	290	-20 to 160	Graphite	Grease for high loads and wet ambients with shock efforts	
G. BESLUX SULPLEX 462/G3	M		2	270	-15 to 160	Graphite		
G. BESLUX SULPLEX H-2/G	M		2	270	-15 to 160	Graphite		
G. BESLUX SULPLEX EH- /G	M		1	290	-25 to 170	Graphite	Very adherent grease for high loads and shock efforts	
			2		-20 to 170			
G. BESLUX SULPLEX LX- /BM	M		1/2	280	-20 to 160	MoS2	Greases with MoS2 for severe applications where a great anti-wear resistance is needed	
G. BESLUX SULPLEX MX- /BM	M		1	290	-20 to 160	MoS2		
			2					
G. BESLUX SULPLEX H-2/BM	M	2	250	-15 to 160	MoS2			

# AUTOMOTIVE

Long-life products developed for the automotive industry, following specifications.

Name	Thickener	Base oil	Consistency NLGI	Drop point (°C)	Temperature range (°C)	Properties
G.A. N.31	Calcium	M	2	145	-50 to 110	Calcium grease for low temperatures. Meets standard: - Renault 03.80.200 (N° 31)
G.A. N.84/2	Lithium	M	2	190	-35 to 140	Grease for electric windows. Compatibility with POM-C, PA 6.6 and NBR
G.A. UNIVERSAL 6	Inorganic	S	1/2	-	-50 to 130	Long-life and excellent metallic affinity
G.A. ARMIGRAS BD-4421/A		S (PAG)	1	-	-40 to 180	Grease compatible with plastics and elastomers. Meets standard: - BOSCH NDT 3G0217 type A
G.A. N.21	Lithium	Silicone	2	200	-40 to 200	Grease compatible with plastics and elastomers for electric windows and cable lubrication

G. BESLUX PLEX 745	Calcium	SS	1/2	150	-50 to 100	Calcium grease for low temperatures. Meets standard: - TL-VW 745 of SEAT-VOLKSWAGEN
G. BESLUX PLEX 735	Lithium	M	2	180	-40 to 125	Calcium grease for low temperatures. Meets standard: - TL-VW 735 of SEAT-VOLKSWAGEN
G. BESLUX PLEX RT-2		SS	2	190	-40 to 100	12 V motor lubrication Meets standard: - BOSCH FT1013-AKV-E0010
G. BESLUX ELG-89/S		SS	2	190	-50 to 140	Low temperature lubrication for windshield cleaners, motor bearings, chassis, etc.
G. BESLUX PLEX 778A		S	2	210	-60 to 150	Synthetic grease for a wide range of temperatures. Meets standard: - TLW 778 A (VOLKSWAGEN)
G. BESLUX PLEX 181 TF PLUS		S	1	180	-50 to 150	Long-life grease with high plastic compatibility
G. BESLUX PLEX 778A/TF		S	2	200	-55 to 150	Synthetic grease for a wide range of temperatures with PTFE for smooth movements
G. BESLUX PLEX 778B/TF PLUS			2	200	-55 to 150	Low coefficient friction grease for a wide range of temperatures and UV tracer
G. BESLUX PLEX DPH-8113 UV			2	200	-55 to 150	Special grease for noise and vibrations reduction thanks to its PTFE content
G. BESLUX ELG-232		S	1/2	215	-40 to 150	Special grease for noise and vibrations reduction thanks to its PTFE content



Name	Thickener	Base oil	Consistency NLGI	Drop point (°C)	Temperature range (°C)	Properties
G. BESLUX ELG-163	Lithium special	SS	1/2	265	-40 to 150	Adherent grease for plastic lubrication
G. BESLUX LIPLEX M-1/2 S	Lithium complex	S	1/2	280	-40 to 180	Greases with high compatibility with plastics for lubrication in a wide range of temperatures
G. BESLUX LIPLEX H-1-2/S						
G. BESLUX SPG-323/TF	Inorganic	S	3	-	-45 to 130	Seat recliner mechanism lubrication
G. BESLUX XP-3012		S	1/2	-	-40 to 180	Transparent long-life grease with high compatibility with plastics and UV tracer for all type of mechanisms
G. BESLUX BESSIL L-80	Lithium	Sili-cone	1	210	-50 to 150	Grease with high compatibility with plastics and elastomers for drive cables lubrication
G. BESLUX BESSIL L-80/1 PLUS			1			
G. BESLUX BESSIL 102	Lithium complex	Sili-cone	2	250	-50 to 160	Grease with high compatibility with plastics and elastomers for gearshift lubrication
G. BESLUX BESSIL 120		Sili-cone	1	270	-50 to 160	
G. BESLUX BESSIL 4032	Inorganic	Sili-cone	2	300	-50 to 180	Brake components lubrication. Bosch homologation
G. BESLUX KOMPLEX M-2/1 STF	Polyurea	S (PAG)	1/2	270	-40 to 180	Brake components lubrication. Meets standard: - DT 3G0217 type B - BOSCH FT6040-002
G. BESLUX FLUOR L-2	Organic	PFPE	2	300	-50 to 160	Inert greases compatible with plastics and elastomers
G. BESLUX FLUOR LT-2 ATOX						
G. BESLUX FLUOR RACING XR4-G					-35 to 160	Lubrication of CV joints for competition cars



# FOOD INDUSTRY

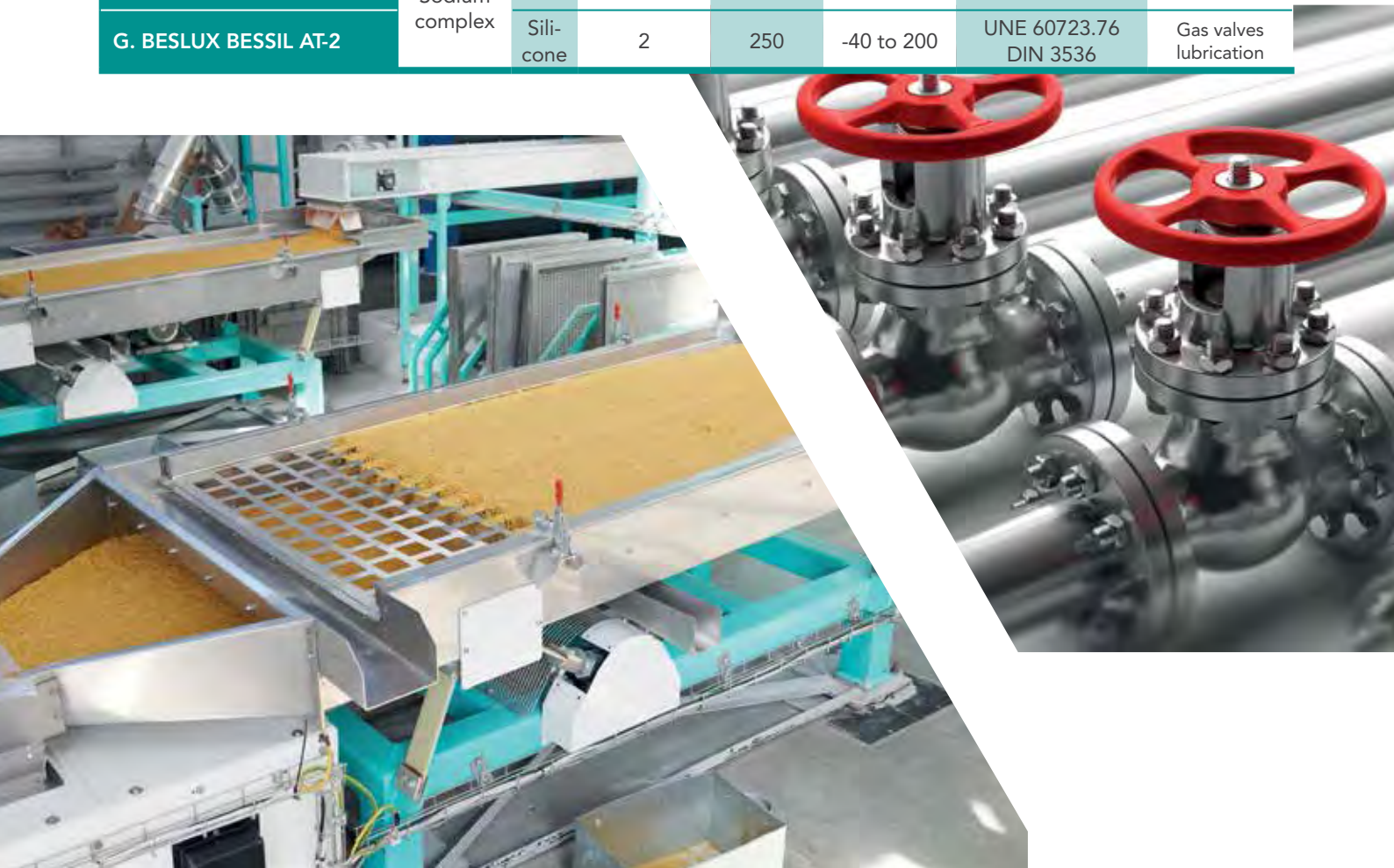
Greases formulated with components approved for the food industry that may have an accidental contact with food. NSF-H1 registration.

NAME	Thickener	Base oil	Consistency NLGI	Drop point (°C)	Temperature range (°C)	NSF-H1 Register	Properties
G.A. BESSIL 25	Inorganic	Silicone	2/3	-	-50 to 180	111111	Multipurpose non-toxic lubrication in chemical ambients and presence of water
G. BESLUX ATOX M-2	Calcium	SS	2	145	-20 to 100	153956	Multipurpose calcium grease for the food industry
G. BESLUX ATOX BT-2		S	2	250	-60 to 150	165646	Food-grade grease for low temperatures or high speeds
G. BESLUX CAPLEX M- ATOX	Aluminium complex	SS	00	240	-30 to 130	065295	Multipurpose greases for the food industry
			0			116792	
			1	260		025696	
			2	270		025697	
G. BESLUX ATOX M-00		S	00	-	-50 to 180	141857	Fluid and pumpable greases for centralized lubrication systems
G. BESLUX ATOX 1500		S	00	-	-50 to 180	165493	
G. BESLUX ATOX H-1/2		S	1/2	260	-45 to 180	134358	High performance grease in severe applications in the food industry. Animal food pellet machines
G. BESLUX ATOX ASP-2		SS	2	250	-20 to 150	134353	Food grade white greases for clean lubrication
G. BESLUX WHITE FOOD GREASE		SS	2	-	-30 to 150	111107	
G. BESLUX ATOX SM-152	Inorganic	S	2	-	-45 to 180	165611	High performance grease, MOSH-MOAH free
G. BESLUX ATOX TF/S		S	2/3	-	-40 to 180	132167	Adherent grease with PTFE
G. BESLUX SULPLEX FG-2212	Calcium sulfonate	SS	1/2	270	-30 to 170	153955	Severe works grease. Specially developed for animal food pellet machines. Van Arsen approval
G. BESLUX PRESS MILL SX			1/2		-50 to 180	152417	High performance greases for severe works. Animal food pellet machines
G. BESLUX SULPLEX FG-462/S		S	2		-45 to 180	164777	
G. BESLUX FLUOR FG-152	Organic	PFPE	2	-	-45 to 240	159751	Highest performance greases for extreme conditions lubrication
G. BESLUX FLUOR FG-222					-40 to 260	159752	
G. BESLUX FLUOR H					-45 to 260	153953	
					-40 to 260	136455	
			3		-25 to 260	153954	
G. BESLUX FLUOR HT-2	Inorganic	PFPE	2	-	-40 to 280	136454	Highest performance grease for extreme condition and top temperature

# VALVES-FAUCETS-OXYGEN

Greases for special applications where strict requirements are to be met; contact with gases, oxygen or contact with potable water.

NAME	Thickener	Base oil	Consistency NLGI	Drop point (°C)	Temperature range (°C)	Standards	Properties
G. BESLUX TAP SI/2 PG	Inorganic	S (PAG)	2	-	-10 to 150	ACS	Contact with water
G. BESLUX ATOX H-2/3	Aluminium complex	S	2/3	250	-40 to 180	ACS	Contact with water
G. BESLUX BESSIL EH-00	Inorganic	Silicone	00	-	-45 to 180	ACS, WRAS, TZW	Contact with water
G. BESLUX BESSIL EHV-00					-35 to 200	ACS, WRAS, TZW	
G. BESLUX BESSIL 6001					-40 to 160	ACS, WRAS	
G. BESLUX BESSIL EH-3					-35 to 200	ACS, WRAS, TZW	
G. BESLUX FLUOR FG 152	Organic	PFPE	2	> 300	-45 to 240	DIN EN 377 DIN 3536	Oxygen presence
G. BESLUX FLUOR FG 222					-40 to 260		
G. BESLUX FLUOR H-	Organic	PFPE	2/3	> 300	-45 to 260		Oxygen presence
					-40 to 260		
					-25 to 260		
G. BESLUX PLEX NA H-3/BM	Sodium complex	M	3	240	-10 to 160	DIN EN 377 DIN 3536	Gas valves lubrication
G. BESLUX BESSIL AT-2	Sodium complex	Silicone	2	250	-40 to 200	UNE 60723.76 DIN 3536	Gas valves lubrication



# MOUNTING PASTE

Very high solid-content greases.

NAME	Thickener	Base oil	Consistency NLGI	Color	Temperature range (°C)	Solids	Properties	
G.A. 238	Inorganic	M	2	Copper	-10 to 1100	Cu	Mounting pastes for very high temperatures thanks to its high Cu content	
G.A. DRILL COMPOUND	Lithium	M	1	Grey-Black	-20 to 120	Zn + Cu + Graphite	Lubricant and conductive paste	
G.A. BESMOLY U-6000		M	1	Grey-Black	-20 to 450	MoS2	Paste with very high MoS2 content	
G. BESLUX ANTI SCUFF PASTE	Vaseline + solids			Black	450	MoS2 + graphite	Dry lubrication by means of dispersed solids in evaporable filament Vaseline	
G. BESLUX WHITE LUBRICANT PASTE	Vaseline + solids			White	450	TiO2		
G. BESLUX RPR PLUS	Lithium	M	2	Ivory	-30 to 120	Corundum	Anchorage paste to prevent relative movement	
G. BESLUX SINCART PASTE-1		S (PAG)	1	Yellow	-40 to 150 (400)	White solids	Mounting paste with white solids for long-life lubrication	
G. BESLUX PASTE 778A		S	1	Ivory	-55 to 150 (300)	PTFE + white solids	Mounting paste for automotive sector with PTFE for smooth movement	
			2					
G. BESLUX TRIBOPASTE L-1/S		SS		1	White	-40 to 400	White solids	Mounting pastes with white solids to avoid tribocorrosion
G. BESLUX TRIBOPASTE L-2/3-S				2/3				
G. BESLUX TRIBOPASTE 32/S				2				
G. BESLUX ANTI-SEIZE PASTE	Inorganic	M	1	Copper	-15 to 1100	Cu + Graphite + MoS2 + CaCO3	Mounting pastes for very high temperatures thanks to its high Cu content	
			2					
G. BESLUX GRAFOL HT PASTE		SS	1	Grey	450	TiO2 + Graphite + MoS2	Dry lubrication paste until 450°C	
G. BESLUX GRAFOL AL PASTE		M	1	Metallic grey	-15 to 1180	Graphite + Al	Mounting paste for high temperatures thanks to its high Al content	
			2/3					
G. BESLUX PASTE TF-3		S	3	White	-40 to 200	PTFE + white solids	Mounting paste for automotive sector with PTFE for smooth movement	
G. BESLUX TOP PASTE		S	1/2	White	-50 to 1150	White solids	White antiseize paste	
G. BESLUX PASTE AL/S	S	1/2	Metallic grey	-50 to 150 (500)	Aluminium	Aluminium based antiseize paste		
G. BESLUX MARTIPASTE-08	Aluminium complex	M	00	Black-copper	-15 to 160	Cu + Zn + Graphite	Pneumatic hammer lubrication paste	
			1/2					
G. BESLUX PASTE AL/S	S	2						
G. BESLUX KOMPLEX PASTE L-2/S	Polyurea	S	2	Cream	-40 to 200	White solids	Paste with high solid content for lubrication at high temperature	





# CENTRALIZED LUBRICATION

Fluid greases that can be pumped long distances with centralized lubrication systems.

NAME	Thickener	Base oil	Consistency NLGI	Drop point (°C)	Temperature range (°C)	Properties
G.A. N.850 EP	Lithium	M	0	165	-20 to 120	Multifunctional central lubrication
			00			
			000			
G. BESLUX MEC-00 GREEN	Lithium	S	00	180	-50 to 120	Grease for long distance lubrication
G. BESLUX KOMPLEX M-0	Polyurea	M	0	235	-20 to 150	Long-life grease
G. BESLUX ALCO M-000	Aluminium complex	M	000	150	-40 to 100	Wheel flange lubrication. S-252 locomotives

# ELECTRICAL CONTACTS

Special greases for electrical applications.

NAME	Thickener	Base oil	Consistency NLGI	Drop point (°C)	Temperature range (°C)	Properties
G.A. RICINOL V	Vaseline		3/4	50		Battery terminals protection
G.A. BESSIL P-1	Inorganic	Silicone	3	-	-45 to 180	Dielectric silicone paste
G. BESLUX CONTACT L- /S	Lithium	S	1	180	-70 to 130	Protective and conductive grease
			2		-65 to 130	
			3			
G. BESLUX ELG-38	Inorganic	M	2/3	-	-20 to 140	Grease with high content of conductive solids
G. BESLUX CONTACT SB-2		M	3	-	-20 to 150	Anchorage and conductive paste for electrical contacts





For the proper selection of a grease it is necessary to know the most important physical-chemical properties described below.



### Consistency

It is defined as the hardness of the grease and depends on the ratio between thickener and base oil. The greater the amount of thickener the greater the consistency of the grease. The way to quantify consistency is to measure the penetration achieved by a cone of dimensions and weight normalized inside a quantity of grease housed in an equally standardized container. The result is measured in tenths of mm, with an equivalence between penetration in tenths of mm and the degree of consistency.

CONSISTENCY NUMBER NLGI	PENETRATION WORKED AT 25°C	CONSISTENCY
000	445 to 475	Liquid
00	440 to 430	Semi-liquid
0	355 to 385	Very soft
1	310 to 340	Soft
2	265 to 295	Steady
3	220 to 250	Very steady
4	175 to 205	Semi-hard
5	130 to 160	Hard
6	85 to 115	Extra-hard

### Drop point

It is the temperature in which the grease undergoes a change of physical state, passing from semi-solid to liquid, increasing its fluidity and 'sweating' the oil from its interior. It can be assimilated as the melting point of the grease and depends for the most part on the type of thickener used.

### Viscosity of the base oil

Viscosity is defined as the resistance that opposes a liquid to its own fluidity. It is measured in  $\text{mm}^2/\text{s}$  or by the best known unit, centistokes, cSt. A low viscous oil will have a greater fluidity, which will allow creating a grease with better performance at low temperatures or with the ability to work at high speeds. On the contrary, a more viscous oil provides a greater lubricating film that ensures effective lubrication and the ability to withstand higher loads.

### Oxidation stability

It can be assimilated to the rate of aging of a grease. A grease with a higher oxidation stability will therefore have a lower aging rate.

### Stability to mechanical work

It is important to know the behaviour of the grease in the face of continuous shear forces to which a grease is subjected inside a bearing. These efforts should not significantly alter the rheological properties of grease. This property is quantified by subjecting the grease to a severe mechanical work after which its consistency must not have varied more than 20%. The type of thickener used is decisive.

### Oil separation

It is the percentage amount of oil that is separated from the whole grease. A slight separation of oil is normal and recommended to ensure proper lubrication, however, an excess of separation can endanger the physical stability of the grease during storage.

### Corrosion resistance

It is the ability of a grease to protect the metal surface on which it is applied against corrosion even in the presence of water or steam.

### Compatibility with rubber and elastomers

The degree of variation of different materials (plastics, elastomers, rubber) in contact with grease at different exposure levels is quantified. It is a comparative test in which the initial and final state of the material is measured. The variables to compare are; hardness, volume, elongation and breaking strength.

### Resistance to water and chemical agents

The sealing function of the grease prevents the entry of contaminants that affect the service life of the grease. The service life of the grease therefore depends to a large extent on its ability to resist physically (entrainment) and chemically to contaminants present.

### Extreme pressure and anti-wear properties

In mechanisms subject to high pressures, the grease must be able to maintain a film that ensures effective lubrication and thus avoid the gripping or wear of the surfaces in contact. These properties are achieved by combining the three elements of a grease; oil, thickener and additive package.



# Brugarolas



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