

# HIGH TECHNOLOGY CONSUMABLES

## PROFESSIONAL GREASES



**ORAPI**<sup>®</sup>  
**PROCESS**



THE ONLY FRENCH MANUFACTURER  
VERTICALLY INTEGRATED FROM DESIGN TO MARKETING

FOR AN ESTIMATE, ADVICE  
OR SPECIFIC REQUEST ?

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More than 80 different types of grease have been developed to respond to all the requirements of our customers: speed, heat, humidity, oxidising environments, heavy loads etc.

You can also discover our unique range of greases based on nanotechnologies: NANOLUBRICANTS.

ORAPI's tribologists pay particular attention to the selection and use of high-performance additives that they incorporate into our greases.

These can be liquids or solids such as MoS<sub>2</sub>, graphite, PTFE and NANOLUBRICANTS which have a significant impact on the performance of the greases by: reducing the friction coefficient, increasing resistance to EP (extreme pressure), minimising material wear, improving adhesion, protecting against the premature oxidation of the grease, protecting metals against corrosion, etc.

## GRADES

Penetration at 25°C

MECHANISM TO BE LUBRICATED	CENTRALISED GREASING	GEARS	BEARINGS	SEALING
Type of grease	Fluid grease	Soft grease	Standard grease	Thick grease
NLGI grade no. (tenths of mm)	0-00	1	2	3
	355-430	310-340	265-295	220-250

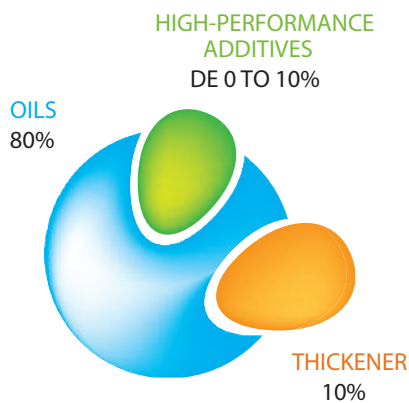
The grade varies depending on the temperature.

The grade increases for cold work - The grade decreases for hot work (the grease softens).

## COMPOSITION

Grease consists of  
3 components

The combined  
characteristics  
of these 3 components  
give grease its  
own characteristics.



## PERFORMANCE

2 tests are used to assess  
the performance  
of a grease :

- Extreme pressure: 4-ball test : load resistance of the lubricating film 40 to 800 kg. Result in kg. Norme ASTM D2586

- Anti-wear test  
Wear resistance 40 kg / 1 hour. Result in mm.



## OILS

These can be mineral or synthetic. Synthetic lubricants currently represent only a small percentage of the overall lubrication market, but this proportion is rising.

## THICKENERS

Help obtain the desired consistency thanks to simple or complex soaps, or silica, bentone or polyurea.

# SPECIAL GREASES














NAME	ENG CB	SI 4	CT 691	CT 300	CT 698	Nano 2010	Nano 2035	CT 51	Vasco 15
No.	612	621	691	628	698	2010	2035	629	658
NLGI GRADE	0	2	1	2	2	2	2	1,5	3
THICKENING AGENT	Li-Ca	Silica	Silica	Bentonite	Mineral waxes	Li-Ca	Silica	Calcium C	Paraffinic waxes
BASE OIL	Mineral	Silicone	PAO	Mineral	Mineral	Mineral	Vaseline	Vaseline	Vaseline
VISCOSITY (cSt)	800 to 40°C	1000 to 25°C	5000 to 40°C		18-23 to 40°C	200 to 40°C	81 to 40°C	150 to 40°C	4-9 to 100°C
MINERAL FILLER	-	-	Teflon	-	-			-	-
4-BALL EP	780	100	> 340	315	-	800	500	315	-
DN FACTOR	50,000	150,000	-	> 100,000	-	500,000	350,000	350,000	50,000
COLOUR	Brown	Translucent	White	Dark amber	Blue	Black	White	Creamy white	White
DROP POINT	260	none	none	none	75			> 250	60
MAX T°	220	200	200	210	75	230	150	160	50
MIN T°	-50	-40	-50	-40	-35	-30	-30	-20	-20
WATER RESISTANCE	G	VG	VG	VG	VG				G
CERTIFICATION								 19-129	 19-084
MAIN APPLICATIONS	Gears, cable greasing. Quarries, public works, gear reducers, bevel and hypoid gears, gear couplings. Excellent anti-wear properties.	Elastomer lubrication, gasket assembly without swelling risk. Optical apparatus lubrication. Rubber/ metal lubrication. Autoclave lids.	Telescopic crane jib lubrication. Protects against corrosion, withstands all climates.	Grease with outstanding extreme pressure lubricating properties at high temperatures. Not soluble in water. No drop point, does not run, even if subjected to overheating.	Gasoline contact lubrication, loading arms in refineries, vehicle filler caps.	Grease rich in additives using new innovative technologies, with tremendous potential for advanced lubrication.	Grease specifically developed for applications in the food industry or where clean grease is required.	Versatile, multi-purpose grease for all types of mechanism : bearings, hinges, runners etc. Water and solvent resistant.	Chlorine-free, sulphur-free, fluorine-free Vaseline codex grease, specifically designed to lubricate small, delicate mechanisms and joints.
PACKAGING	A4-C4-S1-05-U1	B7-O2-T3	C4-O2-LS	C4-O4-S1	C4-O4	A4-C4-B7-02-O4	C4	T3-C4-B7-O2	T3-B7

## LEGEND PACKAGING

A4	650 ml aerosol	C3	290 ml cartridge	O2	25 kg drum	S1	5 kg tub	U1	180 kg drum
B6	500 g box	C4	400 g cartridge	O4	50 kg drum	T3	100 g tube	U2	200 kg drum
CL	410 ml cartridge Lubbe Shuttle	C5	800 g cartridge	O6	75 kg drum	T4	200 g tube		



# FOOD GRADE GREASES

NAME	CT 609	CT 615	CT FLON AL	CT 6092	CT 622	CT 6221	SI ROBINET	VASCO
No.	609	615	618	6092	622	6221	651	657
NLGI GRADE	2	1,5	1/2	2	0	1	2	4/5
THICKENING AGENT	Silica	Calcium C	Calcium C	Gel	Aluminium C	Aluminium C	Silica	Paraffinic waxes
BASE OIL	Food grade Vaseline	Food grade Vaseline	Vaseline	Vaseline Codex	Codex	Codex	Silicone	Vaseline
VISCOSITY (cst)	81 to 40°C	150 to 40°C	150 to 40°C		180 to 40°C	180 to 40°C	1000 to 25°C	4 - 9 to 100°C
MINERAL FILLER	-	-	Teflon	-	Teflon	Teflon	-	-
4-BALL EP	180	315	350	250	200	250	100	N/A
DN FACTOR	350,000	350,000	350,000	500,000	350,000	350,000	150,000	50,000
COLOUR	Transparent	White	White	Colourless	White	White	Transparent	White
DROP POINT	none	250	220	none	200	210	none	60
MAX T°	150	160	170	180	130	130	200	50
MIN T°	-30	-20	-40	-15	-15	-15	-40	-20
WATER RESISTANCE	VG	-	VG		VG	VG	VG	G
CERTIFICATION	 		 	 	 	 		
MAIN APPLICATIONS	Food industries, does not stain. Chains, hinges, runners, cutting blades in packaging lines. Sliding surfaces.	Food industries. Bearing, cams, conveyors...	Greasing under heavy loads with the lubricating effect of PTFE, noise reduction. Bearings, conveyors... Ideal for use on plastics.	Very high-quality translucent grease. For the food processing industry for applications where direct contact with food is required or is unavoidable.	Lubrication under heavy loads with PTFE's lubricating effect, noise reduction. Bearings, conveyors... Ideal on plastics.	Lubrication under heavy loads with PTFE's lubricating effect, noise reduction. Bearings, conveyors... Ideal on plastics.	Metal, glass or plastic sanitary taps and valves, compatible with all seals. Vacuum lubrication.	Small mechanisms. Clockwork, measuring devices, sewing machines. Pharmaceutical industry : packaging machines, capping machines. Odourless.
PACKAGING	A4-B7-C4-CL-O4-S1-T4	B7-C4-CL-O1-O4-S1-T3	A4-C4-B7-S1	C4-B7	B7-O4	C4-B7-O4	B7-T3	B7-C3-S1

## LEGEND PACKAGING

A4	650 ml aerosol	C3	290 ml cartridge	O2	25 kg drum	S1	5 kg tub	U1	180 kg drum
B6	500 g box	C4	400 g cartridge	O4	50 kg drum	T3	100 g tube	U2	200 kg drum
CL	410 ml cartridge Lubbe Shuttle	C5	800 g cartridge	O6	75 kg drum	T4	200 g tube		



# HIGH TECH GREASES




NAME	WSA	CTDMEP 2	CT 8 EP	CT 1240	M1RB	CT 662	WSA PB	M 4	CT 665	M 6
No.	605	606	617	619	639	662	659	660	665	675
NLGI GRADE	2	2	2	2	2	2	1	2	2	2
THICKENING AGENT	Calcium	Lithium C	Aluminium C	Teflon Silica	Lithium	Polyurea	Calcium	Bentonite	Calcium Sulfonate	Lithium
BASE OIL	Mineral	Mineral	Mineral	Perfluorinated	Mineral	Mineral	Mineral	Mineral	Mineral	Ester synthesis
VISCOSITY (cSt)	870 to 40°C 106 to 100°C	200 to 40°C	150 to 40°C	420 to 40°C	200 to 40°C	230 to 40°C	-	475 to 40°C 32 to 100°C	180 to 40°C	15 to 40°C
MINERAL FILLER	-	-	MoS <sub>2</sub>	Teflon	MoS <sub>2</sub>	-	Zinc (lead-free)	MoS <sub>2</sub>	-	-
4-BALL EP	315	400	315	800	315	> 300	> 500	240	480	350
DN FACTOR	500,000	500,000	250,000	300,000	500,000	250,000	50,000	150,000	250,000	1,000,000
COLOUR	Green	Blue	Grey	White	Grey	Yellow-Brown	Brown	Black	Caramel	Clear
DROP POINT	160	240	260	none	180	> 270	200	none	> 300	190
MAX T°	130	230	230	320	160	150	120	225	190	120
MIN T°	-30	-30	-20	-40	-30	-20	-30	-35	-25	-70
WATER RESISTANCE	VG	VG	-	VG	-	VG	VG	-	VG	-
CERTIFICATION										
MAIN APPLICATIONS	Good adhesion, humid and marine environments. Water pumping and transport installations. Water treatment plants, washing stations <b>NATO G460</b>	Complex soap grease for heavy loads and high temperatures. Paper mills, public works, textiles, cardboard mills, steelworks.	Public works, transport, automobile equipment, mines. Handling equipment, agricultural equipment, fifth weels. Greatly reduces noise.	Aggressive environments, chemical industries, epoxy paint line rollers. Lubrication under oxygen. Biscuit ovens, rotating extruder heads.	Long-life lubrication for aeronautical, aerospace and army applications. Highly stable to temperature changes. Excellent water and chemical agent resistance.	Difficult and complex greasing. Exceptional service life grease.	Grease for marine use, use in cement works, port cranes, cargo facilities, gearboxes, gear wheels, drive pinions subjected to bad weather and high loads. <b>NATO G450</b>	Infusible grease. High stability over time on parts subjected to temperatures around +200°C. High temperature extractor fans, brickyards, glassworks.	Very severe wear and impact conditions. Very long-lasting lubrication. Foundry rollers, crushers, civil engineering, steel industry.	Extreme cold, very high speed bearings. Tooling, milling, sanding and drilling machine spindle bearings.
PACKAGING	A4-B7-C4-O2-04-S1-T4-U1-CL	B7-C4-O2-04-S1-U1	B7-O4-U2	B7-C5-S1-T3	B7-T4	B7-C4-O2	B7-C4 (silicone type) -O4-S1	B7-C4-O4-U2	B7-C4	B7-C4





# STANDARD GREASES



NAME	CT 10	CT 14	CT 4	CT 12 G	CT FLON	CT 140	CT 143	CT BIO
No.	677	602	608	625	607	680	743	687
NLGI GRADE	2	2	2	2	2	0-00	3	2
THICKENING AGENT	Lithium	Lithium	Lithium	Lithium	Lithium	Lithium	Lithium	Li-Ca
BASE OIL	Mineral	Mineral	Mineral	Mineral	Mineral	Mineral	Mineral	Plant and ester
VISCOSITY (cst)	200 to 40°C	200 to 40°C	95 to 40°C	120 to 40°C	120 to 40°C	200 to 40°C	120 to 40°C	350 to 40°C
MINERAL FILLER	-	-	MoS <sub>2</sub>	Graphite	Teflon	-	-	-
4-BALL EP	250	315	315	315	315	315	315	315
DN FACTOR	350,000	350,000	350,000	350,000	350,000	350,000	350,000	500,000
COLOUR	Light amber	Light amber	Grey black	Black	Light beige	Amber	Amber	Green
DROP POINT	180	180	180	180	180	180	180	160
MAX T°	130	165	165	165	140	165	165	145
MIN T°	-25	-30	-30	-30	-20	-40	-20	-25
WATER RESISTANCE	-	-	-	-	G	-	-	Excellent
CERTIFICATION								
MAIN APPLICATIONS	No-load greasing. Domestic appliances, building, DIY.	Multi-purpose greasing under heavy load.	Greasing under very heavy loads, fights effectively against wear. Mechanical construction, safety lubricant. Tooth clutches.	Greasing under heavy loads, friction coefficient improved with graphite. Electric motors.	Greasing under heavy loads with the lubricating effect of Teflon, noise reduction. Chemical inertness. Ideally suited to plastics.	Centralised greasing. Multi-purpose. Improved ant-wear and EP properties. Fluid grease.	Water tap and valve sealing and labyrinth seals. Self-locking effect. Thick grease for sealing and lubricating at the same time.	Dams, locks, public works, agriculture, forest maintenance.
PACKAGING	B7-C4-04-U1	A4-A5-B7-C4-02-04-T3-U1-CL	A4-B7-C4-02-04-S1-T4	B7-C4-02	A4-B7-C4-S1	O2-04-S1-U1	B7-04	C4-02

## LEGEND PACKAGING

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*Standard greases*



## DIN 51825 : CLASSIFICATION SYSTEM

NAME	N°	DIN 51825	TYPE OF GREASE
CT 10	677	KP2K-25	STANDARD
CT 12 G	625	KPF2P-30	STANDARD
CT 1240	619	KP2U-40	HIGH TECH
CT 14	602	KP2P-30	STANDARD
CT 140	743	KP00P-40	STANDARD
CT 143	743	KP3P-20	STANDARD
CT 300	628	KP2S-40	SPECIAL
CT 4	608	KPF2P-30	STANDARD
CT 51	629	KP1.5P-20	SPECIAL
CT 520	630	KP2U-26	SPECIAL
CT 609	609	KP2N-30	FOOD GRADE
CT 615	615	KP1.5P-20	FOOD GRADE
CT 630	672	KP2U-40	SILICONE + HIGH TECH
CT 662	662	KP2R-40	HIGH TECH
CT 665	665	KP2R-25	HIGH TECH
CT 683	683	K3.5U-50	SPECIAL
CT 691	691	KPF1S-50	SPECIAL
CT 698	698	K2D-35	SPECIAL
CT 8 EP	617	KPF2U-20	HIGH TECH
CT 830	616	KP2U-40	HIGH TECH
CT BIO	687	KPE2N-25	STANDARD
CT FLON	607	KPF2N-20	STANDARD
CT FLON AL	618	KPF2P-40	SPECIAL
CT1240	619	KPF2U-40	HIGH TECH
CTDMEP2	606	KP2U-30	HIGH TECH
ENG CB	612	GP0T-50	SPECIAL
M 4	660	KPF2U-35	HIGH TECH
M 6	675	KPE2K-70	HIGH TECH
M 7	674	KPF2M-70	HIGH TECH
M1RB	639	KPF2P-30	HIGH TECH
NANOLUBRICANT	2010	KPF2U-30	HIGH TECH
NANOLUBRICANT	2035	KPF2N-30	HIGH TECH
NANOLUBRICANT	2045	KPF2M-30	HIGH TECH
SI 20	646	KP2P-30	SILICONE
SI 33	652	KP2P-60	SILICONE
SI 4	621	K2S-40	SILICONE
SI 450	648	K2S-40	SILICONE
SI 528	649	K3S-40	SILICONE
SI ROBINET	651	KP2S-40	FOOD GRADE
SI VIDE	633	K2S-40	SILICONE
SIL 50/50	823	KPF1U-50	SILICONE
SITEF 1	626	KPF1U-60	SILICONE
SITEF 2	620	KPF2U-60	SILICONE
SITEF 3	654	K3U-60	SILICONE
VASCO	657	KP4/5C-20	FOOD GRADE
VASCO 15	658	K3C-20	SPECIAL
WSA	605	KP2P-30	HIGH TECH
WSA PB	659	GOPF1M-30	HIGH TECH

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**NANOLUBRICANTS.**



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