

APPLICATION / COMPONENT	USE THIS	DO NOT USE
3D printer smooth rods	SPR 30	Thick grease; silicone on print surfaces
Linear rails (MGN etc.)	SSG 25	Thin oil alone; belts nearby
Lead screws (trapezoidal)	SSG 25	Thin oil as a sole lubricant
Ball screws	LGE 00	Dry film; thin oil alone
Z-axis screws	LGP 20 Prime	Thin oil that drips onto parts below
Idler pivots	ICHOREX Oil	Heavy grease that adds drag
Belt pulleys (bearing only)	ICHOREX Oil	Any lubricant on the belt or teeth
Belts	<i>Do not lubricate</i>	Oil, grease, silicone, dry film - anything
Print bed / build plate	<i>Do not lubricate</i>	Any lubricant or silicone
Hotend thermal interfaces	Thermal Grease 12.3	Lubricating grease or oil; conductive compound
Heater cartridge seating	Thermal Grease 12.3	Lubricating grease; conductive compound
Thermistor seating	Thermal Grease 12.3	Conductive compound; lubricating grease
Plastic gears	PGG 20	Mineral EP grease; aggressive additives
Metal gears	CG 2	Silicone grease (low load capacity)
Robot gearboxes	RGG 0	Thin oil; silicone under high load
Servo actuators	SGP 2 Prime	Heavy grease that loads the servo
Humanoid / quadruped joints	RGG 0	Thin oil that migrates out
Linear actuators	LGE 00	Thin oil alone on loaded screws
Small bearings	ICHOREX Oil	Heavy grease in high-speed miniature bearings
Exposed hinges	ICHOREX Oil	Dust-collecting heavy grease in the open
Damping hinges	HDG 30	Low-friction oil or grease
Camera / gimbal mechanisms	ICHOREX Oil	Heavy grease that adds drag to fine motion
Electrical connectors (protection)	ECG 37	Conductive grease across separate contacts
Grounding points	<i>Do not lubricate</i>	Contact-protection grease where true conductivity is required
Slip rings	ECG 37	Anything that bridges adjacent tracks
Potentiometers	ECG 37	Conductive grease (changes resistance); heavy grease
PCB connectors (fine-pitch)	ECG 37	Silver or carbon conductive grease
Sensors	<i>Do not lubricate</i>	Any lubricant on the sensing face
Rubber seals	Silicone Grease	Mineral oil/grease (swells many rubbers)
O-rings	Silicone Grease	Mineral oil/grease on rubber O-rings
Cleaning before lubrication	3D Printer Cleaner	Cleaning energised electronics; harsh solvents on plastics

Universal rules

- Clean old lubricant first. Do not mix greases unless compatibility is known.
- Apply oils and exposed greases sparingly, and wipe away excess.
- Never lubricate belts or print beds.
- For rails and gearboxes, follow the equipment manufacturer's lubricant specification.
- Use thermal compound for heat transfer, never as a lubricant.
- Use conductive grease only on de-energised equipment, and never where it can bridge contacts.
- Test compatibility on sensitive plastics before full use.