



# CT 830

## EXTREME CONDITIONS GREASE

### SPECIAL OXIDISATION- AND CORROSION-RESISTANT LUBRICANT

#### DEFINITION

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CT 830 is a chemically-advanced, fluorinated grease that resists chemical products and withstands difficult conditions.

ORAPI engineers have demonstrated their mastery of this advanced technology for more than 25 years. The chemical resistance and thermal stability of this grease brings on a new age in lubricant technology for maintenance-free constructions.

Indeed, working temperature is an important criterion in lubricating bearings; before the development of ORAPI CT 830, extremely high temperatures necessitated mechanical solutions.

This grease fills a long-standing need amongst standard product lines since lithium + synthetic oil soap greases can lubricate for a maximum of 200 hours at 150°C only. But with CT 830, lubrication lasts 1000 hours at 250°C for ball bearings under dynamic mechanical loads.

#### ADVANTAGES

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CT 830 possesses exceptional characteristics that provide solutions to multiple technical problems: Extraordinary stability in regards to principle chemical products – organic solvents, in particular –, hydrocarbons, chlorinated products, and more.

Demonstrates excellent resistance to strong oxidising agents, including oxygen, peroxides, acids, strong bases, and helium.

Demonstrates excellent vacuum load up to 10-10 bars at 20°C.

Resists oscillations and vibrations well, preventing tribocorrosion.

Demonstrates incomparable resistance to high temperatures (280°C continuously) permitting its use in numerous sectors.

Effective from a thickness of 7 microns.

Demonstrates excellent resistance to water, vapour and salt spray.

CT 830 is compatible with most polymers, such as butyl, chloroprene, and natural elastomers, etc.

## APPLICATION FIELDS

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CT 830 decreases the required frequency of lubrication to 6 to 18 months while offering optimal functional safety. CT 830 has proved to be indispensable for the automobile industry and for household appliance manufacturers.

Lubricates bearing rollers and closed-circuit conveyors in high temperature environments for varnishing, curing and painting operations.

Lubricates trolley wheels of curing and drying ovens, and autoclaves.

Lubricates ventilation bearings (ovens, incubators).

Lubricates electrical motor mechanisms - Clients have reported that after 5,000 hours of operation, examination of grease is adequate.

Use in solvents and chemical products industries, plastics processing, ceramics, and refractory materials industries.

Lubricates all mechanisms subjected to very high temperatures, and oxidising chemical products (e.g., chlorates).

Bearings, rollers, valves and fittings, powdered metal bearings, and more.

Special grease for lubricating matching plastic runners, especially Duroplastics and thermoplastics such as polycarbonates, polystyrene, which tend to warp and crack when other commercially-available lubricants are applied.

During our own tests conducted for 100 hours at 80°C, our engineers observed no changes to volume or appearance of plastics materials tested.

Cellulose acetate	CA
Polyoxymethylene	POM
Polyethylene	PE
Polycarbonate	PC
Polyurethane	PUR
Polystyrene	PS
Polytetrafluoroethylene	PTFE

Note that the use of two similar plastics in a moving system is to prevent auto-adhesion.

CT 830 reduces wear of plastic materials to less than a tenth.

Tried and tested for cameras, projectors, general optics industry, precision mechanics and manufacturing of special devices.

Lubricate and re-lubricate bearing rollers, circuit rollers, wheel and chain bearings of conveyors, particularly in the food and textile industry.

Long-lasting or lifetime lubrication of bearings submitted to high temperatures, e.g., in electrical motors, ventilators, drying installations, cooking ovens, radiator grills, presses used in continuous manufacturing of fibreboard or laminated chip board.

Dry compressors. Piston pins equipped with needle roller bearings, where the temperature can rise to 120°C, or even a maximum of 200°C, due to compression, absolutely require CT 830.

Specially-formulated for use in oxygen installations (Air Liquide authorisation available upon demand). Acceptable oxygen pressure is 345 bars, maximum.

High-performance, long-lasting grease for valves and fittings for hot and boiling water, vapours and other aggressive and corrosive agents. Ensures smooth, reliable and long-lasting operation and watertightness for valves, faucets, and plug and ball valves.

Lubricate electrical contacts. CT 830 increases the working life of pins, push buttons, rotary switches, and potentiometers.

Lubricate O-rings.

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### Manufacturing site and registered office

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## TECHNICAL CHARACTERISTICS

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Colour .....	White
Base .....	Perfluoroether
Density at 20°C (DIN 51757) .....	1.96
Drop point (NFT 60102) .....	None
Grade NLGI (DIN 51 818) .....	2
Worked penetration (NFT 60132) .....	265 - 295
Dynamic viscosity at 25°C .....	9,500 mPa.s
DN Factor .....	300,000
Oil separation at 200°C (AIR 1650 A) .....	12%
Anti-rust performance (EMCOR) (NFT 60-135) .....	1/1
Viscosity of base oil at 40°C .....	approximately 70 cSt
Viscosity of base oil at 20°C .....	approximately 250 cSt
4-balls EP test (ASTM D 2596) .....	750 kg
Operating temperature .....	-40°C to 280°C

Following the DIN ISO 2176 standard, the drop point of CT 830-type lubricants cannot be determined since they do not melt. However, some oil separation may be observed from 160°C.

## INSTRUCTIONS FOR USE

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Because CT 830 is incompatible with generally-used greases, it is important to carefully decrease the material before applying CT 830.

Optimum performance of this technologically-advanced grease is obtained when friction points are clean.

We recommend carefully cleaning with ORASOLV M1 and to dry any residue with compressed air in order to obtain perfectly dry surfaces.

Apply grease in a thin layer to the parts to be lubricated.

In bearings, do not fill more than 50% of the clearance.

In special cases where rotation speeds are low in bearings, circuit rollers for conveyors, and trolley wheels in cooking ovens, it is advised to fill the cavity completely.

## PACKAGING

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100 g tube	Ref. 3616 T3	x 12
800 g cartridge	Ref. 3616 C5	x 1
1 kg box	Ref. 3616 B7	x 6
5 kg bucket	Ref. 3616 S1	x 2

## AUTHORISATION

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- Food Industries      INS H1 1795182
- Complies with NATO G 397 / MIL 27617 F.
- Authorised by Air Liquide for contact with oxygen up to 345 bars.

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