

## SL123R UNITHERM

*India's First and Only True Synthetic · High Load · High Temperature Grease to Prevent Failures in Gear Couplings and Heavy-Duty Drives*

### Gear Coupling & Heavy Drive Applications in a Thermal Power Plant

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A thermal unit runs 20–30 critical gear couplings — TG shaft coupling, BFP drive couplings, CW pump drive couplings, and especially coal mill drive couplings and pinions, which combine high torque, dust, and heat in one of the most aggressive duties on any unit. Ordinary EP grease bleeds under centrifugal force and oxidises in the coupling cavity; fretting and tooth wear follow. SL123R UNITHERM holds film integrity through centrifugal load and sustained 150°C+ duty.

### Part A — Annual Cost of Gear Coupling & Drive Failures — 660 MW Unit

- **Coupling life:** ordinary EP grease delivers 1.5–2 years on coal mill and high-torque drive couplings against 5+ year design life.
- **Coupling + drive spares: ₹25–45 lakh/year per 660 MW unit.** Coal mill drive couplings and BFP drive spindles are high-value spares.
- **Maintenance + alignment: ₹10–18 lakh/year.** TG shaft alignment after coupling change is specialised.
- **Unit derate + trip cost: ₹2–5 cr/year — the dominant cost.** Coal mill coupling failure forces mill tripping and unit derating; BFP coupling failure drops the boiler.
- **Total: ₹2.5–6 cr/year per 660 MW unit.** A true synthetic high-load, high-temperature grease delivers 3–4× coupling life and addresses ₹90 lakh–3 cr/year.

### Part B — Gear Coupling & Heavy Drive Applications

- **Turbine Generator** — HP-IP shaft coupling; IP-LP shaft coupling; generator rotor-exciter coupling.
- **Boiler Feed** — BFP drive coupling; booster pump drive couplings; BFP turbine drive couplings.
- **Coal Mill / Pulveriser** — coal mill drive couplings; mill main gearbox output coupling; coal feeder drive couplings.
- **Circulating Water** — CW pump drive couplings; ACW and DMCW pump drive couplings.
- **Draft System** — ID fan drive couplings; FD fan drive couplings; PA fan drive couplings.
- **FGD & Emission Control** — FGD booster fan drive couplings; absorber recirculation pump drives; limestone slurry pump drives.
- **Coal Handling Plant** — stacker-reclaimer drive couplings; wagon tippler drive couplings; crusher drive couplings; belt drive pulleys.
- **Ash Handling** — ash slurry pump drive couplings; ash silo unloading drives.
- **Cooling Tower** — induced-draft fan gearbox drive couplings; fan hub couplings.
- **Condenser & Auxiliary** — condensate extraction pump drive couplings; auxiliary pump drive couplings.

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**Request a free 90-day plant trial — your reliability data will speak for itself.**

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