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balzers

More power inside.

BALINIT® C coating for reliable and durable heavy duty vehicle gears.

General Engineering

Take the easy way out: BALINIT® C for hard work.

Gears in heavy-duty vehicles typically are subject to high loads. Specific operating conditions may cause poor lubrication which increases the danger of wear, thereby shortening component life time. With increasingly powerful engines, conventional anti-wear strategies such as case hardening and nitriding often cannot provide the tribological reserve needed.
The BALINIT® C (WC/C) coating is an unmatched combination of high hardness together with low friction. It thereby effectively reduces the danger of seizures and pitting wear. The reduced friction contributes to overall system efficiency.

Your advantages with BALINIT® C coated gears.

- High hardness decreases wear
- Low friction at high loads prevents seizures and minimizes frictional losses
- 15% increase in surface fatigue limit as compared with uncoated gears extends component life time
- Lightweight design by a possible reduction in gear size

BALINIT® C means significantly improved wear resistance and durable efficency.

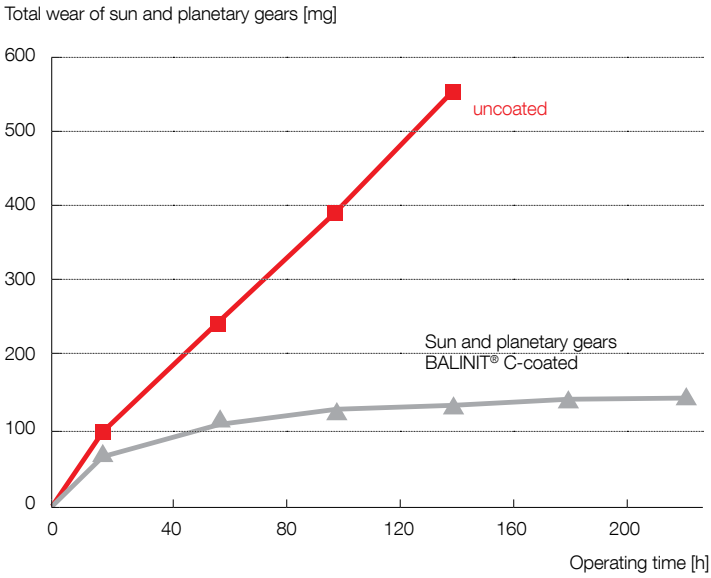

Fig.1:
Slow turning gears with high surface pressures typically suffer from considerable wear. BALINIT® C effectively stops further wear after a running-in phase (FZG C test, 2.180 MPa, 0.04m sliding speed)

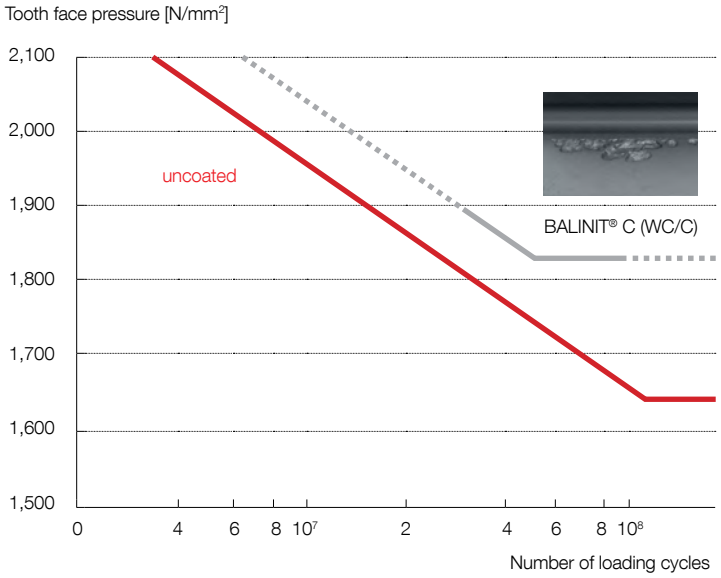

Fig.2:
The standard FZG C test indicates 10-15% increase in fatigue strength as compared to uncoated gears (material: case hardened steel 62 HRC, Rz=3µm), stopping criterion 4% wear induced material loss per tooth (weight)

We recommend: BALINIT® C coatings for more reliability and durability.

BALINIT® C				
Coating material	**Micro hardness (HK 0.01)**	**Typical thickness**	**Coefficient of friction µ against steel (dry)**	**Colour**
a-c:H:W (WC/C)	1000	1-4 µm	0.1 - 0.2	black-grey

There's much more to talk about – please get in touch to discuss what we can do to improve your business.

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