How to stop teeth in your plastic gears from breaking

1. Understand the loads on the gear - our free Gear Card summarizes the load data.
2. Select the right plastic - it should be tension-free, dimensionally stable (especially in moisture), display high impact strength, and offer secure attachment to shaft.
3. Size the gear - We use proprietary software to correctly size the gear for the load.
4. Design tooth mesh to minimize tooth wear - this may involve optimizing tooth size, modifying teeth, or application of a special low-friction coating.
5. Examine the drive layout - sometimes a slight change in the drive design (e.g., a larger gear OD) will prevent the gear from breaking.
6. Minimize backlash - excessive backlash caused by an undercut to compensate for moisture absorption can increase shock loading and shorten gear life.

For your FREE Gear Card
Call 201-767-8066

Or visit
www.intechpower.com/Gear-Card.html
Only Power-Core
“plastic-on-metal” gears give you all these advantages!

- No lubrication – no product contamination, no maintenance required.
- No moisture absorption – eliminates the need for backlash allowance to compensate for swelling.
- Steel, stainless steel, or aluminum core – dissipates stresses and heat; reduces thermal expansion.
- Engineered for longer life – proprietary formula accurately calculates how long the gear will last.
- Design assistance – Intech engineers can help you size the gear to last in your application. Just fill in and return the free Gear Card available below.

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