

**TITLE OF THE INVENTION: A FLEXSPLINE, A HARMONIC GEAR AND A
METHOD OF PREPARATION**

ABSTRACT

5 Described herein is a flexspline comprising at least one sheet of carbon fibre, a plurality of
gear teeth arranged along and attached to a surface of the at least one sheet of carbon fibre,
and an adhesive resin to attach the at least one sheet of carbon fibre to the plurality of gear
teeth, each gear tooth in the plurality of gear teeth comprises carbon fibre filaments and the
adhesive resin. The flexspline may be prepared by placing at least one sheet of carbon
10 fibre between an inner mould and an outer mould, placing carbon fibre filaments in a
plurality of gear tooth cavities formed between the inner mould and the outer mould,
injecting an adhesive resin, and compressing the sheet of carbon fibre, the carbon fibre
filaments and the adhesive resin with a compression mould.

15 [FIG. 4]