

PneuNet actuator molds



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Summary

Molds for casting pneuNet actuators out of silicone. <https://softroboticstoolkit.com/book/pneunets-bending-actuator>

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Pneumatic network actuators (PneuNet) are a type of soft robotic actuator composed of a network of channels and chambers embedded in an elastomer. The design was originally created by the Whitesides Research Group at Harvard.

I modelled a couple of actuator molds based on the instructions that can be found on <https://softroboticstoolkit.com/book/pneunets-bending-actuator>

Details for casting the actuators can be found on the mentioned website.

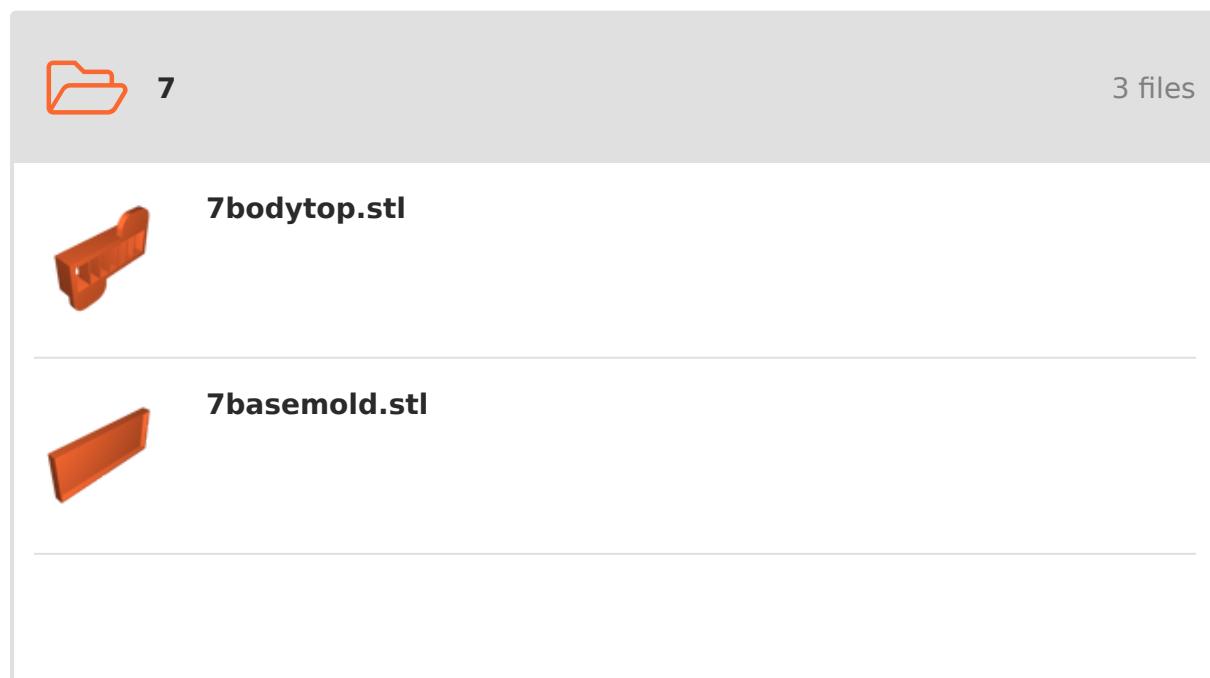
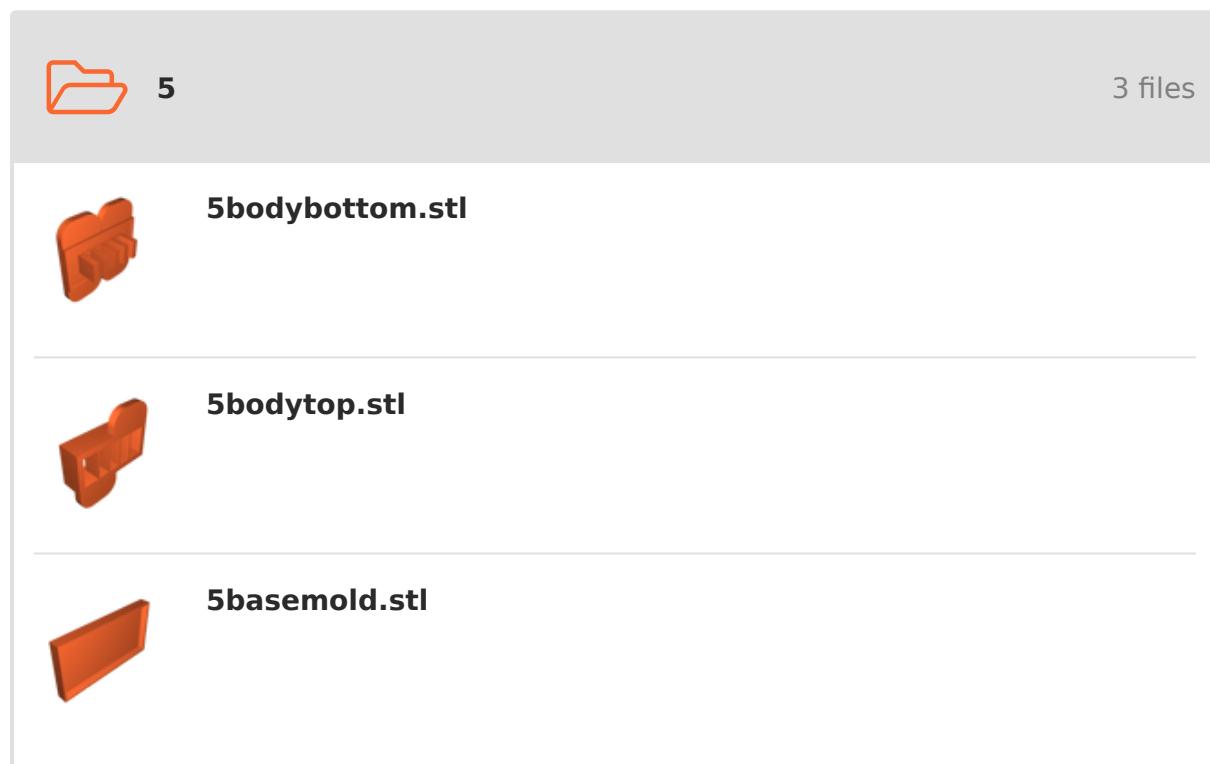
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The website mentions that for the strain-limiting layer to use paper; I got better results with carbon fiber fabric (which is not that safe, don't use it if you don't have proper ppe and such).

When it comes to actually printing the molds, the settings I used were:

- 30% infill
- 3 wall layers
- 4 top layers
- 30% skin overlap

Model files





7bodybottom.stl



9

3 files



9basemold.stl



9bodybottom.stl



9bodytop.stl



11

3 files



11bodytop.stl



11basemold.stl



11bodybottom.stl

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