Electronic Supplementary Material (ESI) for Soft Matter.

Droplet impacts onto soft solids entrap more air

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Supplemental Movie Captions

Movie 1 – Corresponds with Figure 2(a) in the main text. Bottom view of an ethanol drop impact onto a rigid, glass microscope slide (V = 1.99 m/s, R_b = 1.5 mm, We = 207). Filmed at 5 Mfps, played back at 24 fps.

Movie 2 – Corresponds with Figure 2(b) in the main text. Bottom view of an ethanol drop impact onto a soft silicone surface (E = 15 kPa, V = 1.91 m/s, R_b = 1.4 mm, We = 187). Filmed at 5 Mfps, played back at 24 fps.

Movie 3 – Corresponds with Figure 5(a) in the main text. Bottom view of a DI water drop impact onto a soft silicone surface (E = 15 kPa, V = 0.7 m/s, R_b = 2.7 mm, We_e = 4.4). Filmed at 200 kfps, played back at 24 fps.

Movie 4 – Corresponds with Figure 5(b) in the main text. Bottom view of a DI water drop impact onto a soft silicone surface (E = 15 kPa, V = 1.1 m/s, R_b = 2.6 mm, We_e = 10). Filmed at 200 kfps, played back at 24 fps.

Movie 5 – Corresponds with Figure 5(c) in the main text. Bottom view of a DI water drop impact onto a soft silicone surface (E = 15 kPa, V = 1.5 m/s, R_b = 2.7 mm, We_e = 21). Filmed at 200 kfps, played back at 24 fps.

Movie 6 – Corresponds with Figure 5(d) in the main text. Bottom view of a DI water drop impact onto a soft silicone surface that is only 1 mm thick (E = 15 kPa, V = 1.1 m/s, R_b = 5.1 mm, We_e = 21). Filmed at 1 Mfps, played back at 24 fps.

Movie 7 – Corresponds with Figure 5(e) in the main text. Bottom view of a DI water drop impact onto a soft silicone surface (E = 330 kPa, V = 1.1 m/s, R_b = 7.7 mm, We_e = 29). Filmed at 1 Mfps, played back at 24 fps.

Movie 8 – Corresponds with Figure 5(f) in the main text. Bottom view of a DI water drop impact onto a soft silicone surface (E = 460 kPa, V = 1.1 m/s, R_b = 3.4 mm, We_e = 13). Filmed at 1 Mfps, played back at 24 fps.

Movie 9 – Corresponds with Figure 7 in the main text. Bottom view of an ethanol drop impact onto a soft silicone surface (E = 330 kPa, V = 1.1 m/s, R_b = 1.54 mm, We_e = 37) using transmission interferometry. Filmed at 1 Mfps, played back at 24 fps.