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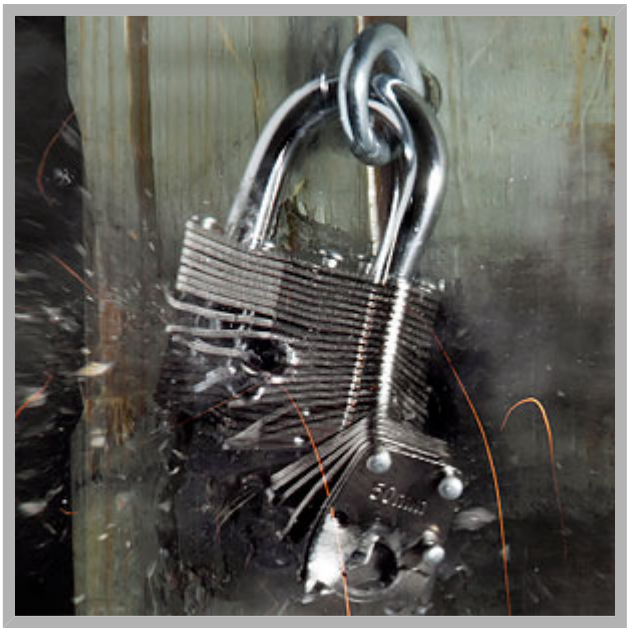
Can Your Padlock Withstand a Bullet? Abusive Lab Test

A padlock can be all that stands between a burglar and a shed or lockbox full of property. But how well can it really handle the tools of a determined thief (or years of bad weather, for that matter)? To find out, we enlisted the expertise of our friends at Minnesota's Environ Labs testing facility, where we put four models—from cheap hardware-store finds to a $115 "all-weather" model—through an unforgiving battery of tests.

BY SETH PORGES



Lock vs. bullet.

Photograph by Ofer Wolberger

Shock Test

To measure the locks' resilience against brute force—the kind they'd feel from a sledgehammer—we used an MTS Systems shock test machine to drop a 32-pound weight on them.

Franklin: One drop from 55 inches (the machine's max height) popped the lock.

Medeco: Three drops and the lock was reduced to a cloud of plastic and steel shrapnel.

Master: The toughest lock slowly pulled apart over the course of four drops from max height.

OnGuard: Just one drop smashed the lock's plastic shell and unlatched the shackle.

Winner: Master

Bolt-Cutter Test

Bolt cutters can be a burglar's best friend. We used a platform scale to measure how much force bolt-cutter handles needed to snap the shackles.

Franklin: Applying just 95 pounds of pressure to the bolt cutter's handles snapped the weakest shackle.

Medeco: It took 110 pounds of force to snip the shackle.

Master: The second-toughest shackle broke after 200 pounds of squeeze.

OnGuard: The toughest lock was the only one to survive this test—after 270 pounds of pressure, the bolt-cutter teeth began to bend, but the shackle was left with just a small groove.

Winner: OnGuard

Tensile Test

How much force does it take to pull the shackle out of the cylinder? We used an Instron tensile testing machine to find out.

Franklin: The shackle on the weakest lock was pulled free with just 1024 pounds.

Medeco: The runner-up met its end with 6436 pounds of force.

Master: It took a whopping 7745 pounds of force to pull the winner loose.

OnGuard: 3072 pounds of pull and the lock was sprung.

Winner: Master

Salt-Fog Test

To simulate sitting outside a shed through years of acid rain and environmental exposure, we left the locks in a chamber for an intense weeklong onslaught of sulfur-dioxide salt fog.

Franklin: A week of sulfur dioxide left the Franklin permanently stuck shut.

Medeco: We had high hopes for Medeco's "All-Weather" lock. And although it survived the sulfur dioxide, curiously, it wouldn't open after seven days with a weaker, nonsulfuric salt fog.

Master: The Master left the test looking like it had been submerged on the Titanic for a century, but it still opened.

OnGuard: This lock finished looking like we'd plucked it from a swamp but still working.

Winner: Tie between Master and OnGuard

Gunshot Test

In Hollywood heists, burglars frequently shoot open locks. To see how these padlocks handle bullets, we shot the cylinders with a rifle from 80 feet away.

Franklin: Although centered shots passed right through the lock, it took an off-center bullet from a .243 Winchester to actually spring it.

Medeco: A single centered shot from a .25-06 Remington left this lock unlatched—and with a large exit hole.

Master: Behold, the bulletproof lock—the Master stopped .243 Winchester and Remington .25-06 shots in their tracks. Not even a pair of bullets from a .300 Winchester Magnum could pass through or open this lock.

OnGuard: After one off-center shot from the .25-06 Remington, we were able to pull the lock open by hand. As with the Franklin, centered shots passed through the cylinder but failed to actually open it.

Winner: Master, by a mile

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