



# How to repair a frayed Apple AC Adapter Wire

Over time, the wire coating of an Apple MagSafe...

Written By: Ryan Mostofi



## INTRODUCTION

Over time, the wire coating of an Apple MagSafe Power Adapter may deteriorate leaving the wires exposed and possibly subject to electrical shorts. By covering the exposed wires with heat shrink you can protect the power adapter and yourself while continuing to use it to charge your computer.



### TOOLS:

- [Heat Gun](#) (1)

*Alternatively, you can use a lighter*

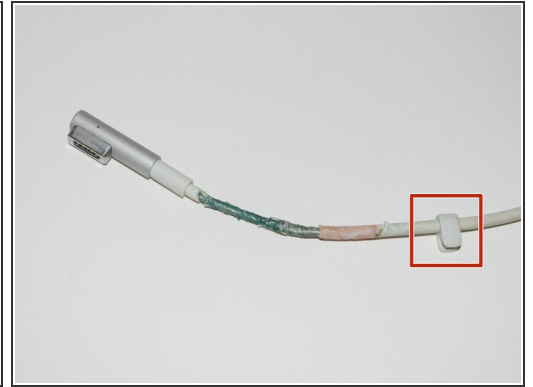
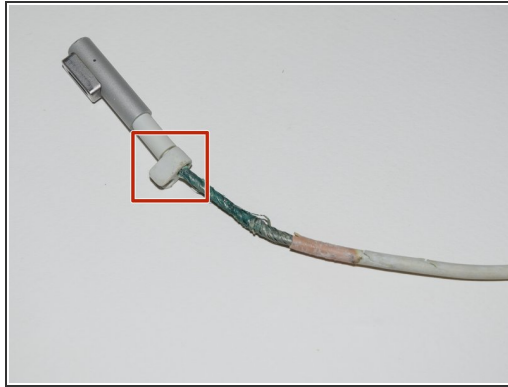
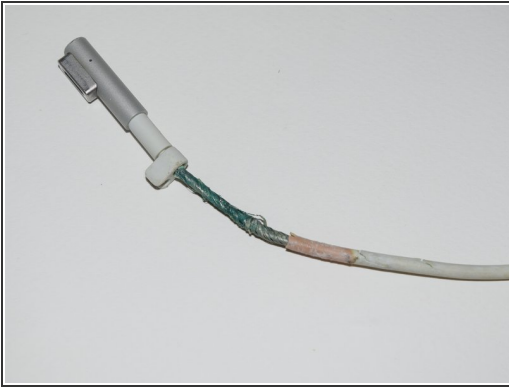
- [Utility Scissors](#) (1)



### PARTS:

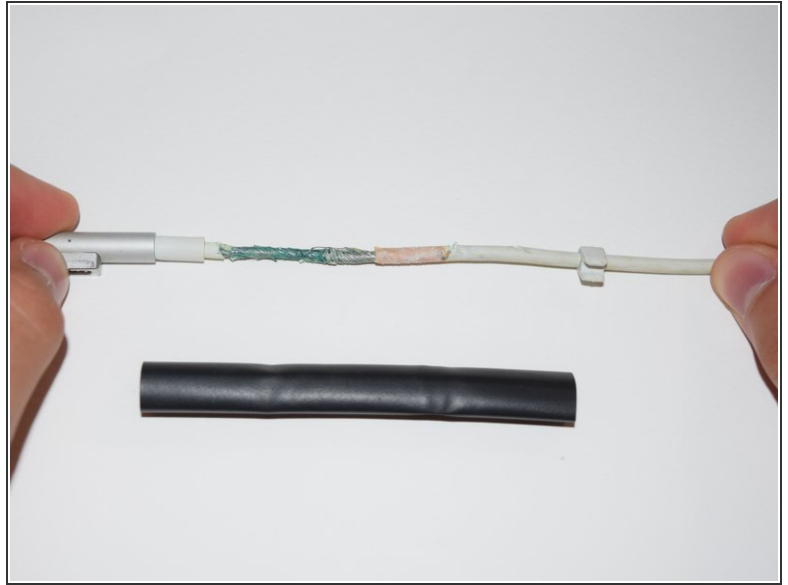
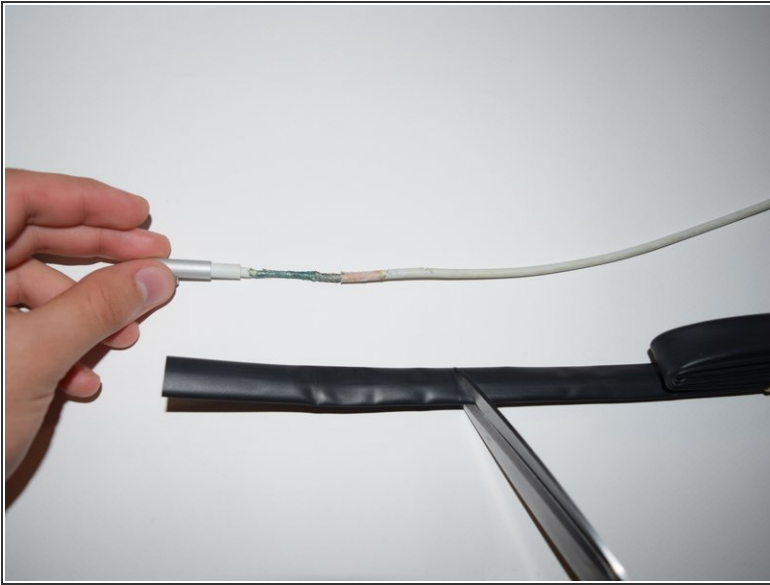
- [Moisture-Seal Heat-Shrink Tubing](#) (1)  
2:1 Shrink Ratio 0.38" (10mm)
- [Vinyl electrical tape](#) (1)

## Step 1 — How to repair a frayed Apple AC Adapter Wire



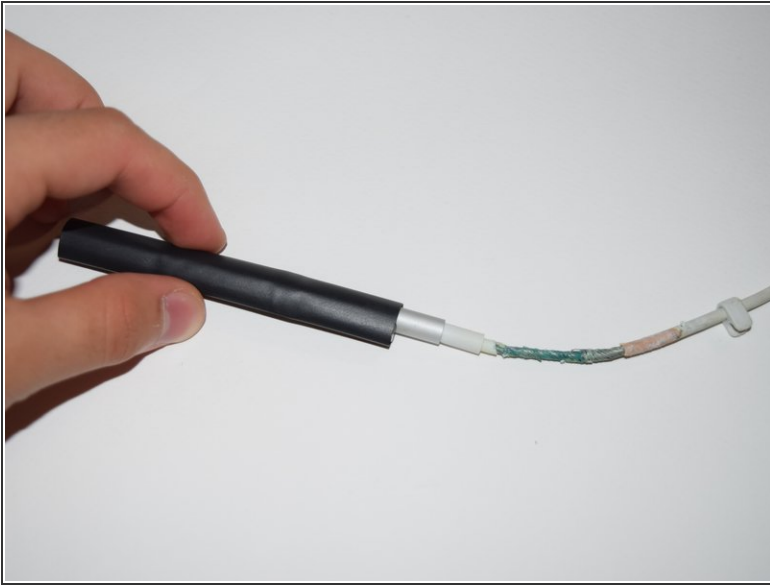
- Locate the damaged or exposed area on the adaptor wire.
- Move the cable organizer clip away from the damaged or exposed area.

## Step 2



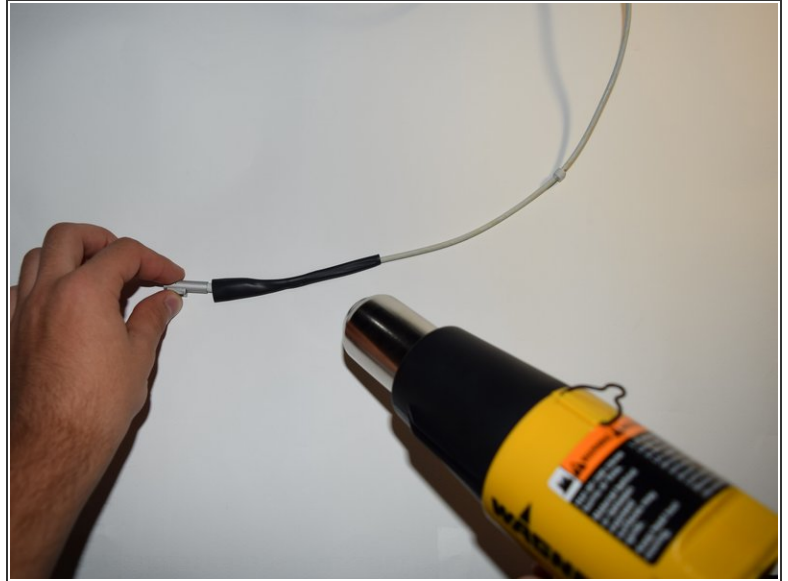
- Measure the approximate length of heat shrink needed to thoroughly cover all nearby damage with a single piece of heat shrink.
  - ⓘ The length of the heat shrink should be longer than the actual length of the damaged or exposed wire.
  - ⓘ Use 3/8"(10mm) diameter heat shrink. This size diameter is large enough to slide over the charging interface and small enough to secure itself on the wire when heated.
- Cut the heat shrink to the appropriate length using scissors.

### Step 3



- Slide the heat shrink over the wire until it covers all of the damaged or exposed area.

## Step 4



- Use a heat gun or a lighter to apply heat to the heat shrink.
- Continue until the heat shrink has shrunk and is tightly attached to the wire.

**⚠ When heating, always keep the heat gun moving around the heat shrink. Do not apply heat to one location for too long. Overheating the heat shrink may cause further damage to the wire or wire coating underneath and may melt the heat shrink itself.**

**ⓘ Optional: Apply multiple layers of heat shrink if you think the wire will be used in more demanding situations and want to ensure its protection and longevity.**

## Step 5 — Add an additional layer on the ends of the Mac Charger Wire's Diameter



- The 3/8"(10mm) Heat Shrink Tube has a minimum diameter after shrinking (0.19"/5mm) that is larger than the Mac Charger Wire's Diameter. So, to create a proper hold, we need to increase its diameter. Wrap it in an electric tape or something like the red wire covering shown in the picture, to increase its diameter before shrinking it.
- ⓘ There is also 4:1 Shrink Ratio Tubing where you might not need to do this, but 2:1 Shrink Ratio Tubing is typically easier to get if you don't want to order online.

## Step 6



- Once the heat shrink has shrunk and cooled down, flex the wire in different directions to ensure the heat shrink is properly attached to the wire.



Apple MagSafe Power Adapters typically range from \$20-\$79. By following this simple repair you can save money and continue using your power adaptor. People with similar wire coating issues and different power adaptors can hopefully find this repair guide helpful since the repair process is nearly identical.