WELDING ROD OVEN TEMPERATURE CHART

Storage and re-drying temperatures for stick rods in °F and °C, how long low-hydrogen rods can stay out, and which rods never need an oven.

Rods	Opened can: store at	Re-dry	Wet rods: pre-dry first
Low hydrogen E7018, E7028 Re-dry figures from Lincoln. ESAB holds its low-hydrogen rods at 225–300°F and reconditions them for 1 hour at 700°F.	**250–300°F** 120–150°C	**650–750°F** 340–400°C · 1 hour	**180–220°F** 80–100°C
Higher-strength low hydrogen E8018, E9018, E10018, E11018 Re-dry figures from Lincoln, whose chart sets these 50°F higher than E7018.	**250–300°F** 120–150°C	**700–800°F** 370–430°C · 1 hour	**180–220°F** 80–100°C
Rutile and iron powder E6012, E6013, E6022, E7014, E7024 A warm, dry cabinet is enough; these rods don't need a hot oven.	**100–130°F** 40–50°C	**250–300°F** 120–150°C · 1 hour	–
Cellulosic E6010, E6011, E7010, E8010 No oven: keep them dry at room temperature. Reconditioning is not recommended.	**Dry, room temperature**	**Not recommended**	–

Maker figures. Never go above the temperature on your rods' box or data sheet.

TIME OUT OF THE OVEN

Longest for low-hydrogen rods on AWS D1.1 code work. Take out only what you'll use.

E70XX (E7018, E7028)	**4 hours**
E70XXR, E70XXHZR, E7018M	**9 hours**
E80XX (E8018)	**2 hours**
E90XX (E9018)	**1 hour**
E100XX, E110XX	**30 minutes**

AWS D1.1 CODE WORK

E7018, E7028
Bake at 500–800°F (260–430°C) for at least 2 hours, once only.

E8018 to E11018
Bake at 700–800°F (370–430°C) for at least 1 hour, once only.

Rods that got wet
Can't be used at all on code work.

SHELF LIFE (ESAB)

Unopened, stored at 50–90°F and 50% humidity: sealed can / other packages.

Low hydrogen (Atom Arc)	**5 years**
Carbon steel (Sureweld)	**2 years / 1 year**
Stainless (Arcaloy)	**5 years / 1 year**

HOW MANY RE-DRIES?

Code work (AWS D1.1)
One re-bake only.

Other work
The makers allow up to 3 re-dries.

Mixed rods
Keep low-hydrogen rods in an oven of their own, never with other rods.

Sources: maker guidance from Lincoln Electric's re-drying chart, ESAB's Atom Arc storage and shelf-life tables, and the storage tables in Randy Williams's "Why Do Welding Rods Need to Be Heated" on weldingtribe.com. Code rules from AWS D1.1, Structural Welding Code – Steel. °C rounded to 10 degrees, the way AWS prints them. Compiled by Welding Tribe, November 2026. Free to print for your shop or class.