mentrode WELDING ELECTRODES SINCE 1990

Welding Safety Guide

Safe handling and use of Mentrode covered welding electrodes

Read before use

Arc welding can be hazardous to you and to people around you. This guide covers the safe handling and use of Mentrode covered (stick) electrodes. Always follow your workplace safety rules, the welding machine manufacturer's instructions and local regulations. For detailed guidance see ANSI Z49.1, *Safety in Welding, Cutting and Allied Processes*.

Electric Shock Can Kill

- Do not touch live electrical parts or the electrode with bare skin or wet clothing.
- Wear dry, hole-free insulated gloves. Replace damaged gloves at once.
- Insulate yourself from the work and the ground – use dry mats or boards, especially in damp or confined spaces.
- Check cables, holder and earth clamp before work. Never use damaged cables.
- Switch off the machine before changing settings or leaving it.
- Remove the electrode from the holder when not welding.

Fumes & Gases

- Keep your head out of the fume plume.
- Use enough ventilation or local fume extraction to keep fumes away from your breathing zone.
- In confined spaces, or where ventilation is poor, use an approved respirator.
- Take extra care with coated, painted, galvanised or plated metals – clean the joint area first.
- If you feel dizzy, nauseous or have irritation, stop and move to fresh air.

Arc Rays Burn Eyes & Skin

- Use a welding helmet or shield with the correct filter shade (generally shade 10–13 for stick welding, depending on current).
- Wear safety glasses under the helmet.
- Cover all skin with flame-resistant clothing – full sleeves, no synthetic fabrics.
- Protect people nearby with screens or curtains, and warn them before striking an arc.

Fire, Sparks & Hot Metal

- Remove flammable material from the work area, or cover it with fire-resistant blankets.
- Keep a suitable fire extinguisher close by.
- Never weld on drums, tanks or containers that held fuel or chemicals unless they are properly cleaned and certified safe.
- Welds, slag and electrode stubs stay hot – handle with tongs and gloves. Put stubs in a metal container.
- Check the area for smouldering material for at least 30 minutes after welding.

PERSONAL PROTECTIVE EQUIPMENT

Welding helmet
Correct filter shade, with safety glasses underneath

Welding gloves
Dry, insulated leather gauntlets

Protective clothing
Flame-resistant, full sleeves, no turn-ups

Safety shoes
Leather, insulated soles

Respirator
Where ventilation is not enough

Ear protection
In noisy shops and during chipping or grinding

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Storage, Health & First Aid

Keep electrodes in good condition, and know what to do if something goes wrong

1 Storage & Handling

- Store electrodes in their original packets, in a dry place off the floor, ideally below 60% relative humidity.
- Do not stack heavy loads on cartons. Keep packets away from water, oil and chemicals.
- Handle with clean, dry gloves. Do not use electrodes with cracked, chipped or damp coating.
- Use the oldest stock first (first in, first out).

2 Re-drying

Grade	Re-drying	Holding
E6013	100–150 °C, 1 h (only if damp)	–
E7016	300–350 °C, 1 h	100–150 °C
E7018	300–350 °C, 1 h	100–150 °C

Low-hydrogen electrodes (E7016, E7018) pick up moisture once the packet is opened. Moisture can cause porosity and hydrogen cracking. Do not re-dry the same electrodes more than a few times.

3 Before You Weld

- Set the current within the range on the packet or datasheet.
- Clean rust, paint, oil and moisture from the joint.
- Connect the earth clamp close to the weld, on clean metal.
- Check the polarity (AC, DC+ or DC-) for the grade.

4 Health Effects

Welding fume from covered electrodes can contain oxides of iron, manganese and other metals, plus fluorides from basic (low-hydrogen) coatings. Short-term exposure may cause irritation of the eyes, nose and throat, or metal fume fever. Long-term overexposure to manganese and other fume components may affect the lungs and nervous system. Control exposure with ventilation and, where needed, respiratory protection.

+ First Aid

- **Electric shock:** switch off the power before touching the person. Call for medical help; give CPR if trained and needed.
- **Arc eye (flash burn):** rest the eyes away from light and get medical advice.
- **Burns:** cool with clean running water for at least 10 minutes; seek medical help for serious burns.
- **Fume inhalation:** move to fresh air; get medical help if symptoms continue.

♻ Disposal

- Collect electrode stubs and scrap for metal recycling.
- Dispose of slag, packaging and used electrodes in line with local regulations.

i More Information

Technical data sheets for each Mentrode grade are available at www.vamweld.com/downloads. Safety Data Sheets (SDS) and test certificates are available on request from support@vamweld.com. This guide gives general information only and does not replace workplace safety training.

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