

## Esab OK 43.33

# ESAB OK 43.33 Rutile Electrodes

## INSTRUCTION MANUAL

Brand: ESAB | Model: OK 43.33

### 1. Introduction

This manual provides essential information for the safe and effective use of ESAB OK 43.33 Rutile Electrodes. These electrodes are designed for welding common steels and general fabrication, offering stable arc characteristics and good weldability in all positions. Please read this manual thoroughly before use to ensure proper operation and safety.

### 2. Safety Instructions

**WARNING: Welding can be hazardous. Always follow safety precautions to prevent injury or death.**

- **Eye and Face Protection:** Always wear a welding helmet with appropriate shade filter to protect eyes and face from arc rays and sparks.
- **Respiratory Protection:** Ensure adequate ventilation or use a respirator to protect against welding fumes and gases.
- **Protective Clothing:** Wear flame-resistant clothing, gloves, and safety shoes to protect against burns and electric shock.
- **Electrical Safety:** Ensure welding equipment is properly grounded. Do not touch live electrical parts. Inspect cables for damage before use.
- **Fire Prevention:** Keep flammable materials away from the welding area. Have a fire extinguisher readily available.
- **Work Area:** Keep the work area clean, dry, and free of obstructions.
- **First Aid:** Know basic first aid procedures for burns and electric shock.

### 3. Setup

1. **Prepare Welding Equipment:** Connect the welding machine according to the manufacturer's instructions. Ensure all cables (electrode holder cable, ground cable) are securely attached and in good condition.
2. **Ground Clamp:** Attach the ground clamp firmly to the workpiece or a clean, bare metal surface close to the weld area to ensure a good electrical connection.
3. **Electrode Selection:** Select the appropriate ESAB OK 43.33 electrode diameter (2.5 mm) for your application and welding current.
4. **Workpiece Preparation:** Clean the welding area of any rust, paint, oil, or other contaminants that could affect weld quality. Bevel thick sections if necessary.
5. **Ventilation:** Ensure proper ventilation in the welding area to disperse fumes.

## 4. Operating Instructions

1. **Current Setting:** Set the welding current on your machine according to the electrode manufacturer's recommendations for the 2.5 mm diameter. Typical current ranges are provided on the electrode packaging.
2. **Arc Striking:** Strike the arc by lightly scratching the electrode tip against the workpiece, similar to striking a match. Once the arc is established, lift the electrode slightly to maintain a short arc length.
3. **Electrode Angle:** Maintain an electrode angle of approximately 70-80 degrees to the workpiece in the direction of travel.
4. **Travel Speed:** Maintain a consistent travel speed to ensure uniform bead width and penetration. Too fast a speed results in a narrow, convex bead; too slow a speed can lead to excessive heat input and a wide, flat bead.
5. **Welding Positions:** ESAB OK 43.33 electrodes are suitable for welding in all positions (flat, horizontal, vertical up/down, overhead). Adjust technique and current slightly for different positions as needed.
6. **Slag Removal:** After completing a weld pass, allow the weld to cool slightly, then remove the slag using a chipping hammer and wire brush.

## 5. Maintenance

- **Electrode Storage:** Store ESAB OK 43.33 electrodes in a dry environment, preferably in their original sealed packaging, to prevent moisture absorption. Moisture can lead to porosity in welds.
- **Equipment Inspection:** Regularly inspect your welding machine, cables, and electrode holder for wear or damage. Replace any damaged components immediately.
- **Cleaning:** Keep welding equipment clean and free of dust and debris.

## 6. Troubleshooting

| Problem           | Possible Cause  | Solution  |
|-------------------|---|---|
| Poor Arc Striking | Low current, damp electrode, poor ground connection             | Increase current, dry electrodes, ensure good ground connection |
| Porosity in Weld  | Damp electrodes, insufficient shielding, contaminated workpiece | Dry electrodes, check arc length, clean workpiece thoroughly    |

| Problem             | Possible Cause   | Solution   |
|---------------------|--|--|
| Excessive Spatter   | Too high current, long arc length                                  | Reduce current, maintain short arc length            |
| Lack of Penetration | Too low current, too fast travel speed                             | Increase current, reduce travel speed                |
| Undercutting        | Too high current, incorrect electrode angle, too fast travel speed | Reduce current, adjust angle, slow down travel speed |

## 7. Specifications

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- **Model:** ESAB OK 43.33
- **Electrode Type:** Rutile
- **Diameter:** 2.5 mm
- **Quantity:** 720 units per package
- **Suitable for:** Common steels, general fabrication
- **Welding Positions:** All positions
- **Approximate Package Weight:** 12.8 kg
- **Manufacturer:** ESAB

## 8. Warranty and Support

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For warranty information, technical support, or service inquiries regarding your ESAB OK 43.33 Rutile Electrodes, please refer to the documentation provided with your purchase or contact your authorized ESAB distributor or the seller directly. Keep your purchase receipt as proof of purchase.