**magmaweld 11204NEFM3**

# Magmaweld E7018 Welding Electrode Rod User Manual

Model: 11204NEFM3

## Introduction

This manual provides essential information for the safe and effective use of Magmaweld E7018 Welding Electrode Rods. These electrodes are designed for professional-quality welding, delivering X-ray quality welds for high-strength applications. Please read this manual thoroughly before use to ensure optimal performance and safety.


Image: A welder performing arc welding with Magmaweld E7018 electrodes, demonstrating the product in use.

## Key Features

- **Professional Quality Welds:** Delivers X-ray quality welds for high-strength applications like bridges, tanks, pipelines, and heavy machinery.
- **Precision & Efficiency:** Optimized for welding medium and high-strength steels, offering excellent mechanical

properties and durability.

- **Smooth Arc Performance:** Ensures a stable, low-spatter arc with easy slag removal for a clean, professional finish.
- **High Metal Recovery Rate:** Provides a 115% metal recovery rate, ensuring consistent and efficient weld deposits.
- **Trusted Brand Legacy:** Built with Magmaweld's 60 years of welding expertise, ensuring reliability, quality, and performance with every weld.


Image: Visual representation of key features including Precision, Durability, Excellent finish, Arc Stability, and Efficiency.

## Setup and Preparation

Proper setup is crucial for safe and effective welding. Always adhere to local safety regulations and best practices.

1. **Work Area:** Ensure your welding area is clean, dry, well-ventilated, and free from flammable materials.
2. **Personal Protective Equipment (PPE):** Always wear appropriate PPE, including a welding helmet with proper shade, flame-resistant clothing, welding gloves, and safety shoes.
3. **Welding Machine:** Connect your welding machine according to the manufacturer's instructions. Ensure all cables are in good condition and connections are secure.
4. **Electrode Selection:** Select the appropriate E7018 electrode size (e.g., 1/8") and quantity for your specific welding task.
5. **Amperage Setting:** Refer to your welding machine's guide or a welding chart for the recommended amperage range for E7018 electrodes of your chosen diameter. Start with the lower end of the range and adjust as needed.
6. **Electrode Storage:** E7018 electrodes are low-hydrogen and must be kept dry. Store them in a sealed, moisture-proof container or a heated electrode oven to prevent moisture absorption, which can lead to porosity in welds.

Image: Magmaweld E7018 welding electrodes neatly packed inside a blue, durable storage container, emphasizing proper storage.

## Operating Instructions

Follow these steps for effective welding with E7018 electrodes:

1. **Striking an Arc:**
   - Hold the electrode at a slight angle to the workpiece.
   - Gently scratch or tap the electrode against the workpiece to initiate the arc. Avoid sticking the electrode.
   - Once the arc is established, quickly lift the electrode slightly to maintain the arc length, typically equal to the electrode's core diameter.
2. **Maintaining the Arc:**
   - Maintain a consistent arc length and travel speed. E7018 electrodes are designed for a smooth, stable arc.
   - Use a slight weaving motion or a straight drag, depending on the joint configuration and desired bead width.
   - Keep the electrode angle consistent, typically 10-30 degrees from vertical in the direction of travel.
3. **Slag Removal:** E7018 electrodes produce a heavy, easily removable slag. Allow the weld to cool slightly before chipping away the slag with a chipping hammer and wire brush. Ensure all slag is removed between passes for multi-pass welds.
4. **Re-striking:** If the electrode sticks or the arc breaks, clean the tip of the electrode before re-striking.


Image: An illustration highlighting the design and benefits of the E7018 electrodes, including smooth arc performance and suitability for high-strength steels.

## Maintenance and Storage

Proper maintenance and storage ensure the longevity and performance of your E7018 electrodes.

- **Electrode Storage:** E7018 electrodes are low-hydrogen and highly susceptible to moisture absorption. Store unused electrodes in a sealed, moisture-proof container or a heated electrode oven (typically 250-300°F / 120-150°C) to maintain their low-hydrogen properties.
- **Reconditioning:** If electrodes have been exposed to moisture, they may need to be reconditioned in a baking oven at higher temperatures (e.g., 700-800°F / 370-430°C for 1-2 hours) before use. Consult welding standards (e.g., AWS D1.1) for specific reconditioning procedures.
- **Workpiece Preparation:** Always ensure the workpiece is clean, dry, and free from rust, paint, oil, or other contaminants before welding.
- **Cleanliness:** Keep your welding equipment and work area clean to prevent contamination and ensure safe operation.


Image: A welder demonstrating the use of electrodes, highlighting the high metal recovery rate feature of Magmaweld E7018 electrodes.

## Troubleshooting

Here are some common issues and their potential solutions when using E7018 electrodes:

| Problem | Possible Cause | Solution |
|---|---|---|
| Electrode sticks or difficult to strike arc | Low amperage, improper arc length, moisture in electrode, dirty workpiece. | Increase amperage, adjust arc length, recondition electrodes, clean workpiece. |
| Excessive spatter | Too high amperage, long arc length, incorrect electrode angle. | Decrease amperage, shorten arc length, adjust electrode angle. |
| Porosity (holes in weld) | Moisture in electrode, dirty workpiece, insufficient shielding, too fast travel speed. | Recondition electrodes, clean workpiece, ensure proper arc length and travel speed. |
| Poor slag removal | Weld too cold, improper travel speed, incorrect electrode angle. | Increase amperage, adjust travel speed and angle. |

## Specifications

| Attribute | Detail |
|---|---|
| Brand | Magmaweld |
| Model Number | 11204NEFM3 |
| Material | E7018 10LB |

| Attribute | Detail |
|---|---|
| Size (Current Product) | 1/8" |
| Item Package Quantity | 20 |
| Manufacturer | Magmaweld |
| Date First Available | November 5, 2024 |


Image: Examples of high-strength applications where Magmaweld E7018 electrodes are used, including bridges, tanks, pipelines, and heavy machinery.

## Warranty and Support

For specific warranty information regarding your Magmaweld E7018 Welding Electrode Rods, please refer to the packaging or contact Magmaweld directly. Warranty terms may vary based on region and purchase date.
For technical support, product inquiries, or further assistance, please visit the official Magmaweld website or contact their customer service department. Always provide your product model number (11204NEFM3) and purchase details when seeking support.
**Magmaweld Official Website:** www.magmaweld.com