



# Flame Tools Safety Training



North American Technician Excellence (NATE), headquartered in Arlington, VA, was founded in 1997 and is the nation's largest non-profit certification organization for heating, ventilation, air conditioning and refrigeration technicians. NATE is the only technician certification organization governed, owned, operated, developed and supported by the HVACR industry.

**COURSE NAME: FLAME TOOLS SAFETY TRAINING**

**NATE COURSE# 6111-0001**

**CONTINUING EDUCATION HOURS (CEH): 2 HOURS**

**COURSE OVERVIEW: A field training course that last approximately 2 hours with lecture/discussion and demonstrations.**

**REQUIRED TOPICS:**

- **Introduction Overview** of Uniweld Products, Inc.
- **Fire Triangle** - A review of the Fire Triangle and the basic elements of fire.
- **Fuel Gases and Cylinders** - General discussion on the different types of fuels used to braze and solder copper tubing. Working temperatures of the various fuels and their applications. Safety precautions when working with the various fuel gases and cylinders.
- **Flame Tools** - A review of oxyacetylene and air-fuel flame tools and their applications within the HVACR, Plumbing and Maintenance industries.
- **Flame Tool Set Up and Safety** - Step by step procedure on setting up an oxyacetylene outfit and the proper safety procedures to apply when in use. This will include a review on setting the regulator delivery pressures based on the tip size used, proper procedures on shutting down an oxyacetylene outfit and preparing it for storage.
- **Alloys** - Review of the various alloys used in soldering/brazing, including aluminum alloy.
- **Nitrogen Regulators and Flow Indicators** - Review the use of nitrogen when purging an AC or R system and the effective way to monitor nitrogen flow.
- **Brazing Demonstration** - Review capillary action of brazing alloy with proper brazing techniques and which flame tool to use in certain applications.

All attendees must sign a NATE Official Recognized Provider Attendance Record.

This course applies to the following NATE course outlines:

SERVICE	
ACSV	Air Conditioning – Air to Air
HPSV	Heating – Reverse Cycle Air to Air
RLSV	Light Commercial Refrigeration
RCSV	Commercial Refrigeration

INSTALLER	
ACIN	Air Conditioning – Air to Air
HPIN	Heating – Reverse Cycle Air to Air
RLIN	Light Commercial Refrigeration

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