



# New Mexico State Personnel Office

2600 Cerrillos Road  
Santa Fe, New Mexico 87505-0127

## Classification Description

### WELDERS, CUTTERS, SOLDERERS, AND BRAZERS

<u>Class Title</u>	<u>Class Code</u>	<u>Pay Band</u>	<u>Alt Pay Band*</u>
Welder, Cutter, Solderer, & Brazer-B	V4121B	35	
Welder, Cutter, Solderer, & Brazer-O	V4121O	40	
Welder, Cutter, Solderer, & Brazer-A	V4121A	45	

*\*In accordance with SPB Rule 1.7.4.10 NMAC, the assignment to alternative pay bands shall be reviewed annually to determine their appropriateness.*

#### Occupation Description

Use hand-welding, flame-cutting, hand soldering, or brazing equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products.

#### Nature of Work

Welders may work in a wide variety of industries. The work done and the equipment they use may vary greatly. Welding is the most common way of permanently joining metal parts. In this process, heat is applied to metal pieces, melting and fusing them to form a permanent bond. Because of its strength, welding is used in shipbuilding, automobile manufacturing and repair, aerospace applications, and thousands of other manufacturing activities. Welding also is used to join beams in the construction of buildings, bridges, and other structures and to join pipes in pipelines, power plants, and refineries.

Cutters use the heat from an electric arc, a stream of ionized gas called plasma, or burning gases to cut and trim metal objects to specific dimensions. Cutters also dismantle large objects, such as ships, railroad cars, automobiles, buildings, or aircraft. Some operate and monitor cutting machines similar to those used by welding machine operators.

Soldering and brazing workers use molten metal to join two pieces of metal. However, the metal added during the soldering and brazing process has a melting point lower than that of the piece, so only the added metal is melted, not the piece. Soldering uses metals with a melting point below 840 degrees Fahrenheit; brazing uses metals with a higher melting point. Because soldering and brazing do not melt the pieces being joined, these processes normally do not create the distortions or weaknesses in the pieces that can occur with welding. Soldering commonly is used to make electrical and electronic circuit boards, such as computer chips. Soldering workers tend to work with small pieces that must be precisely positioned. Brazing often is used to connect copper plumbing pipes and thinner metals that the higher temperatures of welding would warp. Brazing also can be used to apply coatings to parts to reduce wear and protect against corrosion.

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### Distinguishing Characteristics of Levels

*Note: Examples of Work are intended to be cumulative for each progressively higher level of work. The omission of specific statements does not preclude management from assigning other duties which are reasonably within the scope of the duties.*

#### Basic

- Employees in this Role receive training from a more experienced welder in welding and the operation of welding equipment and learn how to draw and interpret blueprints and sketches.

#### Recommended Education and Experience for Full Performance

High School diploma or GED and six (6) months semi-skilled experience in general mechanical or construction field. Demonstrated ability and dexterity to operate tools and equipment is required. Six (6) months of vocational training in welding can count for six (6) months experience.

#### Minimum Qualifications

Eighth grade education.

#### Operational

- Employees in this Role independently perform a variety of skilled welding tasks.
- Employees draw and/or interpret blueprints and sketches to assure accuracy of work; determine materials needed for projects and maintain welding equipment; provide assistance to less experienced welders; keep a record of work completed; and ensure safety regulations are followed.

#### Recommended Education and Experience for Full Performance

High School diploma or GED, completion of a three-credit postsecondary course in welding or completion of an approved welding apprenticeship training program and one (1) year journey level experience as a welder. Position may require certification as a welder by American Welding Society.

#### Minimum Qualifications

High School diploma or GED, completion of a three-credit postsecondary course in welding or completion of an approved welding apprenticeship training program and three (3) months journey level experience as a welder. Position may require certification as a welder by American Welding Society.

#### Advanced

- Employees in this Role direct a major welding program with responsibility for large welding projects including budget planning.

#### Recommended Education and Experience for Full Performance

High School diploma or GED, completion of a three-credit postsecondary course in welding or completion of an approved welding apprenticeship training program and two (2) years journey level experience as a welder. Position may require certification as a welder by American Welding Society.

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### Minimum Qualifications

High School diploma or GED, completion of a three-credit postsecondary course in welding or completion of an approved welding apprenticeship training program and six (6) months journey level experience as a welder. Position may require certification as a welder by American Welding Society.

### Knowledge and Skills

*Note: This information has been produced by compiling information and documentation provided by O\*NET. O\*NET™ is a trademark of the U.S. Department of Labor, Employment and Training Administration.*

### Knowledge

**Mechanical** — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.

**Design** — Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.

### Skills

**Critical Thinking** — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

**Active Listening** — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

**Monitoring** — Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

**Statutory Requirements:** This occupation is subject to regulation under 14.5.1 NMAC, Construction Industries General Provisions - General Provisions, effective 1-1-11.

**Conditions of Employment:** Working Conditions for individual positions in this classification will vary based on each *agency's utilization, essential functions, and the recruitment needs* at the time a vacancy is posted. All requirements are subject to possible modification to reasonably accommodate individuals with disabilities.

**Default FLSA Status:** Non-Exempt. FLSA status may be determined to be different at the agency level based on the agency's utilization of the position.

**Bargaining Unit:** This position may be covered by a collective bargaining agreement and all terms/conditions of that agreement apply and must be adhered to.

**Established:** 07/07/2001

**Revised:** 09/20/2011

*\*Adapted from the United States Bureau of Labor Statistics and are intended to illustrate the typical education and experience required for this occupation.*

*Note: Classification description subject to change. Please refer to the SPO website [www.spo.state.nm.us](http://www.spo.state.nm.us) to ensure this represents the most current copy of the description.*

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