



# Changzhou Sanzhong Welding Materials Co.,Ltd

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| Standard:<br>AWS A 5.9<br>YB/T5092 | Chemical Composition %   |           |            |          |                                 |           |                |       |       |
|------------------------------------|--|-----------|------------|----------|---------------------------------|-----------|----------------|-------|-------|
|                                    | C  | Mn        | Si         | Cr       | Ni                              | P         | S              | Mo    | Cu    |
| Grade<br>ER309L                    | ≤0.03  | 1.0 – 2.5 | 0.3 – 0.65 | 23 – 25  | 12 – 14                         | ≤0.03     | ≤0.03          | ≤0.75 | ≤0.75 |
| Type                               | Spool (MIG)  |           |            |          | Tube (TIG)                      |           |                |       |       |
| Specification<br>(MM)              | 0.8、0.9、1.0、1.2、1.6、2.0  |           |            |          | 1.6、2.0、2.4、3.2、4.0、5.0         |           |                |       |       |
| Package                            | S100/1kg                      S200/5kg<br>S270,S300/15kg-20kg  |           |            |          | 5kg/box                         | 10kg/box  | length :1000MM |       |       |
| Mechanical<br>Properties           | Tensile Strength Mpa   |           |            |          | Elongation after fracture A (%) |           |                |       |       |
|                                    | ≥ 520  |           |            |          | ≥ 30                            |           |                |       |       |
| Diameter<br>(MM)                   | 0.8  | 1.0       | 1.2        | 1.6      | 2.0                             | 2.5       | 3.2            |       |       |
| Current (A)                        | 70 ~ 150   | 100 ~ 200 | 140 ~ 220  | 50 ~ 100 | 100 ~ 200                       | 200 ~ 300 | 300 ~ 400      |       |       |
| Application                        | <p>ER309L, also known as H03Cr24Ni13Si, is the welding wire for ultra-low carbon stainless steel. Its weld metal is super low carbon. Because of low carbon content, it does not cause carbide precipitation in intergranular, and has excellent intergranular corrosion resistance.</p> <p>The same type of stainless steel structure, composite steel and dissimilar steel are used in synthetic fiber, petrochemical equipment and so on. They can also be used in nuclear reactor, pressure vessel inner wall transition layer surfacing welding and tower inner member welding.</p>   |           |            |          |                                 |           |                |       |       |
| Notice                             | <ol style="list-style-type: none"> <li>1. Oil, dirt and rust on the welding wire surface should be removed before welding. Surface impurities such as oil, rust and water should be thoroughly removed in the welding place, so as to prevent blowhole, crack and so on during welding. The surface of the groove and its surroundings should be polished with metallic gloss.</li> <li>2. In order to obtain good mechanical properties of welding seam, suggest protect gas Ar+2%O<sub>2</sub> and shield gas flow rate 20-25 L/min for MIG welding. For TIG welding,suggest protect gas pure Ar and shield gas flow rate 8-15 L/min ,Arc length 1~3 mm; Length of the tungsten pole is about 3~5 mm; wind speed limit ≤ 1.0 m/s, argon protection at the back of welding area .</li> <li>3. In the welding process, the welding line energy directly affects the mechanical properties and crack resistance of weld metal, and should be paid more attention to.</li> <li>4. The above welding methods, conditions and specifications are for reference only. Users should evaluate the welding process according to their own welding characteristics before using the welding wire for the formal product welding.</li> </ol> |           |            |          |                                 |           |                |       |       |



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