

CHEMICAL COMPOSITION





E312-16

<u>DESCRIPTION:</u> Weldcote Metals E312-16 electrodes are used for welding wrought and cast alloys of similar composition as well as for welding of dissimilar metals. The weld deposits exhibit high tensile strength and offer good resistance to abrasion.

<u>APPROVALS:</u> Manufactured under Quality System approved by ASME, IS09001. Meets AWS 5.4 Class E312-16.

MECHANICAL PROPERTIES

| CHEMICAL COMI OSITION | | MECHANICAL TROTERTIES | |
|-----------------------|---------|--------------------------------------|---------|
| Carbon | .12 | Tensile Strength | |
| Manganese | 1.80 | 109,000 PSI | 750 MPA |
| Silicon | .56 | Yield Strength 78,000 PSI 540 MPA | |
| Chromium | 29.3 | | |
| Nickel | 9.4 | | 540 MPA |
| Sulfur | .021 | | |
| Phosphorus | .022 | Elongation | 23% |
| Iron | Balance | | |

WELDING PARAMETERS

Direct Current Electrode + Ve

AMPERAGES:

| 3/32" | 65-75 |
|-------|---------|
| 1/8" | 90-105 |
| 5/32" | 120-135 |
| 3/16" | 135-155 |

(For vertical welding amperages are to be reduced by 10 to 15 amps)

Weldcote Metals believes this data to be accurate and to reflect qualified expert opinion regarding current research. However, Weldcote Metals can not make any expressed or implied warranty as to this information.