

## Stick electrode

**Features:** ■ Suitable for dissimilar-metal joint and underlaying on ferritic steels

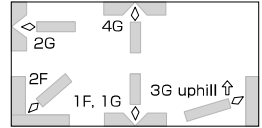
**Classification:** AWS A5.4 E309L-16

**Redrying Conditions:** 150~200°Cx0.5~1h

**Identification color:** 1st Yellow green, 2nd Blue white

**Polarity:** AC, DCEP

## Welding Positions:



## Packaging data

| φ mm | Length mm | kg/pack | kg/carton | g/piece | carton mm        |
|------|-----------|---------|-----------|---------|------------------|
| 2.0  | 250       | 2       | 20        | 11      | 300W, 125H, 280L |
| 2.6  | 300       | 2       | 20        | 20      | 300W, 95H, 330L  |
| 3.2  | 350       | 5       | 20        | 36      | 175W, 125H, 380L |
| 4.0  | 350       | 5       | 20        | 55      | 175W, 115H, 380L |
| 5.0  | 350       | 5       | 20        | 82      | 175W, 115H, 380L |

## Composition (all-weld metal mass%)

|           | Typical (AC) | Guaranty <sup>a</sup> |
|-----------|--------------|-----------------------|
| <b>C</b>  | 0.04         | 0.04                  |
| <b>Si</b> | 0.42         | 1.00                  |
| <b>Mn</b> | 1.6          | 0.5~2.5               |
| <b>P</b>  | 0.03         | 0.04                  |
| <b>S</b>  | <0.01        | 0.03                  |
| <b>Ni</b> | 13.3         | 12.0~14.0             |
| <b>Cr</b> | 23.8         | 22.0~25.0             |
| <b>Mo</b> | 0.18         | 0.75                  |
| <b>Cu</b> | 0.09         | 0.75                  |

Note: <sup>a</sup> Single values are maximum.

## Welding parameters (A)

| φ mm | 1F, 1G, 2F, 2G | 3G uphill, 4G |
|------|----------------|---------------|
| 2.0  | 50~75          | 45~65         |
| 2.6  | 75~95          | 70~90         |
| 3.2  | 85~120         | 80~115        |
| 4.0  | 110~160        | 90~140        |
| 5.0  | 150~200        | -             |

## All-weld mechanical properties

|                     | Typical (AC) | Guaranty |
|---------------------|--------------|----------|
| <b>0.2%YS (MPa)</b> | 410          | -        |
| <b>TS (MPa)</b>     | 560          | 518min.  |
| <b>El on 4d (%)</b> | 42           | 30min.   |
| <b>IV 0°C (J)</b>   | 67           | -        |

## Approvals

|               |                       |
|---------------|-----------------------|
| <b>ABS</b>    | MG (AWS 5.4 E309L-16) |
| <b>LR</b>     | SS/CMn m (CHEM)       |
| <b>DNV-GL</b> | VL309L, MG            |
| <b>BV</b>     | UP (E309L-16)         |
| <b>NK</b>     | KD309L                |