

# CA-101S×UC-347

For welding of 18%Cr-8%Nb-Ti stainless steel

UC-347 : AWS ER347

## Applications

Welding of 18%Cr-8%Nb-Ti stainless steel and 18%Cr-8%Nb-Ti type hardsurfacing of mild steel or low alloy steel.

## Characteristics

CA-101S×UC-347 bonded type flux, containing appropriate quantity of alloy element, appropriate ferrite content of weld metal, good crack resistibility, good mechanical properties, good corrosion resistibility of weld metal and stable arc.

## Notes on usage

- (1) Refer to "General notes on usage for submerged arc welding."
- (2) Avoid excessive current to prevent deterioration of corrosion resistibility in heat affect zone.
- (3) Weld with two passes per one layer in the groove.
- (4) Pay attention to crater treatment because crater crack is apt to appear.

## Typical chemical composition of weld metal (%)

| Flux × Wire    | C    | Mn   | Si   | Ni   | Cr    | Nb+Ti | Remarks                |            |         |
|----------------|------|------|------|------|-------|-------|------------------------|------------|---------|
|                |      |      |      |      |       |       | Welding method         | Base metal | PT (mm) |
| CA-101S×UC-347 | 0.05 | 1.18 | 0.88 | 9.27 | 19.02 | 0.62  | Both side single-layer | SUS 347    | 16      |

## Typical mechanical properties of weld metal

| Flux × Wire    | TS<br>N/mm <sup>2</sup> (MPa) | EL<br>% | IV (J) |
|----------------|-------------------------------|---------|--------|
|                |                               |         | 0°C    |
| CA-101S×UC-347 | 580                           | 39      | 68     |

## Typical welding conditions

| PT (mm) | Dia. (mT.) | Pass | Amp. | Volt. | Speed (cm/min) | Groove dimension |        |        |       |       |
|---------|------------|------|------|-------|----------------|------------------|--------|--------|-------|-------|
|         |            |      |      |       |                | A (mm)           | B (mm) | N (mm) | C (°) | D (°) |
| 17      | 4.0        | 1    | 500  | 33    | 45             | 6                | 5      | 6      | 90    | 90    |
|         |            | 2    | 700  | 34    | 50             |                  |        |        |       |       |
| 24      | 4.8        | 1    | 720  | 33    | 20             | 8                | 8      | 8      | 90    | 90    |
|         |            | 2    | 750  | 36    | 27             |                  |        |        |       |       |

