

## CLASSIFICATION

|            |                 |         |   |
|------------|-----------------|---------|---|
| AWS A5.1   | E7016 H4R       | A-Nr    | 1 |
| ISO 2560-A | E 42 3 B 1 2 H5 | F-Nr    | 4 |
|            |                 | 9606 FM | 1 |

## GENERAL DESCRIPTION

Basic very low hydrogen electrode (HDM< 5 ml/100g)  
 Excellent for general purpose welding  
 Will run on low open circuit voltage (min. OCV 55 V)  
 Good side wall wetting  
 Impact toughness down to -30°C  
 Popular at welding schools

## WELDING POSITIONS (ISO/ASME)



PA/1G



PB/2F



PC/2G



PF/3Gu



PH/5Gu



PE/4G

## CURRENT TYPE

AC / DC +/-

## APPROVALS

|       |        |      |        |        |     |
|-------|--------|------|--------|--------|-----|
| ABS   | BV     | DNV  | LR     | GL     | TÜV |
| 3H,3Y | 3,3YHH | 3YH5 | 3,3YH5 | 3,3YH5 | +   |

## CHEMICAL COMPOSITION (W%), TYPICAL, ALL WELD METAL

|      |     |     |            |
|------|-----|-----|------------|
| C    | Mn  | Si  | HDM        |
| 0.08 | 1.0 | 0.5 | 4 ml/100 g |

## MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

| Condition                                          | Yield strength<br>(N/mm <sup>2</sup> ) | Tensile<br>strength<br>(N/mm <sup>2</sup> ) | Elongation<br>(%)  | Impact ISO-V(J) |                    |
|----------------------------------------------------|----------------------------------------|---------------------------------------------|--------------------|-----------------|--------------------|
|                                                    |                                        |                                             |                    | -20°C           | -29°/-30°C         |
| Required: AWS A5.1<br>ISO 2560-A<br>Typical values | min. 400<br>min. 420                   | min. 490<br>500-640                         | min. 22<br>min. 20 |                 | min. 27<br>min. 47 |
| AW                                                 | 555                                    | 600                                         | 26                 | 120             | 80                 |

## PACKAGING AND AVAILABLE SIZES

|                  | Diameter (mm)        | 2.5 | 3.2 | 4.0 | 5.0 |
|------------------|----------------------|-----|-----|-----|-----|
|                  | Length (mm)          | 350 | 350 | 350 | 450 |
| Carton + PE foil | Pieces / unit        | 136 | 120 | 90  | 65  |
|                  | Net weight/unit (kg) | 2.5 | 4.3 | 4.8 | 6.3 |

Identification Imprint: 7016 / BASO 100

Tip Color: Light blue

Baso<sup>®</sup> 100: rev. C-EN26-01/02/16

# Baso<sup>®</sup> 100

## EXAMPLES OF MATERIALS TO BE WELDED

| Steel grades/Code                          | Type                           |
|--------------------------------------------|--------------------------------|
| <b>General structural steels</b>           |                                |
| EN 10025                                   | S185, S235, S275, S355         |
| <b>Ship plates</b>                         |                                |
| ASTM A 131                                 | Grade A, B, D, AH32 to EH36    |
| <b>Cast steels</b>                         |                                |
| EN 10213-2                                 | GP240R                         |
| <b>Pipe material</b>                       |                                |
| EN 10208-1                                 | L210, L240, L290, L360         |
| EN 10208-2                                 | L240, L290, L360, L415, L445   |
| API 5LX                                    | X42, X46, X52, X60             |
| EN 10216-1                                 | P235T1, P235T2, P275T1         |
| EN 10217-1                                 | P275T2, P355N                  |
| <b>Boiler &amp; pressure vessel steels</b> |                                |
| EN 10028-2                                 | P235GH, P265GH, P295GH, P355GH |
| <b>Fine grained steels</b>                 |                                |
| EN 10025 part 3                            | S275, S355, S420               |
| EN 10025 part 4                            | S275, S355, S420, S460         |

## CALCULATION DATA

| Sizes                  |                      | Current type | Arc time<br>- per electrode at max. current -<br>(S)* | Energy<br>E(kJ) | Dep. rate<br>H(kg/h) | Weight/<br>1000 pcs<br>(kg) | Electrodes/<br>kg weldmetal<br>B | kg electrodes/<br>kg weldmetal<br>1/N |
|------------------------|----------------------|--------------|-------------------------------------------------------|-----------------|----------------------|-----------------------------|----------------------------------|---------------------------------------|
| Diam. x length<br>(mm) | Current range<br>(A) |              |                                                       |                 |                      |                             |                                  |                                       |
| 2.5x350                | 55-80                | AC           | 53                                                    | 116             | 0.8                  | 19.1                        | 85                               | 1.63                                  |
| 3.2x350                | 75-115               | AC           | 62                                                    | 229             | 1.2                  | 36.1                        | 50                               | 1.81                                  |
| 4.0x350                | 120-160              | AC           | 64                                                    | 337             | 1.6                  | 50.1                        | 34                               | 1.72                                  |
| 5.0x450                | 160-240              | AC           | 91                                                    | 578             | 2.4                  | 96.7                        | 16                               | 1.58                                  |
| 5.0x450                | 160-240              | DC+          | 93                                                    | 591             | 2.6                  | 96.7                        | 15                               | 1.44                                  |

\*Stub end 35mm

## WELDING PARAMETERS, OPTIMUM FILL PASSES

| Diameter<br>(mm) | Welding positions |       |       |         |       |         |
|------------------|-------------------|-------|-------|---------|-------|---------|
|                  | PA/1G             | PB/2F | PC/2G | PF/3Gup | PE/4G | PH/5Gup |
| 2.5              | 80A               | 80A   | 80A   | 90A     | 85A   | 85A     |
| 3.2              | 130A              | 125A  | 140A  | 120A    | 115A  | 120A    |
| 4.0              | 165A              | 160A  | 165A  | 150A    | 140A  |         |
| 5.0              | 230A              | 220A  | 210A  | 200A    |       |         |

## REMARKS / APPLICATION ADVICE

Redry electrodes 2-4h 350 ±25°C after removal from cardboard boxes