

# Outershield® 19-H

## TOP FEATURES

- Superior weldability, low spatter, good bead appearance
- Outstanding operator appeal
- Superior product consistency with optimal alloy control
- Excellent wire feeding

## TYPICAL APPLICATIONS

- Power Generation.
- Welding of 1.25%Cr 0.55Mo creep resistant steels.

## CLASSIFICATION

AWS A5.29 E 81T1-B2M-H4  
 EN ISO 17634-A T CrMo1 P M 2 H5

## CURRENT TYPE

DC+

## WELDING POSITIONS

All except vertical down

## SHIELDING GASES (ACC. EN ISO 14175)

M21 Mixed gas Ar+ (>15-25%) CO<sub>2</sub>  
 Flow rate 15-25 l/min

## APPROVALS

TÜV  
+

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

| Shielding gas | C    | Mn   | Si   | P     | S     | Cr   | Mo   | HDM        |
|---------------|------|------|------|-------|-------|------|------|------------|
| M21           | 0.07 | 0.74 | 0.24 | 0.013 | 0.010 | 1.24 | 0.52 | 3 ml/100 g |

## MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

|                     | Shielding gas | Condition*         | Yield strength (MPa) | Tensile strength (MPa) | Elongation (%) | Impact ISO-V (J) |       |
|---------------------|---------------|--------------------|----------------------|------------------------|----------------|------------------|-------|
|                     |               |                    |                      |                        |                | +20°C            | -20°C |
| Required: AWS A5.29 |               | SR = 690 ± 15°C/1h | min. 470             | 550-690                | min. 19        | not specified    |       |
| EN ISO 17634-A      |               | SR = 660-700°C/1h  | min. 355             | min. 510               | min. 22        | min. 47          |       |
| Typical values      | M21           | SR = 1h/690°C      | 545                  | 635                    | 21             | 150              | 80    |

\* SR = Stress relieved

## PACKAGING AND AVAILABLE SIZES

| Wire diameter (mm) | Packaging    | Weight (kg) | Item number |
|--------------------|--------------|-------------|-------------|
| 1.2                | SPOOL (B300) | 16.0        | 943016N     |

### TEST RESULTS

Test results for mechanical properties, deposit or electrode composition and diffusible hydrogen levels were obtained from a weld produced and tested according to prescribed standards, and should not be assumed to be the expected results in a particular application or weldment. Actual results will vary depending on many factors, including, but not limited to, weld procedure, plate chemistry and temperature, weldment design and fabrication methods. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application

Safety Data Sheets (SDS) are available here:



Subject to Change – The information is accurate to the best of our knowledge at the time of printing. Please refer to [www.lincolnelectric.eu](http://www.lincolnelectric.eu) for any updated information.

Outershield® 19-H-EN-17/11/22