



# exocor™

## Stainless Steel BARE WIRE DATA SHEET executive 320LR

### DESCRIPTION

**Executive 320LR** (Low Residuals) has the same basic composition as Executive 320; however the elements C, Si, P and S are specified at lower maximum levels and the Nb and Mn are controlled at narrower ranges. These changes reduce the weld metal hot cracking and fissuring (while maintaining the corrosion resistance) frequently encountered in fully austenitic stainless steel weld metals. Consequently, welding practices typically used for austenitic stainless steel weld metals containing ferrite can be used in bare filler metal welding processes such as GTAW and GMAW.

This filler metal has been used successfully in SAW overlay welding, but it may be prone to cracking when used for joining base metal by the SAW process. The selection of a suitable flux is critical to ensure problem free weld deposits. Executive 320LR has a lower minimum tensile strength than Executive 320 weld metal.

### TYPICAL CHEMICAL VALUES

| C    | Cr   | Ni   | Mo  | Mn  | Si  | P    | S    | Cu  | Nb <sup>a</sup>   |
|------|------|------|-----|-----|-----|------|------|-----|-------------------|
| 0.02 | 19.5 | 34.0 | 2.5 | 1.6 | 0.1 | 0.01 | 0.01 | 3.4 | 8xC min – 1.0 max |

<sup>a</sup> Nb may be reported as Nb + Ta

### WELDING PARAMETERS

| PROCESS | SIZE | VOLTS                       | AMPS      | SPEED OF WELDING / GAS FLOW | SHIELDING GAS / FLUX            |
|---------|------|-----------------------------|-----------|-----------------------------|---------------------------------|
| SAW     | .093 | 29 - 32                     | 300 - 350 | 20 - 30 IPM                 | Record IN Flux                  |
|         | .125 | 29 - 32                     | 400 - 550 | 20 - 30 IPM                 | Record IN Flux                  |
| GMAW    | .035 | 29 - 33                     | 160 - 180 | 30 - 50 CFH                 | 98/99% Ar + 2/1% O <sub>2</sub> |
|         | .045 | 29 - 33                     | 180 - 220 | 30 - 50 CFH                 | or                              |
|         | .062 | 29 - 33                     | 210 - 250 | 30 - 50 CFH                 | 97% Ar + 3% CO <sub>2</sub>     |
| GTAW    | .093 | Direct Current; Electrode – |           | 30 - 40 CFH                 | 100% Ar                         |

### MECHANICAL PROPERTIES

|                   |            |         |
|-------------------|------------|---------|
| Tensile Strength: | 86,000 PSI | 590 MPA |
| Yield Strength:   | 57,500 PSI | 400 MPA |
| Elongation:       | 35%        |         |

### CLASSIFICATION

Wire chemistry has been optimized for best performance and conforms to **AWS/SFA 5.9, Class ER320LR**.  
ISO 14343B, Class SS320LR.