

# MIG & TIG

## Oxford Alloy® 60

AWS ERNiCu-7 • Nickel Alloys

### Key Features

- ❖ Dissimilar welding applications include joining alloys to Nickel 200 and copper-nickel alloys.
- ❖ Widely used in marine applications because of its good resistance to the corrosive effects of seawater and brackish waters.
- ❖ Can be used for MIG overlay on steel after a first layer with nickel 208.

### Conformances

AWS/ASME SFA 5.14  
ERNiCu-7  
UNS N04060

#### Chemical Composition - As required per AWS 5.14

| Ni        | C        | Mn        | Fe       | Si       | Cu  | Al       |
|-----------|----------|-----------|----------|----------|-----|----------|
| 62.0-69.0 | 0.15 max | 4.0 max   | 2.5 max  | 1.25 max | Bal | 1.25 max |
| Ti        | P        | S         | OET      |          |     |          |
| 1.5-3.0   | 0.02 max | 0.015 max | 0.50 max |          |     |          |

#### Mechanical Properties - As required by AWS 5.14

|                             | Tensile Strength<br>MPa (ksi) | Yield Strength<br>MPa (ksi) | Elongation<br>% |
|-----------------------------|-------------------------------|-----------------------------|-----------------|
| AWS Requirements            | 480 (70) typical              | Not Specified               | Not Specified   |
| Typical Results - As welded | 530 (77)                      | 360 (53)                    | 34              |



#### Typical Welding Parameters

| Diameter |      | Process | Volt  | Amps    | Shielding Gas                |
|----------|------|---------|-------|---------|------------------------------|
| in       | (mm) |         |       |         |                              |
| .035     | 0.9  | GMAW    | 26-29 | 150-190 | Spray Transfer<br>100% Argon |
| .045     | 1.2  | GMAW    | 28-32 | 180-220 |                              |
| 1/16     | 1.6  | GMAW    | 29-33 | 200-250 |                              |
| 1/16     | 1.6  | GTAW    | 14-18 | 90-130  | 100% Argon                   |
| 3/32     | 2.4  | GTAW    | 15-20 | 120-175 | 100% Argon                   |
| 1/8      | 3.2  | GTAW    | 15-20 | 150-220 | 100% Argon                   |

#### Diameters & Packaging

| Oxford Alloys USA |      |                              | Oxford Alloys Asia Pacific |      |                             |
|-------------------|------|------------------------------|----------------------------|------|-----------------------------|
| Diameter (in)     | Form | Packaging (lbs)              | Diameter (mm)              | Form | Packaging (kgs)             |
| .035              | GMAW | 33 lb spool   1980 lb pallet | 0.9                        | GMAW | 15 kg spool   900 kg pallet |
| .045              | GMAW | 33 lb spool   1980 lb pallet | 1.2                        | GMAW | 15 kg spool   900 kg pallet |
| 1/16              | GMAW | 33 lb spool   1980 lb pallet | 1.6                        | GMAW | 15 kg spool   900 kg pallet |
| 1/16              | GTAW | 10 lb tube   40 lb carton    | 1.6                        | GTAW | 5 kg tube   20 kg carton    |
| 3/32              | GTAW | 10 lb tube   40 lb carton    | 2.4                        | GTAW | 5 kg tube   20 kg carton    |
| 1/8               | GTAW | 10 lb tube   40 lb carton    | 3.2                        | GTAW | 5 kg tube   20 kg carton    |

Actual test results may vary. Refer test result disclaimer on page 160.