

**DESCRIPTION**

Stoodite® 21 bare rod provides a low carbon austenitic type deposit with excellent work hardenable high temperature strength and impact resistance. The deposits are quite stable, making them a favorite selection for hot die materials. Resistance to galling (self-mating), corrosion and cavitation erosion make Stoodite® 21 a good choice for valve trim on steam and fluid control bodies and seats. It bonds well to all weldable steels, including stainless.

**TYPICAL DEPOSIT CHARACTERISTICS**

|                      |                   |
|----------------------|-------------------|
| Abrasion Resistance  | Fair              |
| Impact Resistance    | Excellent         |
| Corrosion Resistance | Good              |
| Hardness (2 layer)   | HRC 24 - 28       |
| (work hardened)      | HRC 40 - 45       |
| Hot Hardness         | Excellent         |
| Magnetic             | No                |
| Deposit Layers       | Unlimited         |
| Surface Cross Check  | No                |
| Machinability        | Use carbide tools |
| Specifications       |                   |
| AWS / SFA A5.21-2001 | ERCoCr-E          |

**TYPICAL DEPOSIT CHEMISTRY (wt%)**

|            |         |
|------------|---------|
| Carbon     | 0.24    |
| Chromium   | 27.4    |
| Iron       | 1.7     |
| Manganese  | 0.8     |
| Molybdenum | 5.4     |
| Nickel     | 2.7     |
| Silicon    | 0.6     |
| Cobalt     | Balance |

**TYPICAL APPLICATIONS**

Typical applications include:

- Steam valves
- Forging dies
- Chemical and petrochemical valves
- Hydro-Turbine cavitation repair
- Hot shears
- Piercing plugs

**OPERATIONAL CHARACTERISTICS / WELDING PARAMETERS**

|                    |                   |                  |
|--------------------|-------------------|------------------|
| Diameter, In. (mm) | <b>1/8 (3.2)</b>  | <b>5/32(4.0)</b> |
| Current, Amp DCEN  | 90 - 120          | 120 - 140        |
| Voltage            | 20 - 40           | 20 - 40          |
| Shielding Gas      | Argon             | Argon            |
| Position           | Flat              | Flat             |
| <br>               |                   |                  |
| Diameter, In. (mm) | <b>3/16 (4.8)</b> | <b>1/4 (6.4)</b> |
| Current, Amp DCEN  | 140 - 160         | 160 - 180        |
| Voltage            | 20 - 40           | 20 - 40          |
| Shielding Gas      | Argon             | Argon            |
| Position           | Flat              | Flat             |

**STANDARD SIZES & PACKAGING**

| <u>Diameter</u> | <u>Packaging</u> | <u>Part #</u> |
|-----------------|------------------|---------------|
| 1/8" (3.2mm)    | 10# box          | 812101105125  |
| 5/32" (4.0mm)   | 10# box          | 812101105156  |
| 3/16" (4.8mm)   | 10# box          | 812101105187  |
| 1/4" (6.4mm)    | 10# box          | 812101105250  |

**Stoody Company**

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PDS-CO-B-004  
Revision 2  
12/03/01

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