

**DESCRIPTION**

Stoodite® 12 bare rod develops high hardness, abrasion resistance and good corrosion resistance. These properties make Stoodite® 12 the choice for wood cutting saws and bars and for industrial cutting applications for carpet, plastics, paper and chemical industries. It is non-forgable and can be machined with difficulty using carbide tools. Stoodite® 12 bonds well to all weldable grade steels, including stainless.

**TYPICAL DEPOSIT CHARACTERISTICS**

|                      |                   |
|----------------------|-------------------|
| Abrasion Resistance  | Excellent         |
| Impact Resistance    | Good              |
| Corrosion Resistance | Good              |
| Hardness (2 layer)   | HRC 46 - 48       |
| Hot Hardness         | Excellent         |
| Magnetic             | No                |
| Deposit Layers       | 2 Maximum         |
| Surface Cross Check  | No                |
| Machinability        | Use carbide tools |
| Specifications       |                   |
| AWS / SFA A5.21-2001 | ERCoCr-B          |
| Mil-R-17131C         | Type Mil-R-CoCr-B |

**TYPICAL DEPOSIT CHEMISTRY (wt%)**

|            |         |
|------------|---------|
| Carbon     | 1.5     |
| Chromium   | 30.4    |
| Iron       | 2.3     |
| Manganese  | 0.06    |
| Molybdenum | 0.1     |
| Nickel     | 2.2     |
| Silicon    | 1.3     |
| Tungsten   | 8.5     |
| Cobalt     | Balance |

**TYPICAL APPLICATIONS**

Typical applications include:

- Valve plugs and seats
- Chain saw guide bars
- Turbine engine seals
- Saw teeth
- Rotary cutters
- Bearing areas

**Stoody Company**

5557 Nashville Road • Bowling Green, KY 42101  
1-800-227-9333

**OPERATIONAL CHARACTERISTICS / WELDING PARAMETERS**

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

| <b>GTAW</b>        |                  |                   |
|--------------------|------------------|-------------------|
| Diameter, In. (mm) | <b>1/4 (6.4)</b> | <b>5/16 (8.0)</b> |
| Current, Amp. DCEN | 160 - 180        |                   |
| Voltage            | 20 - 40          |                   |
| Shielding Gas      | Argon            |                   |
| <b>OAW</b>         |                  |                   |
| Tip Size           | 6                | 6                 |
| Flame              | 3X - 4X          | 3X - 4X           |
| Position           | Flat             | Flat              |

**STANDARD SIZES & PACKAGING**

| Diameter      | Packaging | Part #   |
|---------------|-----------|----------|
| 1/8" (3.2mm)  | 10# box   | 11406700 |
|               | 20# box   | 11405500 |
| 5/32" (4.0mm) | 10# box   | 11449500 |
|               | 20# box   | 11409100 |
| 3/16" (4.8mm) | 10# box   | 10244900 |
|               | 20# box   | 11325800 |
| 1/4" (6.4mm)  | 10# box   | 10245100 |
|               | 20# box   | 11321000 |
| 5/16" (8.0mm) | 10# box   | 10245300 |
|               | 20# box   | 11327400 |

PDS-CO-B-003

Revision 2  
12/03/01

Notice: The information contained or otherwise referenced herein is presented only as "typical", without guarantee or warranty. Stoody expressly disclaims any liability from any reliance thereon. Typical data are those obtained when welded and tested in accordance with Stoody's internal procedures. Other tests and procedures may produce different results. No data is to be construed as a recommendation for any welding condition or technique not controlled by Stoody.