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TECHNICAL SPECIFICATION SHEET

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# 420 STAINLESS STEEL WELDING WIRE

WARNING: PROTECT yourself and others. Read and understand this information.
FUMES AND GASES can be hazardous to your health.
ARC RAYS can injure eyes and burn skin.
ELECTRIC SHOCK can KILL.

- Before use, read and understand the manufacturer's instructions, Material Safety Data Sheets (MSDS), and your employer's safety practices.
- Keep your head out of fumes.
- Use enough ventilation, exhaust at the arc, or both, to keep fumes and gases from your breathing zone and the general area.
- Wear correct eye, ear, and body protection.
- Do not touch live electrical parts.
- See American National Standard Z49.1, *Safety in Welding, Cutting, and Allied Processes,* published by the American Welding Society, 550 N.W. LeJeune Road, Miami, Florida 33126; OSHA Safety and Health Standards, available from the U.S. Government Office, Washington, DC 20402



## NOMINAL COMPOSITION:

| | | | |
|---|---|---|---|
| Carbon | .25-.40 % | Chromium | 12.0-14.0 % |
| Nickel | .6 % max. | Manganese | 0.6 % |
| Copper | .75 % max. | Silicon | . 5 % |
| Phosphorus | .03 % max. | Sulfur | .03 % max. |
| Molybdenum | .75 % max. | Iron | Balance |

## TYPICAL MECHANICAL PROPERTIES AS WELDED:

Influenced by change in preheat & interpass temperatures.

| | | | |
|---|---|---|---|
| Tensile Strength | 145,000 psi | Elongation | 45 % |

## APPLICATION:

420 is similar to 410 except with a higher carbon and chromium content ;this alloy may be used for welding of 403,405,410,416,420 and carbon steel overlay.





**For technical support and product information, visit our web site at www.jwharris.com** *9/99 DC*

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# 420 STAINLESS STEEL WELDING WIRE

**Requires preheat & interpass temperatures of min. 400° f followed by slow cool**

**RECOMMENDED WELDING PARAMETERS:**

***GMAW (MIG) Parameters** (DC Reverse Polarity) Electrode Positive Short-Circuiting transfer

| Wire Diameter | Amps | Volts | 90%Helium+7.5%Argon+ 2.5%$CO_2$(cfh) | Wire Feed ipm |
|---|---|---|---|---|
| .030 | 60-125 | 17-22 | 20-25 | 150-430 |
| .035 | 75-160 | 17-22 | 20-25 | 120-400 |
| .045 | 100-200 | 17-22 | 20-25 | 100-240 |

***GMAW(MIG) Parameters** (DC Reverse Polarity) Electrode Positive Spray transfer

| Wire Diameter | Amps | Volts | Argon/ 1-2% $O_2$ (cfh) | Wire Feed ipm |
|---|---|---|---|---|
| .030 | 160-225 | 24-28 | 25 | 440-650 |
| .035 | 180-300 | 24-29 | 30 | 430-500 |
| .045 | 200-450 | 24-30 | 30-35 | 220-400 |
| 1/16 | 225-500 | 24-32 | 40 | 110-210 |
| 3/32 | 250-600 | 24-32 | 50 | 50-80 |

***GTAW(Tig) Parameters** (DCSP ) Electrode negative

| Material | 2%Thoriated | Filler Wire Size | Amps | Gas Cup | Argon(cfh) |
|---|---|---|---|---|---|
| 1/16” | 1/16” | 1/16” | 80-120 | 3/8 | 20 |
| 3/32” | 1/16” | 1/16” | 100-130 | 3/8 | 20 |
| 1/8” | 3/32” | 1/16” | 120-150 | 7/16 | 20 |
| 3/16” | 3/32” | 3/32” | 150-250 | 7/16 | 25 |
| 1/4” | 1/8” | 1/8” | 200-350 | 1/2 | 25 |
| 1/2” | 1/8” | 1/8” | 235-375 | 1/2 | 25 |

*** All parameters are suggested as basic guidelines and will vary depending on joint design, number of passes and other factors.**

**SPECIFICATION COMPLIANCE : ANSI/AWS A5.9 & ASME SFA 5.9 ER 420**

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