Material Safety Data Sheet

May be used to comply with
OSHA's Hazard Communication Standard.
29 CFR 1910.1200 Standard must be
consulted for specific requirements.

IDENTITY (As Used on Label and List) IMP. 73. 75. 80. 87. 88. 90. 95. 60. 70. GC #7. Hi-Test #1, AWS A5.2. AWS A5.17. AWS A5.18. AWS A5.28

Section I

Manufacturer's Name
Midstates Wire

Address (Number, Street, City, State, and ZIP Code)
510 S. Oak St.
Crawfordsville, IN 47933

Emergency Telephone Number
317-362-2200

Telephone Number for information
317-362-2200

Product Name
Gas Metal Arc Welding Wire (solid)
Submerged Arc Welding (solid)

Section II — Hazardous Ingredients/Identity information

Other Limits

Hazardous components (Specific Chemical Identity; Common Name(s); OSHA PEL; ACGIH TLY; Recommended)
This section “Hazardous Ingredients” is to be interpreted as defined in OSHA STD 29 CFR 1910.1200
and does not necessarily mean a hazard actually exists. The materials listed are what is reasonably
expected to exist in the fumes when wire is used in welding.

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Chemical Name</th>
<th>% of Sample</th>
<th>Ceiling Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1309-38-2</td>
<td>Iron Oxide</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>7439-95-5</td>
<td>Manganese</td>
<td>5 CL</td>
<td>1” (Fume)</td>
</tr>
<tr>
<td>7631-96-9</td>
<td>Silicon Oxide</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>7440-50-8</td>
<td>Copper-fumes</td>
<td>0.1</td>
<td>0.2</td>
</tr>
<tr>
<td>7439-95-7</td>
<td>Molybdenum</td>
<td>15</td>
<td>10, 20 STEL **</td>
</tr>
</tbody>
</table>

*CL-Ceiling Limit ** STEL-Short Term Exposure Limit (†) Present in Imperial 95 only

Section III — Physical/Chemical Characteristics

Solid Steel Wire, copper coated

Section IV — Fire and Explosion Hazard Data

Non-flammable material. Note that when used for welding, sparks could ignite combustibles in the
immediate area. See precautions in American National Standard Z49.1 “Safety in Welding &
Cutting”, available from AWS, P.O. Box 351040, Miami, Fl 33125
Section V - Reactivity Data

Note that fumes and gas decomposition products during welding are important, rather than the ingredients of the wire. These products are present as complex compounds. They could include oxides of iron, manganese & copper, carbon monoxide and dioxide, products ozone and nitrogen oxides. See "Characterization of Arc Welding Fumes: AWS, P.O. Box 351040, Miami, FL 33135. Fumes & gases can be affected by the coatings, such as paint and galvanizing, on the metal being welded. Contaminants in the atmosphere, such as chlorinated hydrocarbons from degreasing equipment also affect fumes and gases from arc welding. Heat Rays (infrared radiation from flames or hot metal) can injure the eyes.

Section VI - Health Hazard Data

Fumes & Gases: The ACGIH recommended general limit for welding fumes (NOG) not otherwise classified is 5 mg/m³. This is stated as a guide not to be used as a firm line between safe and dangerous. Overexposure to welding fumes may result in discomfort such as dizziness, nausea, or irritation of the nose, throat, and eyes. Presence of contaminants of atmosphere as noted in Sect. V and of the heavy metals plating on the weldment will accentuate these conditions. Long term (chronic) overexposure may lead to siderosis and may affect pulmonary function.

Electric Shock & Arc Rays: See Sect. VII for precautions to take. Arc Rays can injure eye sight and burn exposed skin. Electric shock can kill.

Emergency & First Aid Procedure: Call for medical aid. Employ Red Cross recommended first-aid emergency treatments. Give oxygen if breathing is difficult. Use CPR (Cardiopulmonary Resuscitation) in case of electrical shock and if not breathing.


Section VII - Precautions for Safe Handling and Use

Protection Clothing & Eye Protection: Read and understand manufacturer's instruction and precautionary label for use. Take necessary precautions in regard to ventilation, respiratory protection, eye protection, skin protection, and protective clothing. Wear head helmet or face shield with filter lens shield shade #12 or darker. Use screens around welding area to protect others from Arc Radiation in area. Protective clothing for head, hands, and body should be worn to help prevent injury from electrical shock, and radiation and sparks, from arc and hot metal. This is to include face shield, protective clothing on body, arms and legs. Leather gloves on hands are to be used to protect against electrical shock, radiation and heat.

Waste disposal: Use standard good housekeeping procedures for disposal of flammable wire cartons and hardboard spools. Discarded steel wire can be disposed of with normal scraped steel.

Ventilation & Respiratory Protection: Use local exhaust at the arc, or in welding area, to keep fumes below recommended limits. Train welder to keep head out of immediate fume area. In confined spaces, special air-supplied respirator may be necessary.

See ANSI / AWS F 1.1 "Method for Sampling Airborne Particles Generated by Welding and Allied Processes" Available from AWS, 550 N.W. Lejeune Road, Miami, FL 33135