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## MATERIAL SAFETY DATA SHEET

<b>SECTION 1.</b>	<b>CHEMICAL IDENTIFICATION</b>
MSDS Version Number:	MSDS-T-LA-1
Product Trade Name:	ArcTime™ Multipurpose Tungsten Electrodes
Date of Issue:	6-12-07
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<b>SECTION 2.</b>	<b>COMPOSITION, INFORMATION ON INGREDIENTS</b>
Chemical Family:	Refractory Alloy
Formula:	Tungsten with Non-Radioactive Rare Earth Dopants (chemical composition a trade secret)
<b>SECTION 3.</b>	<b>HAZARDS IDENTIFICATIONS</b>
Routes of Exposure:	Inhalation of fumes produced during welding.
Potential Health Effects:	Short term overexposure to welding fumes may result in discomfort such as dizziness, nausea, or irritation of the nose, throat, or eyes. Although inhalation of tungsten has the potential for causing temporary or permanent lung damage, it is generally considered to exhibit a low degree of toxicity.
Carcinogenic Assessment:	None of the components of the product have been identified as known or suspected carcinogens by NTP, IARC, or OSHA.
<b>SECTION 4.</b>	<b>FIRST AID MEASURES</b>
Inhalation:	Move the exposed individual from the welding area to fresh air. Aid breathing and seek medical attention, if necessary.
Eye Contact:	If irritation occurs due to welding fumes or from dust when grinding tungsten, flush with water. If irritation persists seek medical attention.
Skin Contact:	Adverse reaction from contact with these electrodes is not likely. Prompt medical attention should be obtained for burns or irritation resulting from welding process.
Nose Irritation:	Consult physician
<b>SECTION 5.</b>	<b>FIRE FIGHTING MEASURES</b>
Flash Point:	Not applicable
Extinguishing Media:	For tungsten dust fires, use Class D extinguishing media dry powder. Use respirator approved for toxic dusts and fumes. Use self-contained breathing apparatus for large fires.
Special Procedures:	None
Unusual Fire Hazards:	When tungsten is heated in air, tungsten trioxide (TWA 5 MG/M3) begins to sublime above 750°C. Also, welding arc and sparks can ignite combustibles. Refer to ANSI Z49.1 "Safety in Welding and Cutting" published by the American Welding Society for fire prevention and protection information during welding.
<b>SECTION 6.</b>	<b>ACCIDENTAL RELEASE MEASURES</b>
Steps to be taken if material is released or spilled:	Not applicable
<b>SECTION 7.</b>	<b>HANDLING AND STORAGE</b>
ArcTime Multipurpose Electrode solids are in general safe materials to handle and use under almost all commonly encountered environments. Special precautions should be observed in order to minimize dust that may be created by grinding or machining. The generation of dust or mites may present a health hazard if the exposure limits, as set by OSHA or ACGIH, are exceeded. Maintain good housekeeping procedures to prevent the generation of airborne dust particles. Clean up using methods which avoid the generation of dust. Such methods include wet mopping or vacuuming (assuring that the vacuum is equipped with the proper filter to prevent airborne dust levels which exceed applicable limits). If airborne dust is generated, use the appropriate NIOSH approved respiratory protection.	

<b>SECTION 8.</b>	<b>EXPOSURE CONTROLS, PERSONAL PROTECTION</b>
Respiratory Measures:	Use NIOSH approved respirator when welding in confined spaces and whenever fume concentrations exceed applicable limits for tungsten or other welding fumes.
Ventilation:	Use general and/or local ventilation to keep fumes and gases from welder's breathing zone. If such equipment is not available, use respirators as specified above.
Hand Protection:	Use of welders gloves is recommended.
Eye Protection:	Wear helmet or use face shield with appropriate filter lens. Provide protective screen and flash goggles, if necessary, to shield others.
Other Protective Equipment:	Wear appropriate hand, head, and body protection to prevent injury from sparks and electrical shock. See ANSI Z49-1.
<b>SECTION 9.</b>	<b>PHYSICAL AND CHEMICAL PROPERTIES</b>
Form:	Bar shaped solid
Color:	Steel gray
Odor:	Scentless
pH:	Not applicable
Vapor Pressure:	Non-transient
Vapor density (Air=1):	Not applicable
Boiling Point:	5660oC
Melting Point:	Approximately 3400oC
Solubility in Water:	Not soluble
Specific Gravity:	Approximately 19
Percent Volatile:	0
<b>SECTION 10.</b>	<b>STABILITY AND REACTIVITY</b>
Chemical Stability:	Stable
Conditions to Avoid:	None
Incompatibility with Other Materials:	None
Hazardous Decomposition Products:	Welding fumes (oxides of metal being welded) and gases (such as carbon monoxide ozone and oxides of nitrogen) depending on the process, procedure, and metal welded. Some loss of metal from the electrode does occur.
Hazardous Polymerization:	Will not occur.
<b>SECTION 11.</b>	<b>TOXICOLOGICAL INFORMATION</b>
There is no danger of poisoning or infection in case of mechanical injuries with the electrodes. Damages caused by welding are unknown.	
<b>SECTION 12.</b>	<b>ECOLOGICAL INFORMATION</b>
Proper operation does not cause undue exhaust responsible for the increase of air, water, or soil pollution.	
<b>SECTION 13.</b>	<b>DISPOSAL CONSIDERATIONS</b>
State or local regulations are complex and may differ from federal regulations. The owner of the tungsten is responsible for proper waste disposal in accordance with applicable laws and regulations.	
<b>SECTION 14.</b>	<b>TRANSPORT INFORMATION</b>
Not special requirements.	
<b>SECTION 15.</b>	<b>REGULATORY INFORMATION</b>
Hazardous ingredients:	Tungsten
% by Weight:	>96%
ACGIH TLV:	5MG/M3
Cas Numbers:	Tungsten: 7440-33-7

ArcTime™ All-Purpose Tungsten Electrodes: This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy themselves as to the suitability and completeness of such information for their own particular use. Arc-Zone.com does not accept liability for any loss or damage that may occur from this information nor offers warranty against patent infringement.

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