SAFETY DATA SHEET

Tungsten 2 % Lanthana welding electrode

Section 1. Identification					
GHS product identifier	: Tungsten 2 % Lanthana welding electrode				
Product code	: Not available.				
Other means of identification	: Not available.				
Product type	: Solid.				
Relevant identified uses o	Relevant identified uses of the substance or mixture and uses advised against				
Identified uses	: Welding and cutting of metals. The product as sold is non-hazardous, the SDS is written based on its normal use and emission of fumes, dust and respirable powders.				
Manufacturer	: Shandong Weldstone Tungsten Industry Co., LTD. 188 Zhoulong Rd Zhoucun District, Zibo City Shandong Province, PR China 255300 Tel : 865336824658 Fax : 865336823685				
Supplier's details	: Astaras Welding Accessories 6901 Bryan Dairy Rd. Unit #160 Largo, FL 33777 Tel: (727) 546-9600 Fax: (727) 546-9699				
Emergency telephone number (with hours of operation)	: CHEMTREC, U.S.: 1-800-424-9300 International: +1-703-527-3887 24/7				

Section 2. Hazards identification

OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	: SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B

The product as sold is non-hazardous, the SDS is written based on its normal use and emission of fumes, dust and respirable powders.

GHS label elements		
Signal word	Warning	
Hazard statements	H320 - Causes eye irritation.	
Precautionary statements		
Prevention	P264 - Wash hands thoroughly after handling.	
Response	 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention. 	
Storage	Not applicable.	
Disposal	Not applicable.	
Hazards not otherwise classified	None known.	

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Section 3. Composition/information on ingredients

Substance/mixture

Other means of identification

- : Mixture : Not available.
- **Ingredient name** % **CAS** number 80 - 100 7440-33-7 Tungsten

United States: The exact percentage (concentration) in the composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

Canada: The exact percentage (concentration) in the composition has been withheld as a trade secret in accordance with the amended HPR as of April 2018.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures		
Eye contact	 Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. If irritation persists, get medical attention. 	
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.	
Skin contact	: Flush contaminated skin with plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.	
Ingestion	: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.	
	toms/effects, acute and delayed	
Potential acute healt	<u>h effects</u>	

Eye contact	: Causes eye irritation.			
Inhalation	: No known significant effects or critical hazards.			
Skin contact	: No known significant effects or critical hazards.			
Ingestion	: No known significant effects or critical hazards.			

Over-exposure signs/symptoms



Section 4. First aid measures

Eye contact	:	Adverse symptoms may include the following: pain or irritation watering redness	
Inhalation	1	No known significant effects or critical hazards.	
Skin contact	1	No known significant effects or critical hazards.	
Ingestion	:	No known significant effects or critical hazards.	
Indication of immediate medical attention and special treatment needed, if necessary			
Notes to physician	:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.	
Specific treatments	:	No specific treatment.	
Protection of first-aiders	:	No action shall be taken involving any personal risk or without suitable training. It may	

be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

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Extinguishing media	
Suitable extinguishing media	: Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: None known.
Specific hazards arising from the chemical	: No specific fire or explosion hazard.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: metal oxide/oxides
Special protective actions for fire-fighters	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures			
For non-emergency personnel	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.	
For emergency responders	:	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".	
Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).	

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Section 6. Accidental release measures

Methods and materials for containment and cleaning up

- Spill
- : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling		
Protective measures	: Put on appropriate personal protective equipment (see Section 8). Do not ingest. contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. E containers retain product residue and can be hazardous. Do not reuse container.	
Advice on general occupational hygiene	: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eatir drinking and smoking. See also Section 8 for additional information on hygiene measures.	וg,
Conditions for safe storage, including any incompatibilities	: Store in accordance with local regulations. Store in original container protected fro direct sunlight in a dry, cool and well-ventilated area, away from incompatible mate (see Section 10) and food and drink. Keep container tightly closed and sealed unti ready for use. Containers that have been opened must be carefully resealed and k upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.	rials il ‹ept

Section 8. Exposure controls/personal protection

Control parameters

United States

Occupational exposure limits

Ingredient name	Exposure limits
Tungsten	NIOSH REL (United States, 10/2016). TWA: 5 mg/m³, (as W) 10 hours. STEL: 10 mg/m³, (as W) 15 minutes. ACGIH TLV (United States, 3/2018). TWA: 3 mg/m³, (as W) 8 hours. Form: Respirable

Canada

Occupational exposure limits

Ingredient name	Exposure limits
Tungsten	CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 5 mg/m³, (as W) 8 hours. 15 min OEL: 10 mg/m³, (as W) 15 minutes. CA British Columbia Provincial (Canada, 7/2018). TWA: 5 mg/m³ 8 hours. STEL: 10 mg/m³ 15 minutes. CA Saskatchewan Provincial (Canada, 7/2013). STEL: 10 mg/m³ (measured as W) 15 minutes. TWA: 5 mg/m³, (measured as W) 8 hours. CA Ontario Provincial (Canada, 1/2018). STEL: 10 mg/m³, (as W) 15 minutes. TWA: 5 mg/m³, (measured as W) 8 hours. CA Ontario Provincial (Canada, 1/2018). STEL: 10 mg/m³, (as W) 15 minutes. TWA: 5 mg/m³, (as W) 15 minutes. TWA: 5 mg/m³, (as W) 8 hours.



Section 8. Exposure controls/personal protection

Appropriate engineering controls	:	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
Environmental exposure controls	:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
Skin protection	
Hand protection	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Body protection	 Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Other skin protection	: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance		
Physical state	: Solid.	
Color	: Gray.	
Odor	: Odorless.	
Odor threshold	: Not available.	
рН	: Not available.	
Melting point	: <3400°C (<61	l52°F)
Boiling point/boiling range	: Not available.	
Flash point	: Not available.	
Evaporation rate	: Not available.	
Flammability (solid, gas)	: Not available.	
Lower and upper explosive (flammable) limits	: Not available.	
Vapor pressure	: Not available.	
Vapor density	: Not available.	



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Section 9. Physical and chemical properties

Relative density	9 to 19.1	
Solubility	nsoluble in the following materials: cold water and hot water	
Partition coefficient: n- octanol/water	lot available.	
Auto-ignition temperature	lot available.	
Decomposition temperature	lot available.	
Viscosity	lot available.	
Flow time (ISO 2431)	lot available.	

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific data.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials and acids.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

There is no data available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Tungsten	Eyes - Mild irritant Skin - Mild irritant	Rabbit Rabbit	-	24 hours 500 mg 24 hours 500 mg	-

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.



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Section 11. Toxicological information

Aspiration hazard

There is no data available.

Information on the likely routes of exposure	: Dermal contact. Eye contact. Inhalation. Ingestion.
Potential acute health effect	<u>s</u>
Eye contact	: Causes eye irritation.
Inhalation	: No known significant effects or critical hazards.
Skin contact	: No known significant effects or critical hazards.
Ingestion	: No known significant effects or critical hazards.
Symptoms related to the ph Eye contact	 ysical, chemical and toxicological characteristics Adverse symptoms may include the following:
	pain or irritation watering redness
Inhalation	: No known significant effects or critical hazards.
Inhalation Skin contact	 No known significant effects or critical hazards. No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

<u>Short term exposure</u>	
Potential immediate effects	: No known significant effects or critical hazards.
Potential delayed effects	: No known significant effects or critical hazards.
<u>Long term exposure</u>	
Potential immediate effects	: No known significant effects or critical hazards.
Potential delayed effects	: No known significant effects or critical hazards.
Potential chronic health effe	ects
General	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

There is no data available.



Section 12. Ecological information

Toxicity

There is no data available.

Persistence and degradability

There is no data available.

Bioaccumulative potential

There is no data available.

Mobility in soil

Soil/water partition	: Not available.
coefficient (Koc)	

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods	: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority
	requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging
	should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of
	spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	ΙΑΤΑ
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.

AERG : Not applicable.

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal regulations	: United States inventory (TSCA 8b): All components are listed or exempted.		
Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)	: Not listed		
Clean Air Act Section 602 Class I Substances	: Not listed		
Clean Air Act Section 602 Class II Substances	: Not listed		
DEA List I Chemicals (Precursor Chemicals)	: Not listed		
DEA List II Chemicals (Essential Chemicals)	: Not listed		
<u>SARA 302/304</u>			
No products were found.			
SARA 304 RQ	: Not applicable.		
<u>SARA 311/312</u>			
Classification	: SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B		
Composition/information	on ingredients		
Name	Classification		

Name	Classification
U	FLAMMABLE SOLIDS - Category 1 SELF-HEATING SUBSTANCES AND MIXTURES - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B

<u>SARA 313</u>

There is no data available.

State regulations

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Massachusetts	: The following components are listed: Tungsten
New York	: None of the components are listed.
New Jersey	: The following components are listed: Tungsten
Pennsylvania	: The following components are listed: Tungsten
<u>California Prop. 65</u>	
This product does	not require a Safe Harbor warning under California Prop. 65.

Canadian lists

Canada inventory (DSL NDSL)	: All components are listed or exempted.
Canadian NPRI	: None of the components are listed.
CEPA Toxic substances	: None of the components are listed.

Section 16. Other information

Procedure used to derive the classification	
Classification	Justification
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B	Calculation method
History	
Date of issue mm/dd/yyyy : 01/30/2020	

Date of issue mm/dd/yyyy	: 01/30/2020
Date of previous issue	: 05/15/2015
Version	: 7



Section 16. Other information

Prepared by	: KMK Regulatory Services Inc.
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = International Air Transport Association IBC = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries,

assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

