

Safety Data Sheet: AWS A5.1 E6010

Supersedes Date 07/14/2009

Issuing Date 06/13/2013

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name AWS A5.1 E6010
Recommended use Welding
Information on Manufacturer
 TOKO Technology(Wuxi) Co.,Ltd

Product Code TOKO E6010
Chemical nature Inorganic solid blend
Emergency Telephone Number
 TEL: (86)510-83595138

Email: jp@tokoc.com

2. HAZARD IDENTIFICATION

Color gray

Physical State Solid

Odor Odorless

GHS

Classification

Physical Hazards

None

Health Hazard

Acute Oral Toxicity

Carcinogenicity

Specific target organ systemic toxicity (single exposure)

Specific target organ systemic toxicity (repeated exposure)

Other hazards

None

Category 4
 Category 1A
 Category 2
 Category 2

Labeling

Signal Word

DANGER



Hazard Statements

H302 - Harmful if swallowed

H350 - May cause cancer

H371 - May cause damage to organs

H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary Statements

P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

P260 - Do not breathe dust or fume

P270 - Do not eat, drink or smoke when using this product

P264 - Wash face, hands and any exposed skin thoroughly after handling.

P281 - Use personal protective equipment as required

P301+ P312 - IF SWALLOWED: Call a physician if unwell

P330 - Rinse mouth

P308 + P313 - IF exposed or concerned: Get medical attention/advice

P405 - Store locked up

P501 - Dispose of contents and container to an approved waste disposal plant.

P273 - Avoid release to the environment

6 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Iron	7439-89-6	60-100
Manganese	7439-96-5	1-5
Silica mica	12001-26-2	1-5
Aluminum oxide	1344-28-1	1-5
Titanium dioxide	13463-67-7	1-5
Crystalline Silica (Quartz)	14808-60-7	1-5
Cellulose	9004-34-6	1-5
Magnesium carbonate	546-93-0	.1-1

4. FIRST AID MEASURES

General advice If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.
Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
Skin Contact In case of contact, immediately flush skin with soap and plenty of water. If skin irritation persists, call a physician.
Inhalation Remove person to fresh air. If signs/symptoms continue, get medical attention.
Ingestion If swallowed, do not induce vomiting - seek medical advice. Rinse mouth.
Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point The product is not flammable **Method** Not applicable
Upper No data available **Lower** No data available
Suitable Extinguishing Media
 Carbon dioxide (CO2). Dry chemical. Foam. Water spray.
Specific hazards arising from the chemical
 Arcs and sparks can ignite combustibles and flammable products. See American National Standard Z49.1; Safety in Welding and Cutting published by The American Welding Society .
Protective Equipment and Precautions for Firefighters
 As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
NFPA **Health** 2 **Flammability** 0 **Instability** 0
HMIS **Health** 2 **Flammability** 0 **Instability** 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
Environmental Precautions Do not flush into surface water or sanitary sewer system.
Methods for Containment Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Methods for Cleaning Up Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Neutralizing Agent Not applicable.

7. HANDLING AND STORAGE

Handling Avoid contact with skin, eyes and clothing.
Storage Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place.
Storage Temperature **Minimum** No information available **Maximum** No information available
Storage Conditions **Indoor** X **Outdoor** **Heated** **Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Iron	No data available	No data available	No data available
Manganese	TWA: 0.2 mg/m ³	Ceiling: 5 mg/m ³	IDLH: 500 mg/m ³ STEL 3 mg/m ³ TWA: 1 mg/m ³
Silica mica	TWA: 3 mg/m ³	No data available	IDLH: 1500 mg/m ³ TWA: 3 mg/m ³
Aluminum oxide	TWA: 1 mg/m ³	TWA: 15 mg/m ³ TWA: 5 mg/m ³	No data available
Titanium dioxide	TWA: 10 mg/m ³	TWA: 15 mg/m ³	IDLH: 5000 mg/m ³
Crystalline Silica (Quartz)	: 0.025 mg/m ³ TWA (respirable fraction)	No data available	IDLH: 50 mg/m ³ TWA: 0.05 mg/m ³
Cellulose	: 10 mg/m ³ TWA	: 15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)	TWA: 10 mg/m ³ TWA: 5 mg/m ³
Magnesium carbonate	No data available	TWA: 15 mg/m ³ TWA: 5 mg/m ³	TWA: 10 mg/m ³ TWA: 5 mg/m ³

Engineering Measures Use enough ventilation, local exhaust at the arc, or both to keep the fumes and gases below the

	TLV's in the worker's breathing zone and in the general area. Train the worker to keep his head out of the fumes .
Personal Protective Equipment	
Eye/Face Protection	Safety glasses with side-shields. Wear a helmet or use face shield with filter lens of appropriate shade number (SEE ANSI/ASCZ49.1) provide protective screen and flash goggles, if necessary, to shield others. As a rule of thumb, start a shade that is too dark to see the weld zone. Then go next lighter shade which gives sufficient view of the weld zone .
Skin Protection	Welder's leather gloves, Wear fire/flamm resistant/retardant clothing, Wear suitable protective clothing, Impervious gloves.
Respiratory Protection	Use enough ventilation, local exhaust at the arc, or both to keep the fumes and gasses below the TLV's in the workers' breathing zone and the general area. Train the worker to keep his head out of the fumes. Use MSHA/NIOSH approved or equivalent fume respirator or air supplied respirator when welding in a confined space or when local exhaust or ventilation does not keep exposure below TLV.
General Hygiene Considerations	Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid	Viscosity	Not applicable
Color	gray	Odor	Odorless
Odor Threshold	Not applicable	Appearance	Textured black paste
pH	Not applicable	Specific Gravity	No data available
Evaporation Rate	Not applicable	Percent Volatile (Volume)	No information available
VOC Content (%)	No information available	Vapor Pressure	Not applicable
Vapor Density	Not applicable	Solubility	Insoluble
n-Octanol/Water Partition	No data available	Melting Point/Range	2800 - 3200 °F / 1538 - °C
Decomposition Temperature	No data available	Boiling Point/Range	5500 °F / 3038 °C
Flammability (solid, gas)	No data available	Method	Not applicable
Flash Point	The product is not flammable		
Autoignition Temperature	No information available.		
Upper	No data available		
Lower	No data available		

10. STABILITY AND REACTIVITY

Chemical Stability	Hazardous polymerization does not occur.
Conditions to Avoid	Exposure to air or moisture over prolonged periods
Incompatible Products	Incompatible with oxidizing agents, Strong acids.
Hazardous Decomposition Products	Fumes and gasses produced by welding, brazing and similar processes cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded, the process, the procedures and the filler metal being used. Other conditions which also influence the composition and quantity of fumes and gases to which the worker may be exposed include: coatings on the metal being welded, the number of welders and the volume of the work space, the quality and amount of ventilation used, the position of the welder's head in relation to the fume plume, as well as the presence of contaminants in the atmosphere when the filler metal is consumed. The fume and gas decomposition products generated are different in percent and form the product ingredients listed in Section III. The products formed in normal operation include those originating from the volatilization, reaction and oxidation of the filler metal, the metal being welded, the coatings, etc. as noted above. One recommended way to determine the composition and quality of fumes and gases to which workers are exposed is to take an air sample inside the welders helmet if worn or in the workers breathing zone. See ANSI/AWS F1.1
Possibility of Hazardous Reactions	None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information

The following values are calculated based on chapter 3.1 of the GHS document (Rev. 3, 2009):

Oral LD50	No information available
Dermal LD50	No information available
Inhalation LC50	
Gas	No information available
Mist	No information available
Vapor	No information available

Principle Route of Exposure	Inhalation
Primary Routes of Entry	Inhalation
Acute Effects	
Eyes	Causes eye irritation. Welding arc may damage eyes .
Skin	May cause skin irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May cause allergic skin reaction.
Inhalation	Welding fumes may result in discomfort such as: dizziness, nausea, or dryness or irritation of nose, throat, or eyes. Fumes can aggravate asthma, bronchial conditions, or allergies. Individuals with allergies or impaired respiratory function may have symptoms worsen by exposure to welding fumes . Excessive inhalation of iron oxides fumes or dust can lead to irritation of the respiratory tract . Inhalation may cause central nervous system effects. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Ingestion	
Chronic Toxicity	Prolonged exposure may cause chronic effects. Long term overexposure to iron fumes may lead to siderosis (iron deposits in the lung) and is believed by investigators to affect pulmonary function. Lungs will clear in time when exposure to iron and its components cease . Inhalation of manganese fumes may affect the central nervous system, may cause spastic gait, drowsiness, paralysis and other neurological problems with symptoms including weakness and tremors resembling Parkinson's disease. Behavioral changes and changes in handwriting may also appear .
Target Organ Effects	Respiratory system, Central nervous system, Skin, Blood, Kidney, Lungs.
Aggravated Medical Conditions	Pre-existing respiratory and skin conditions such as asthma, emphysema, and dermatitis, Allergies, Central nervous system, Kidney disorders, Skin disorders, Respiratory system.

Component Information

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Iron	= 984 mg/kg (Rat)	no data available	no data available	no data available	no data available
Manganese	= 9 g/kg (Rat)	no data available	no data available	no data available	no data available
Silica mica	no data available	no data available	no data available	no data available	no data available
Aluminum oxide	> 5000 mg/kg (Rat)	no data available	no data available	no data available	no data available
Titanium dioxide	> 10000 mg/kg (Rat)	no data available	no data available	no data available	no data available
Crystalline Silica (Quartz)	= 500 mg/kg (Rat)	no data available	no data available	no data available	no data available
Cellulose	> 5 g/kg (Rat)	> 2 g/kg (Rabbit)	> 5800 mg/m ³ (Rat) 4 h	no data available	no data available
Magnesium carbonate	no data available	no data available	no data available	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Iron	no data available	no data available	no data available	no data available	no data available
Manganese	no data available	no data available	no data available	no data available	CNS,respiratory system,blood,kidneys
Silica mica	no data available	no data available	no data available	no data available	respiratory system
Aluminum oxide	no data available	no data available	no data available	no data available	eyes,respiratory system,skin
Titanium dioxide	no data available	no data available	no data available	no data available	respiratory system
Crystalline Silica (Quartz)	no data available	no data available	no data available	no data available	eyes, respiratory system (in animals: lung cancer), kidneys
Cellulose	no data available	no data available	no data available	no data available	eyes, respiratory system, skin
Magnesium carbonate	no data available	no data available	no data available	no data available	eyes,respiratory system,skin

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH	IARC	NTP	OSHA	Other
Iron	not applicable	not applicable	not applicable	not applicable	not applicable
Manganese	not applicable	not applicable	not applicable	not applicable	not applicable
Silica mica	not applicable	not applicable	not applicable	not applicable	not applicable
Aluminum oxide	not applicable	not applicable	not applicable	not applicable	not applicable
Titanium dioxide	A4	Group 2B	not applicable	X	not applicable
Crystalline Silica (Quartz)	A2	Group 1	Known	X	not applicable
Cellulose	not applicable	not applicable	not applicable	not applicable	not applicable
Magnesium carbonate	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information No information available.
 Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Iron	no data available	LC50 = 13.6 mg/L Morone saxatilis 96 h LC50 = 0.56 mg/L Cyprinus carpio 96 h	no data available	no data available	N/A
Manganese	no data available	no data available	no data available	no data available	N/A
Silica mica	no data available	no data available	no data available	no data available	N/A
Aluminum oxide	no data available	no data available	no data available	no data available	N/A
Titanium dioxide	no data available	no data available	no data available	no data available	N/A
Crystalline Silica (Quartz)	no data available	no data available	no data available	no data available	N/A
Cellulose	no data available	no data available	no data available	no data available	N/A
Magnesium carbonate	no data available	no data available	no data available	no data available	N/A

Persistence and Degradability No information available.
Bioaccumulation No information available.
Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations.
Container Disposal Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT Not regulated
TDG Not regulated
ICAO Not regulated
IATA Not regulated
IMDG/IMO Not regulated

15. REGULATORY INFORMATION

Inventories
TSCA Complies
DSL Complies

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Manganese	7439-96-5	1-5	1.0
Aluminum oxide	1344-28-1	1-5	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	No	No	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Iron	Not applicable	Not applicable
Manganese	Not applicable	Not applicable
Silica mica	Not applicable	Not applicable
Aluminum oxide	Not applicable	Not applicable
Titanium dioxide	Not applicable	Not applicable
Crystalline Silica (Quartz)	Not applicable	Not applicable
Cellulose	Not applicable	Not applicable
Magnesium carbonate	Not applicable	Not applicable

U.S. State Regulations
California Proposition 65

This product contains the following Proposition 65 chemicals

Component	CAS-No	California Prop. 65
Crystalline Silica (Quartz)	14808-60-7	carcinogen

16. OTHER INFORMATION

Supersedes Date 07/14/2009
Issuing Date 06/13/2013
Reason for Revision No information available.
Glossary No information available.
List of References. No information available.

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