TOKO®

# Safety Data Sheet: ER4043

**Supercedes Date** 08/24/2012 **Issuing Date** 07/11/2013

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** ER4043
**Recommended use** Tig wire
**Information on Manufacturer**

TOKO Technology (Wuxi) Co.,Ltd

Email: jp@tokoc.com

**Product Code** TOKO ER4043
**Chemical nature** Inorganic solid blend
**Emergency Telephone Number**

TEL: (86)510-83595138

## 2. HAZARD IDENTIFICATION

**Color** Metallic gray **Physical State** Solid **Odor** Odorless

**GHS Classification**

*Physical Hazards*
None

*Health Hazard*
Skin Corrosion/Irritation Category 3

*Other hazards*
None

**Labeling**

*Signal Word*
**WARNING**

*Hazard Statements*
H316 - Causes mild skin irritation

*Precautionary Statements*
P332 + P313 - If skin irritation occurs, get medical attention.

10 % of the mixture consists of ingredient(s) of unknown toxicity

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

| Component | CAS-No | Weight % |
|---|---|---|
| Aluminum | 7429-90-5 | 85-95 |
| Silicon | 7440-21-3 | 1-10 |
| Chromium | 7440-47-3 | 0 |
| Titanium dioxide | 13463-67-7 | 0 |

## 4. FIRST AID MEASURES

**General advice** Avoid contact with skin, eyes and clothing.
**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.
**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** Ensure adequate ventilation.

**Environmental Precautions** Prevent product from contaminating soil or from entering sewage, drainage systems, and bodies of water .

**Methods for Containment** Pick up and arrange disposal without creating dust.

**Methods for Cleaning Up** Shovel or vacuum any spilled material into a suitable container. Alloy wastes are normally collected to recover metal value .

**Neutralizing Agent** Not applicable.

## 7. HANDLING AND STORAGE

**Handling** Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Ensure adequate ventilation.

**Storage** Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

**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 |
|---|---|---|---|
| Aluminum | TWA: 1 mg/m$^3$ | TWA: 15 mg/m$^3$ TWA: 5 mg/m$^3$ | TWA: 10 mg/m$^3$ TWA: 5 mg/m$^3$ |
| Silicon | No data available | TWA: 15 mg/m$^3$ TWA: 5 mg/m$^3$ | TWA: 10 mg/m$^3$ TWA: 5 mg/m$^3$ |
| Chromium | TWA: 0.5 mg/m$^3$ | TWA: 1 mg/m$^3$ | IDLH: 250 mg/m$^3$<br>TWA: 0.5 mg/m$^3$ |
| Titanium dioxide | TWA: 10 mg/m$^3$ | TWA: 15 mg/m$^3$ | IDLH: 5000 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** 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/flame resistant/retardant clothing.

**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** Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes and clothing. Wear head and body protection which help to prevent injury from radiation, sparks, and electrical shock. See ANSI Z49.1. At minimum, this includes welder's gloves and a protective face shield, and may include arm protectors, aprons, hat, shoulder protection as well as dark nonsynthetic clothing. Train the welder not to touch live electrical parts and to insulate himself from work and ground .

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|---|---|---|---|
| **Physical State** | Solid | **Viscosity** | Not applicable |
| **Color** | Metallic gray | **Odor** | Odorless |
| **Odor Threshold** | Not applicable | **Appearance** | Textured black paste |
| **pH** | Not applicable | **Specific Gravity** | 9 |
| **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** | 1500 - 2000 °F / 816 - 1093 °C |
| **Decomposition Temperature** | No data available | **Boiling Point/Range** | No data available |
| **Flammability (solid, gas)** | No data available | | |
| **Flash Point** | The product is not flammable | **Method** | Not applicable |
| **Autoignition Temperature** | No information available. | | |

**Upper** No data available **Lower** No data available

## 10. STABILITY AND REACTIVITY

**Chemical Stability** Stable under normal conditions. Hazardous polymerization does not occur.

**Conditions to Avoid** Keep away from open flames, hot surfaces, and sources of ignition

**Incompatible Products** Incompatible with oxidizing agents, Strong oxidizing agents.

**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 "Method For Sampling

**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.
- **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 .
- **Ingestion** May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Chronic Toxicity** Long term. Overexposure may cause pulmonary fibrosis and emphysema. Constant inhalation of chromium (VI) compounds may cause an ulceration and perforation of the nasal septum as well as liver and kidney damage. IARC has concluded that the evidence for carcinogenicity to humans and animals is inadequate for chromium metal and trivalent compounds, but sufficient for hexavalent chromium compounds. Chromium compounds are on the IARC list as posing a carcinogenic risk to humans. OSHA (29 CFR 1910.120) lists chromium as possible carcinogen. Chromium VI compounds are required by OSHA to be considered carcinogenic .

**Target Organ Effects** Respiratory system, Eyes, Skin.

**Aggravated Medical Conditions** Pre-existing respiratory and skin conditions such as asthma, emphysema, and dermatitis, Allergies.

Component Information

**Acute Toxicity**

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation | Draize Test | Other |
|---|---|---|---|---|---|
| Aluminum | no data available | no data available | no data available | no data available | no data available |
| Silicon | no data available | no data available | no data available | no data available | no data available |
| Chromium | no data available | 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 |

**Chronic Toxicity**

| Component | Mutagenicity | Sensitization | Developmental Toxicity | Reproductive Toxicity | Target Organ Effects |
|---|---|---|---|---|---|
| Aluminum | no data available | no data available | no data available | no data available | eyes,respiratory system,skin |
| Silicon | no data available | no data available | no data available | no data available | eyes,respiratory system,skin |
| Chromium | 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 |

**Carcinogenicity**

| Component | ACGIH | IARC | NTP | OSHA | Other |
|---|---|---|---|---|---|
| Aluminum | not applicable | not applicable | not applicable | not applicable | not applicable |
| Silicon | not applicable | not applicable | not applicable | not applicable | not applicable |
| Chromium | not applicable | not applicable | not applicable | not applicable | not applicable |
| Titanium dioxide | A4 | Group 2B | not applicable | X | not applicable |

## 12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

| Component | Toxicity to Algae | Toxicity to Fish | Microtox | Water Flea | log Pow |
|---|---|---|---|---|---|
| Aluminum | no data available | no data available | no data available | no data available | N/A |
| Silicon | no data available | no data available | no data available | no data available | N/A |
| Chromium | 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 |

**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
**U.S. Federal Regulations**
**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 |
|---|---|---|---|
| Aluminum | 7429-90-5 | 85-95 | 1.0 |
| Chromium | 7440-47-3 | 0 | 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 |
|---|---|---|
| Aluminum | Not applicable | Not applicable |
| Silicon | Not applicable | Not applicable |
| Chromium | 5000 lb | Not applicable |
| Titanium dioxide | Not applicable | Not applicable |

## 16. OTHER INFORMATION

**Supercedes Date** 08/24/2012
**Issuing Date** 07/11/2013
**Reason for Revision** No information available.
**Glossary** No information available.
**List of References.** No information available.

**TOKO Aluminium Welding, TOKO Group Ltd assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.**