



Safety Data Sheet: E6011 WELDING ELECTRODE

Supersedes Date Not applicable

Issuing Date 04/17/2013

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name E6011 WELDING ELECTRODE

Recommended use Welding

Information on Manufacturer

K-T Industries, INC
3112 NW Blvd
Sheldon, IA 51201

Chemical nature Inorganic solid blend

Emergency Telephone Number

K-T Industries® 712-324-5361

2. HAZARD IDENTIFICATION

Color Dark gray

Physical State Solid

Odor Not significant

GHS

Classification

Physical Hazards

None

Health Hazard

Acute Oral Toxicity

Acute Aquatic Toxicity

Category 4

Category 1

Chronic Aquatic Toxicity

Category 1

Other hazards

None

Labeling

Signal Word

WARNING



Hazard Statements

H302 - Harmful if swallowed

H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements

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

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

P273 - Avoid release to the environment

P330 - Rinse mouth

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

P501 - Dispose of contents and container to an approved waste di

Dispose of contents/container to an approved incineration plant

106.5 % 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
Cellulose pulp	65996-61-4	1-5
Magnesium oxide	1309-48-4	<5
Sodium silicate	1344-09-8	1-5
Titanium dioxide	13463-67-7	<5
Manganese	7439-96-5	1-5
Quartz	14808-60-7	<.5
Calcium carbonate	1317-65-3	.5-1.5

4. FIRST AID MEASURES

General advice Wash thoroughly after handling. Do not take internally.
Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician
Skin Contact Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes
Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion If swallowed, call a poison control center or doctor immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Rinse mouth.
Notes to physician Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flash Point The product is not flammable **Method** Seta closed cup
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
 The product causes burns of eyes, skin and mucous membranes
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 1 Instability 0 Other 0
HMIS Health 2 Flammability 1 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** X **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
Cellulose pulp	No data available	No data available	No data available
Magnesium oxide	TWA: 10 mg/m ³	TWA: 15 mg/m ³	IDLH: 750 mg/m ³
Sodium silicate	No data available	No data available	No data available
Titanium dioxide	TWA: 10 mg/m ³	TWA: 15 mg/m ³	IDLH: 5000 mg/m ³

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
Quartz	TWA: 0.025 mg/m ³	No data available	IDLH: 50 mg/m ³ TWA: 0.05 mg/m ³
Calcium 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 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.

Personal Protective Equipment**Eye/Face Protection**

Safety glasses with side-shields.

Skin Protection

Wear head, hand and body protection which help to prevent injury from radiation, sparks and electrical shock. SEE ANSI Z-49.1. Train the welder not to touch live electrical parts and to insulate himself from work and ground

Respiratory Protection

Use a NIOSH/MSHA approved or equivalent fume respirator or air supplied respirator when welding in confined spaces, or where local exhaust or ventilation does not keep exposure below TLV's .

General Hygiene Considerations

Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid	Viscosity	Not applicable
Color	Dark gray	Odor	Not significant
Odor Threshold	Not applicable	Appearance	Metallic
pH	Not applicable	Specific Gravity	No data available
Evaporation Rate	No information available	Percent Volatile (Volume)	No information available
VOC Content (%)	No information available	Vapor Pressure	No information available
Vapor Density	Not applicable	Solubility	Insoluble
n-Octanol/Water Partition	No data available	Melting Point/Range	2150 2710 °F / 1177 °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	Seta closed cup
Autoignition Temperature	No information available.		
Upper No data available Lower No data available			

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions
Conditions to Avoid	None known
Incompatible Products	No materials to be especially mentioned
Hazardous Decomposition Products	None under normal use
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, Ingestion.

**Primary Routes of Entry
Acute Effects**

Inhalation

Eyes

May cause slight irritation

Skin

Substance may cause slight skin irritation

Inhalation

Inhalation may cause central nervous system effects. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Ingestion

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Toxicity

No information available

Target Organ Effects

Blood, Central nervous system, Kidney, Respiratory system.

Aggravated Medical Conditions

Central nervous system, Kidney disorders.

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
Cellulose pulp	no data available	no data available	no data available	no data available	no data available
Magnesium oxide	no data available	no data available	no data available	no data available	no data available
Sodium silicate	= 1153 mg/kg (Rat)	> 4640 mg/kg (Rabbit)	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
Manganese	= 9 g/kg (Rat)	no data available	no data available	no data available	no data available
Quartz	= 500 mg/kg (Rat)	no data available	no data available	no data available	no data available
Calcium 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
Cellulose pulp	no data available	no data available	no data available	no data available	no data available
Magnesium oxide	no data available	no data available	no data available	no data available	eyes, respiratory system
Sodium silicate	no data available	no data available	no data available	no data available	kidneys
Titanium dioxide	no data available	no data available	no data available	no data available	respiratory system
Manganese	no data available	no data available	no data available	no data available	CNS, respiratory system, blood, kidneys
Quartz	no data available	no data available	no data available	no data available	eyes, respiratory system
Calcium 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
Cellulose pulp	not applicable	not applicable	not applicable	not applicable	not applicable
Magnesium oxide	not applicable	not applicable	not applicable	not applicable	not applicable
Sodium silicate	not applicable	not applicable	not applicable	not applicable	not applicable
Titanium dioxide	not applicable	Group 2B	not applicable	X	not applicable
Manganese	not applicable	not applicable	not applicable	not applicable	not applicable
Quartz	A2	Group 1	Known	X	not applicable
Calcium 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 <i>Morone saxatilis</i> 96 h LC50 = 0.56 mg/L <i>Cyprinus carpio</i> 96 h	no data available	no data available	N/A
Cellulose pulp	no data available	no data available	no data available	no data available	N/A
Magnesium oxide	no data available	no data available	no data available	no data available	N/A
Sodium silicate	no data available	LC50 301 - 478 mg/L <i>Lepomis macrochirus</i> 96 h LC50 = 3185 mg/L <i>Brachydanio rerio</i> 96 h	no data available	EC50= 216 mg/L 96 h	N/A
Titanium dioxide	no data available	no data available	no data available	no data available	N/A
Manganese	no data available	no data available	no data available	no data available	N/A
Quartz	no data available	no data available	no data available	no data available	N/A
Calcium carbonate	no data available	no data available	no data available	no data available	N/A

Persistence and Degradability
Bioaccumulation
Mobility

No information available.
No information available.
No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal
Container Disposal

Dispose of in accordance with local regulations.
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
Manganese	7439-96-5	1-5	1.0

SARA 311/312 Hazardous Categorization

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

Yes	No	No		No
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CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Iron	Not applicable	Not applicable
Cellulose pulp	Not applicable	Not applicable
Magnesium oxide	Not applicable	Not applicable
Sodium silicate	Not applicable	Not applicable
Titanium dioxide	Not applicable	Not applicable
Manganese	Not applicable	Not applicable
Quartz	Not applicable	Not applicable
Calcium 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
Titanium dioxide	13463-67-7	carcinogen
Quartz	14808-60-7	carcinogen

16. OTHER INFORMATION

K-T Industries, INC. 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 SDS 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.