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1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT NAME: 3127, 3130, 3137, 3138, 3140, 3141, 3144, 3146, 3147, 3155, 3156, 3157

MANUFACTURER: Selectrode Industries, Inc.
230 Broadway
Huntington Station, NY 11746 U.S.A.
Phone: 631-547-5470
Fax: 631-547-5475
E-mail: info@selectrode.com

EMERGENCY TELEPHONE NUMBER: 631-547-5470

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2. HAZARD IDENTIFICATION:

Emergency Overview: This product is normally not considered hazardous as shipped. Avoid eye contact or inhalation of dust from the product. When this product is used in a welding process, the most important hazards are welding fumes and heat.

Classification of the Substance/Mixture

CLP/GHS Classification (1272/2008):
Skin Irritation, Category 2
Eye Irritation, Category 2A
Hazardous to the Aquatic Environment – Acute Hazard, Category 1

EU Classification (67/548/EEC):
Irritant (Xi), Dangerous for the Environment (N), R36/37/38, R50

Hazardous Classification per 29CFR 1910.1200 (Rev. July 1, 2012):
Skin Irritation, Category 2
Eye Irritation, Category 2A
Hazardous to the Aquatic Environment – Acute Hazard, Category 1

Labelling:

Symbols: 

Signal Word: Warning

Hazard Statements:
H315 – Causes skin irritation.
H319 – Causes serious eye irritation.
H400 – Very toxic to aquatic life

Precautionary Statements:
P210 – Keep away from heat/sparks/open flames/hot surfaces – No smoking.
P264 – Wash skin and hair thoroughly after handling.
P273 – Avoid release to the environment.
P280 – Wear gloves/eye protection/face protection.
P302+P352 – IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313 – IF skin irritation occurs: Get medical advice/attention.
P337+P313 – IF eye irritation persists: Get medical advice/attention.
P362 – Take off contaminated clothing and wash before reuse.
P391 – Collect spillage.

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P403+P233 – Store in a well-ventilated place. Keep container tightly closed.
P501 – Dispose of contents/container in accordance with local/regional/national/international regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS:

Chemical Identity	CAS #	Range %	OSHA PEL (mg/m3)	ACGIH-TLV (mg/m3)	Carcinogenicity	EU Classification (67/548/EEC)	CLP/GHS Classification (1272/2008)	Hazardous Classification per 29CFR 1910.1200 (Rev. July, 2012)
Tin	7440-31-5	1-11	2	2	No	Not Dangerous	Not Hazardous	Not Hazardous
#Silver	7440-22-4	12-35	.01	.1	No	Not Dangerous	Not Hazardous	Not Hazardous
#Copper	7440-50-8	13-24	1.0	1.0	No	(F) R11 (N) R50	(H228) Flam. Sol. 1 (H400) Aquatic Acute 1	(H228) Flam. Sol. 1 (H400) Aquatic Acute 1
#Zinc	1314-13-2	6-13	5.0	5.0	No	(N),R50/53	(H400) Aquatic Acute 1 (H410) Aquatic C. 1	(H400) Aquatic Acute 1 (H410) Aquatic C. 1
Potash	584-08-7	1-11	NR	NR	No	(Xn) R22 (Xi) R36/37/38	(H302) Acute Tox. 4 (H315) Skin Irrit.. 2 (H319) Eye Irrit.. 2A (H335) STOT SE 3	(H302) Acute Tox. 4 (H315) Skin Irrit.. 2 (H319) Eye Irrit.. 2A (H335) STOT SE 3
Potassium Fluorborate	14075-53-7	15-25	2.5 (as F)	2.5 (as F)	No	(Xn) R22 (Xi) R36/38	(H302) Acute Tox. 4 (H315) Skin Irrit.. 2 (H319) Eye Irrit.. 2A	(H302) Acute Tox. 4 (H315) Skin Irrit.. 2 (H319) Eye Irrit.. 2A
Potassium Tetraborate	12045-78-2	1-11	15	10	No	(C) R34	(H314) Skin Corr. 1B	(H314) Skin Corr. 1B
Boric Acid	10043-35-3	1-11	15	10	No	Repr. Cat. 2 (T),R60, R61	(H360FD) Repr. 1B	(H360FD) Repr. 1B
Naphtha	64742-49-0	1-5	1200-1400	300-400ppm	No	(F) R11 (Xn) R65 (Xi) R36/38 (T) R45,R46,R49	(H225) Flam. Liq. 2 (H304) Aspiration. 1 (H315) Skin Irrit.. 2 (H319) Eye Irrit.. 2A (H336) STOT SE 3 (H340) Muta. 1 (H350) Carc. 1B	(H225) Flam. Liq. 2 (H304) Aspiration. 1 (H315) Skin Irrit.. 2 (H319) Eye Irrit.. 2A (H336) STOT SE 3 (H340) Muta. 1 (H350) Carc. 1B

Important This section covers the materials of which the products manufactured. The fumes and gases produced during normal use of this product are covered in section 10. The term "Hazardous" in "Hazardous Material" should be interpreted as a term required and defined in OSHA Hazard Communication Standard 29CFR 1910-1200 and it does not necessarily imply the existence of hazard. The chemicals or compounds reportable by Section 313 of SARA are marked by the symbol #.

4. FIRST AID MEASURES:

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Inhalation: Remove to fresh air immediately or administer oxygen. Get medical attention immediately.
Skin: Flush skin with large amounts of water and soap. If irritation develops and persists, get medical attention.
Eye: Flush eyes with water for at least 15 minutes. Get medical attention.
Ingestion: Obtain medical attention immediately if ingested. Rinse mouth.

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5. FIRE-FIGHTING MEASURES:

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Welding arcs and sparks can ignite combustible and flammable materials. Use the extinguishing media recommended for the burning material and fire situation.
Unsuitable Extinguishing Media: Not applicable
Specific Hazards Arising From Chemical: Arcs and sparks can ignite combustibles and flammable products. 29 CFR 1910.120 (Non Flammable Solid) Boric oxide fumes Copper oxides, Carbon oxides, Zinc/zinc oxides, Borane/boron oxides, Silver/silver oxides, Tin/tin oxides
Protective Equipment: Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

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6. ACCIDENTAL RELEASE MEASURES:

Personal Precautions: Refer to section 8.
Environment Precautions: Refer to section 13.
Cleaning Measures: Collect mechanically. Solid objects may be picked up and placed into a container. Liquids or paste should be scooped up and placed into a container. Wear proper protective equipment while handling these materials. Do not discard as refuse.

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7. HANDLING AND STORAGE:

Precautions for Safe Handling: Handle with care to avoid stings or cuts. Wear gloves when handling welding consumables. Avoid exposure to dust. Do not ingest. Some individuals can develop an allergic reaction to certain materials. Retain all warning and identity labels.
Conditions for Safe Storage: Store in dry place in closed packages. Keep separate from chemical substances like acids and strong bases, which could cause chemical reactions.

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8. EXPOSURE CONTROLS/ PERSONAL PROTECTION:

Engineering Controls: The usual precautionary measures for handling chemicals should be followed. Keep away from food, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before break and at the end of the work. Store all protective clothing separately. Maintain an ergonomically appropriate working environment. Wear protective equipment. Keep unprotected persons away. Avoid causing dust.
Exposure limits: Use industrial hygiene equipment to ensure that exposure does not exceed applicable national exposure limits. The limits defined under section 3 can be used as guidance. Unless noted, all values are for 8 hour time weighted average.
Biological limits: No available data
Personal protection:
Respiratory protection: Use an air purifying dust respirator when welding or brazing in a confined space, or when local exhaust or ventilation is not sufficient to keep exposure values within safe limits.
Hands protection: Wear appropriate gloves to prevent skin contact.

EN 12477: Protection gloves for welders

Requirements (EN Levels)	Type A	Type B
Abrasion (Cycles)	2 (500)	1 (100)
Cut (Factor)	1 (1.2)	1 (1.2)

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Tear (Newton)	**2 (25)**	**1 (10)**
Puncture (Newton)	**2 (60)**	**1 (20)**
Burning Behaviour	**3**	**2**
Contact Heat	**1**	**1**
Convective Heat	**2**	**-**
Small Splashes	**3**	**2**
Dexterity	**1 (11)**	**4 (6.5)**

Type B gloves are recommended when high dexterity is required as for TIG welding, while type A gloves are recommended for other welding processes. The contact temp (ºC) is 100 and the threshold time (seconds) >15.

Eyes protection: Welder's helmet or face shield with colour absorbing lenses. Shield and filter to provide protection from harmful UV radiation, infra red and molten metal approved to standard EN379. Filter shade to be a minimum of shade 9.

Skin protection: Heat-resistant protective clothing. Wear safety boots, apron, arm and shoulder protection. Keep protective clothing clean and dry. Clothing should be selected to suit the level, duration and purpose of the welding activity.

Class 1	
Impact of Spatter	**15 Drops**
Heat Transfer (radiation)	**RHTI 24 ≥ 7 seconds**
Process	**Manual welding with light formation of spatter and drops** • **Gas Welding** • **TIG Welding** • **MIG Welding** • **Micro plasma welding** • **Brazing** • **Spot Welding** • **MMA Welding (with rutile-covered electrode)**
Environmental Conditions	**Operation of machines** • **Oxygen cutting machines** • **Plasma cutting machines** • **Resistance welding machines** • **Machines for thermal spraying** • **Bench welding**

Class 2	
Impact of Spatter	**25 Drops**
Heat Transfer (radiation)	**RHTI 24 ≥ 16 seconds**
Process	**Manual welding with heavy formation of spatter and drops** • **MMA welding (with basic or cellulose-covered electrodes)** • **MAG welding (with CO2 or mixed gases)** • **MIG Welding (with high current)** • **Self shielded flux core arc welding** • **Plasma cutting** • **Gouging** • **Oxygen cutting** • **Thermal spraying**
Environmental Conditions	**Operation of machines** • **In confined spaces** • **At overhead welding/cutting or in comparable constrained positions**

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9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance: Solid
Color: 3130-Yellow 3137- orange 3138-White 3140- Blue 3141-White 3144-Lt. Blue 3146-White 3147- orange 3155-pink 3156-Lt. Green 3157- orange
Odour: Odourless
Odour Threshold: Not Available
pH Value: Not Available
Specific Gravity: Not Available
Melting Point/Melting Range: 1560-2000° F, 850-1100° C
Freezing Point: Not Available
Boiling Point/Boiling Range: Not Available
Flash point: Not Available
Evaporation Rate: Not Available
Self-in flammability: Not Available
Explosion limits: Not Available
Vapour pressure: Not Available
Vapour density: Not Available
Density at 20ºC: Not Available
Relative density: 6-9 g/cm3
Solubility: Insoluble in water.
Partition coefficient: Not Available
Auto-ignition temperature: Not Available
Decomposition temperature: Not Available
Other Information: No available data.

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10. STABILITY AND REACTIVITY:

Chemical Stability: This product is stable under normal conditions. This product loses H2O when heated.
Hazardous Reactions: Contact with chemical substances like acids or strong bases cause generation of gas.
Conditions to Avoid: Not applicable.
Incompatible Materials: Oxidizing agents. Reaction with strong reducing agents such as metal hydrides, acetic anhydride or alkali metals will generate hydrogen gas which could create an explosive hazard.
Hazardous Decomposition Products: Boric oxide fumes.

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11. TOXICOLOGICAL INFORMATION:

Acute Effects: Overexposure to brazing and soldering fumes may result in symptoms like metal fume fever, dizziness, nausea, dryness or irritation of the nose, throat or eyes. Tin: May cause skin irritation. May cause eye irritation due to mechanical action. Inhalation of tin dust may cause respiratory tract and mucous membrane tract irritation due to mechanical action. It is poorly absorbed from the digestive tract. It can cause gastrointestinal tract disturbance which may be irritant or astringent on the stomach. Silver may cause argyria (a slate-grey or bluish discoloration of the skin and deep tissues due to the deposit of insoluble albuminate of silver). Symptoms of systematic copper poisoning may include: capillary damage, headache, cold sweat, weak pulse, kidney and liver damage, central nervous system excitation followed by depression, jaundice, convulsions, paralysis and coma. Signs and symptoms of zinc exposure are central nervous system depression, cough, chest pain and difficulty breathing. Exposure to high airborne concentrations can cause anaesthetic effects. Toxicity reported for borates in humans: ingestion or absorption may cause nausea, vomiting, diarrhea, abdominal cramps, anderythematous lesions on the skin and mucous membranes. Other symptoms include: circulatory collapse, tachycardia, cyanosis, delirium, convulsions and coma. Death has been reported to occur in infants from less than 5 grams and in adults from 5 to 20 grams.

LD/LC50 Values that are relevant for classification		
Silver 7440-22-4		
Oral	LD50	>5000 mg/kg (rat)

LD/LC50 Values that are relevant for classification		
Copper 7440-50-8		
Oral	LD50	>2000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rat)
Inhalation	LC50	>5.11 mg/L/4 hr (rat)
Intraperitoneal	LD50	3.5 mg/kg (mouse)

LD/LC50 Values that are relevant for classification		
Zinc 7440-66-6		
Oral	LD50	630 mg/kg (rat)

LD/LC50 Values that are relevant for classification		
Potassium Carbonate 584-08-7		
Oral	LD50	1870 mg/kg (rat)
	LC50	<510 mg/l (96h) (fathead minnow)

LD/LC50 Values that are relevant for classification		
Boric Acid 10043-35-3		
Oral	LD50	2660 mg/kg (rat)
	LC50	53.2 mg/l (21d) (water flea)

LD/LC50 Values that are relevant for classification		
Naphtha 64742-49-0		
Oral	LD50	>5000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rabbit)
	LC50	8.2 mg/l (96h) (rainbow trout)

Chronic Effects: Overexposure to brazing and soldering fumes may affect pulmonary function. Chronic copper poisoning is typified by hepatic cirrhosis, brain damage and demyelination, kidney defect and copper deposition in the cornea as exemplified by humans with Wilson's disease. It has also been reported that copper poisoning has led to haemolytic anemia and accelerates arteriosclerosis, damage to the lungs, vomiting, diarrhoea, abdominal pain and blood disorders. Excessive inhalation of zinc oxide fumes may produce symptoms known as "Zinc Shakes" which are flu-like and usually cease when the individual is removed from the source. Prolonged or repeated exposure can cause vomiting, diarrhoea, lung irritation.

12. ECOLOGICAL INFORMATION:

Toxicity: Welding rods contain metals which are considered to be very toxic towards aquatic organisms. Finely divided welding rods are therefore considered harmful to aquatic organisms.

Persistence and Degradability: The welding rods consist of elements that cannot degrade any further in the environment.

Bio accumulative Potential: Welding rods contain heavy metals which bio accumulates in the food chain. The following figures are the bio concentration factor (BCF) for the substances on their own.

BCF:

Copper, BCF: 29

Mobility in Soil: Welding rods are not soluble in water or soil. Particles formed by working welding rods can be transported in the air.

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Other Adverse Effects: In massive form, welding rods present no hazards to the aquatic environment.
Welding materials could degrade into components originating from the materials used in the welding process. Avoid exposure to conditions that could lead to accumulation in soils or groundwater. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS:

Product: For product elimination, dispose of in accordance with EPA regulations.
Package: May be disposed in approved landfills provided local regulations are observed.

14. TRANSPORT INFORMATION:

UN-number: Welding rods are not classified as dangerous goods for transport and has no UN number.
UN proper shipping name: Welding rods are not classified as dangerous goods for transport and has no UN proper shipping name.
Transport hazard class: Welding rods are not classified as dangerous goods for transport.
Packing group: There are not any special precautions with which a user should or must comply or be aware of in connection with transport or conveyance either within or outside premises.
Environmental hazards: Welding rods are not environmentally hazardous according to the criteria of the UN Model Regulations (as reflected in the IMDG Code, ADR, RID and AND) and/or a marine pollutant to the IMDG Code.
Special precautions for users: There are not any special precautions which a user should or must comply or be aware of in connection with transport or conveyance either within or outside premises of the welding rod.
Transport in Bulk According to Annex III MARPOL 73/78 and the IBC Code: Welding rods in massive form do not subject under MARPOL 73/78 and the IBC Code. Not applicable – product is transported only in packaged form.

15. REGULATORY INFORMATION:

Safety, health and environment regulations/legislation specific for the substance or mixture: Read and understand the manufacturer's instructions, your employer's safety practices and the health and safety instructions on the label. Observe any federal and local regulations. Take precautions when welding and protect yourself and others.
Warning: Welding fumes and gases are hazardous to your health and may damage lungs and other organs. Use adequate ventilation. Electric shock can kill. Arc rays and sparks can injure eyes and burn skin. Wear correct hand, head, eye and body protection.
Chemical safety assessment: No
USA: Under the OSHA Hazard Communication Standard, this product is considered hazardous.
CALIFORNIA PROPOSITION 65: Sodium Tetraborate Pentahydrate is not listed on any Proposition 65 lists of carcinogens or reproductive toxicants.
CALIFORNIA PROPOSITION 65: No compounds present. (California Health & Safety Code § 25249.5 et seq.)
United States EPA Toxic Substance Control Act: All constituents of this product are on the TSCA inventory list or are excluded from listing.
EPCRA/SARA Title III Toxic Chemicals
The following metallic components are listed as SARA 313 "Toxic Chemicals" and potential subject to annual SARA reporting. See Section 3 for weight percentage.

Ingredient Name	Disclosure Threshold
Silver	.01 mg/m3
Copper	1.0 mg/m3
Zinc	5.0 mg/m3

16. OTHER INFORMATION:

The information in this document is believed to be correct as of the date issued. However, no warranty is expressed to be implied regarding the accuracy or completeness of this information. This information and product are furnished on the condition that the person receiving them shall make his own determinations as to the suitability of the product for his particular purpose and on the condition that he assumes the risk of his use thereof.

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This Material Safety Data Sheet complies with the EC directives 91/155/EEC and 93/112/EEC, including modifications 2001/58/EC.

Complies with OSHA Communication Standard 29 CFR 1910.1200 and Superfund Amendments and Reauthorization Act (SARA) of 1986 Public Law 99-499

Hazard Statements:
H225 – Highly flammable liquid and vapor
H228 – Flammable solid
H302 – Harmful if swallowed.
H304 – May be fatal if swallowed and enters airways.
H314 – Causes severe skin burns and eye damage.
H315 – Causes skin irritation.
H319 – Causes serious eye irritation.
H335 – May cause respiratory irritation.
H336 – May cause drowsiness or dizziness.
H340 – May cause genetic defects.
H350 – May cause cancer.
H360– May damage fertility or the unborn child.
H400 – Very toxic to aquatic life
H410 – Very toxic to aquatic life with long lasting effects
R-Phrases:
R11 – Highly flammable
R22 – Harmful if swallowed.
R34 – Causes burns.
R36/38 – Irritating to eyes and skin**.**
R36/37/38 – Irritating to eyes, respiratory system and skin.
R45 – May cause cancer
R46 – May cause inheritable genetic damage
R49 – May cause cancer by inhalation
R50 – Very toxic to aquatic organisms
R50/53 – Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R60 – May impair fertility**.**
R61 – May cause harm to the unborn child**.**
R65 – Harmful: may cause lung damage if swallowed**.**
S-Phrases:
S16 – Keep away from source of ignition – No smoking.
S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39 – Wear suitable protective clothing, gloves and eye/face protection.
S45 – In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S51 – Toxic to aquatic organisms
S53 – Avoid exposure – obtain special instructions before use.
S61 – Avoid release to the environment.

End of the document.