

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture

Product Name: Cored Welding Wire Type 2

Intended Use of the Product

Use of the Substance/Mixture: Welding wire. For professional use only.

Name, Address, and Telephone of the Responsible Party

Customer

National Standard
3602 N. Perkins Road
Stillwater, OK 74075
405-377-5050

Emergency Telephone Number

Emergency number : 269-683-8100 Mon - Fri 8 AM – 5PM CST (excluding holidays)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Not classified

Label Elements

GHS-US Labeling

Not applicable

Other Hazards

Other Hazards Not Contributing to the Classification: This product is physiologically inert in its massive form. However, user-generated dust and/or fumes may pose a physiological hazard if inhaled or ingested. Avoid inhalation of metal dusts and fumes. May cause an influenza-like illness. Avoid skin and eye contact with dusts to prevent mechanical irritation. User-generated dust is easily ignited and difficult to extinguish.

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Mixture

Name	Product identifier	% (w/w)	Classification (GHS-US)
Iron	(CAS No) 7439-89-6	93 - 98	Flam. Sol. 1, H228 Self-heat. 1, H251
Silicon	(CAS No) 7440-21-3	0.8 - 1.1	Comb. Dust

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: If medical advice is needed, have product container or label at hand.

Inhalation: If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

Skin Contact: Cool skin rapidly with cold water after contact with molten product. Removal of solidified molten material from skin requires medical assistance.

Eye Contact: Immediately rinse with water for a prolonged period (at least 15 minutes) while holding the eyelids wide open. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists. Removal of solidified molten material from the eyes requires medical assistance.

Ingestion: If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

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Most Important Symptoms and Effects Both Acute and Delayed

General: None expected under normal conditions of use. Under normal conditions of use not expected to present a significant hazard. During processing or physical alteration, flakes or powder cause irritation of the respiratory tract, eyes, skin, and are harmful. Molten material may release toxic, and irritating fumes.

Inhalation: During welding, the most significant route of exposure is by the inhalation (breathing) of welding fumes. If welding fumes are inhaled, they can cause a condition commonly known as metal fume fever with symptoms which resemble influenza. Symptoms may be delayed 4-12 hours and begin with a sudden onset of thirst, and a sweet, metallic or foul taste in the mouth. Other symptoms may include upper respiratory tract irritation accompanied by coughing and a dryness of the mucous membranes, lassitude and a generalized feeling of malaise. Fever, chills, muscular pain, mild to severe headache, nausea, occasional vomiting, exaggerated mental activity, profuse sweating, excessive urination, diarrhea and prostration may also occur.

Skin Contact: Contact with hot, molten metal will cause thermal burns. Arc rays and sparks can burn skin. Mechanical damage via flying particles and chipped slag is possible.

Eye Contact: Risk of thermal burns on contact with molten product. Arc rays and sparks can burn eyes. Mechanical damage via flying particles and chipped slag is possible.

Ingestion: Ingestion is not considered a potential route of exposure.

Chronic Symptoms: This product is intended for use in ARC welding. During this process UV rays irritate the superficial corneal epithelium, causing inhibition of mitosis, production of nuclear fragmentation, and loosening of the epithelial layer. Under experimental conditions in animals, phototoxic effects have been demonstrated at all levels of the cornea, including the stroma and endothelium.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use water when molten material is involved, may react violently or explosively on contact with water.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable.

Explosion Hazard: Product is not explosive.

Reactivity: Stable at ambient temperature and under normal conditions of use.

Advice for Firefighters

Precautionary Measures Fire: Not available

Firefighting Instructions: Do not breathe fumes from fires or vapours from decomposition. Keep upwind.

Protection During Firefighting: Firefighters must use full bunker gear including NIOSH-approved positive-pressure self-contained breathing apparatus to protect against potential hazardous combustion and decomposition products.

Hazardous Combustion Products: Not available

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures Not available

For Non-Emergency Personnel

Protective Equipment: Wear suitable protective clothing, gloves and eye/face protection.

Emergency Procedures: Avoid creating or spreading dust. Eliminate ignition sources.

For Emergency Personnel

Protective Equipment: Wear suitable protective clothing, gloves and eye/face protection.

Emergency Procedures: Ventilate area. Eliminate ignition sources. Evacuate unnecessary personnel.

Environmental Precautions

Do not allow to enter drains or water courses.

Methods and Material for Containment and Cleaning Up

For Containment: Contain and collect as any solid.

Methods for Cleaning Up: Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.

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Reference to Other Sections

For further information refer to section 8 "Exposure controls/personal protection".

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When Processed: Do not handle until all safety precautions have been read and understood.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Always wash your hands immediately after handling this product, and once again before leaving the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke in areas where product is used. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Store in original container. Store in a dry, cool place. Store in a well-ventilated place. Keep container tightly closed. Keep away from heat and flame. Protect from moisture.

Storage Area: Store away from heat.

Special Rules on Packaging: Keep container closed when not in use.

Specific End Use(s)

Welding wire.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Manganese (7439-96-5)		
Mexico	OEL TWA (mg/m ³)	1 mg/m ³
Mexico	OEL STEL (mg/m ³)	3 mg/m ³
USA ACGIH	ACGIH TWA (mg/m ³)	0.1 mg/m ³
USA OSHA	OSHA PEL (Ceiling) (mg/m ³)	5 mg/m ³
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1 mg/m ³
USA NIOSH	NIOSH REL (STEL) (mg/m ³)	3 mg/m ³
USA IDLH	US IDLH (mg/m ³)	500 mg/m ³
Alberta	OEL TWA (mg/m ³)	0.2 mg/m ³
British Columbia	OEL TWA (mg/m ³)	0.2 mg/m ³
Manitoba	OEL TWA (mg/m ³)	0.1 mg/m ³
New Brunswick	OEL TWA (mg/m ³)	0.2 mg/m ³
Newfoundland & Labrador	OEL TWA (mg/m ³)	0.1 mg/m ³
Nova Scotia	OEL TWA (mg/m ³)	0.1 mg/m ³
Nunavut	OEL Ceiling (mg/m ³)	5 mg/m ³
Nunavut	OEL STEL (mg/m ³)	3 mg/m ³
Nunavut	OEL TWA (mg/m ³)	1 mg/m ³
Northwest Territories	OEL Ceiling (mg/m ³)	5 mg/m ³
Northwest Territories	OEL STEL (mg/m ³)	3 mg/m ³
Northwest Territories	OEL TWA (mg/m ³)	1 mg/m ³
Ontario	OEL TWA (mg/m ³)	0.2 mg/m ³
Prince Edward Island	OEL TWA (mg/m ³)	0.1 mg/m ³
Québec	VEMP (mg/m ³)	0.2 mg/m ³
Saskatchewan	OEL STEL (mg/m ³)	0.6 mg/m ³
Saskatchewan	OEL TWA (mg/m ³)	0.2 mg/m ³
Yukon	OEL Ceiling (mg/m ³)	5 mg/m ³
Silicon (7440-21-3)		
Mexico	OEL TWA (mg/m ³)	10 mg/m ³
Mexico	OEL STEL (mg/m ³)	20 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	5 mg/m ³
British Columbia	OEL TWA (mg/m ³)	3 mg/m ³
New Brunswick	OEL TWA (mg/m ³)	10 mg/m ³

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Nunavut	OEL TWA (mg/m ³)	10 mg/m ³ (total mass)
Northwest Territories	OEL TWA (mg/m ³)	10 mg/m ³ (total mass)
Ontario	OEL TWA (mg/m ³)	10 mg/m ³
Québec	VEMP (mg/m ³)	10 mg/m ³ (containing no Asbestos and <1% Crystalline silica)
Saskatchewan	OEL STEL (mg/m ³)	20 mg/m ³
Saskatchewan	OEL TWA (mg/m ³)	10 mg/m ³
Yukon	OEL STEL (mg/m ³)	20 mg/m ³
Yukon	OEL TWA (mg/m ³)	10 mg/m ³

Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment: Safety glasses. Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing: Not available

Hand Protection: If material is hot, wear thermally resistant protective gloves.

Eye Protection: Welders should wear goggles or safety glasses with sideshields that comply with ANSI Z87.1 under welding helmets and always wear goggles or other suitable eye protection when gas welding or oxygen cutting.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	: Solid
Appearance	: Wire
Odor	: Odorless
Odor Threshold	: Not available
pH	: Not available
Relative Evaporation Rate (butylacetate=1)	: Not available
Melting Point	: > 1500 °C (> 2700 °F)
Freezing Point	: Not available
Boiling Point	: Not available
Flash Point	: Not available
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: Negligible
Relative Vapor Density at 20 °C	: Not available
Relative Density	: Not available
Density	: > 7 g/cc
Specific Gravity	: Not available
Solubility	: Water: Insoluble
Partition coefficient: n-octanol/water	: Not available
Viscosity	: Not available
Explosive properties	: Dust explosion hazard in air

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Explosion Data – Sensitivity to Mechanical Impact : Not expected to present an explosion hazard due to mechanical impact.

Explosion Data – Sensitivity to Static Discharge : Not expected to present an explosion hazard due to static discharge.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Stable at ambient temperature and under normal conditions of use.

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Protect from moisture.

Incompatible Materials: Incompatible with: strong acids.

Hazardous Decomposition Products: Under conditions of fire this material may produce: Metal oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not classified

LD50 and LC50 Data:

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ATE (oral)	500.000 mg/kg

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not available

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: During welding, the most significant route of exposure is by the inhalation (breathing) of welding fumes. If welding fumes are inhaled, they can cause a condition commonly known as metal fume fever with symptoms which resemble influenza. Symptoms may be delayed 4-12 hours and begin with a sudden onset of thirst, and a sweet, metallic or foul taste in the mouth. Other symptoms may include upper respiratory tract irritation accompanied by coughing and a dryness of the mucous membranes, lassitude and a generalized feeling of malaise. Fever, chills, muscular pain, mild to severe headache, nausea, occasional vomiting, exaggerated mental activity, profuse sweating, excessive urination, diarrhea and prostration may also occur.

Symptoms/Injuries After Skin Contact: Contact with hot, molten metal will cause thermal burns. Arc rays and sparks can burn skin. Mechanical damage via flying particles and chipped slag is possible.

Symptoms/Injuries After Eye Contact: Risk of thermal burns on contact with molten product. Arc rays and sparks can burn eyes. Mechanical damage via flying particles and chipped slag is possible.

Symptoms/Injuries After Ingestion: Ingestion is not considered a potential route of exposure.

Chronic Symptoms: This product is intended for use in ARC welding. During this process UV rays irritate the superficial corneal epithelium, causing inhibition of mitosis, production of nuclear fragmentation, and loosening of the epithelial layer. Under experimental conditions in animals, phototoxic effects have been demonstrated at all levels of the cornea, including the stroma and endothelium.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data: Not available

SECTION 12: ECOLOGICAL INFORMATION

Toxicity Not classified

Persistence and Degradability Not available

Bioaccumulative Potential Not available

Mobility in Soil Not available

Other Adverse Effects Not available

SECTION 13: DISPOSAL CONSIDERATIONS

Sewage Disposal Recommendations: Do not dispose of waste into sewer.

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Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

Additional Information: Recycle where possible and/or dispose of spent material such as metals & metal-bearing waste and submerged arc welding (SAW) flux/slag appropriately.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT Not regulated for transport

14.2 In Accordance with IMDG Not regulated for transport

14.3 In Accordance with IATA Not regulated for transport

14.4 In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Iron (7439-89-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Silicon (7440-21-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State Regulations

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U.S. - California - Proposition 65 - Carcinogens List

WARNING: This product contains chemicals known to the State of California to cause cancer.

State or local regulations

WARNING! This product contains one or more substances known to the State of California to cause:
Cancer

Iron (7439-89-6)

U.S. - Colorado - Primary Drinking Water Regulations - Secondary Maximum Contaminant Levels (SMCLs)

U.S. - Florida - Drinking Water Standards - Secondary Maximum Contaminant Levels (SMCLs)

U.S. - Georgia - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)

U.S. - Massachusetts - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)

U.S. - Missouri - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)

U.S. - Nevada - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)

U.S. - New Hampshire - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)

U.S. - New Jersey - Secondary Drinking Water Standards - Recommended Upper Limits (RULs)

U.S. - New Jersey - Water Quality - Ground Water Quality Criteria

U.S. - New Jersey - Water Quality - Practical Quantitation Levels (PQLs)

U.S. - New Mexico - Water Quality - Standards for Ground Water of 10,000 mg/L TDS Concentration or Less

U.S. - Pennsylvania - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)

U.S. - Rhode Island - Water Quality Standards - Chronic Freshwater Aquatic Life Criteria

U.S. - Rhode Island - Water Quality Standards - Human Health Criteria for Consumption of Water and Aquatic Organisms

U.S. - South Carolina - Secondary Maximum Contaminant Levels (SMCLs)

U.S. - Texas - Drinking Water Standards - Secondary Constituent Levels (SCLs)

U.S. - Texas - Effects Screening Levels - Long Term

U.S. - Texas - Effects Screening Levels - Short Term

U.S. - Utah - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)

U.S. - Virginia - Water Quality Standards - Public Water Supply Effluent Limits

U.S. - Alaska - Water Quality Standards - Chronic Aquatic Life Criteria for Fresh Water

Silicon (7440-21-3)

U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations

U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)

U.S. - Idaho - Occupational Exposure Limits - TWAs

RTK - U.S. - Massachusetts - Right To Know List

U.S. - Michigan - Occupational Exposure Limits - TWAs

U.S. - Minnesota - Hazardous Substance List

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U.S. - Minnesota - Permissible Exposure Limits - TWAs
 RTK - U.S. - New Jersey - Right to Know Hazardous Substance List
 U.S. - New Jersey - Special Health Hazards Substances List
 U.S. - Oregon - Permissible Exposure Limits - TWAs
 RTK - U.S. - Pennsylvania - RTK (Right to Know) List
 U.S. - Tennessee - Occupational Exposure Limits - TWAs
 U.S. - Texas - Effects Screening Levels - Long Term
 U.S. - Texas - Effects Screening Levels - Short Term
 U.S. - Vermont - Permissible Exposure Limits - TWAs
 U.S. - Washington - Permissible Exposure Limits - STELs
 U.S. - Washington - Permissible Exposure Limits - TWAs

Canadian Regulations

Cored Welding Wire Type 2

WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
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Iron (7439-89-6)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Class B Division 4 - Flammable Solid
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Silicon (7440-21-3)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Class B Division 4 - Flammable Solid
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This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision date : 05/15/2014

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Comb. Dust	Combustible Dust
Flam. Sol. 1	Flammable solids Category 1
Self-heat. 1	Self-heating substances and mixtures Category 1
H228	Flammable solid
	May form combustible dust concentrations in air
H251	Self-heating: may catch fire

Party Responsible for the Preparation of This Document

National Standard T 405-377-5050

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

North America GHS US 2012 & WHMIS 2