

SAFETY DATA SHEET

Issuing Date 14-June-2023

Revision Date 3-Oct-23

Revision Number 2
NGHS / English



1. IDENTIFICATION

Product identifier

Product Name Ceramic Welding Material

Other means of identification

Product Code(s) HWC-FC-1

Recommended use of the chemical and restrictions on use

Recommended Use Professional Use Only

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier Identification Fuse Tech Inc.

Address 546 N. Main St.
Cadiz, OH 43907

Telephone Phone 740-942-3565 (M-F , 8AM - 4PM, EST)

Company Emergency Phone Number (800) 301-3873

2. HAZARDS IDENTIFICATION

Classification

Serious eye damage/eye irritation	Category 2B
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 1

Appearance Gray-Tan

Physical state Solid

Odor Odorless

GHS Label elements, including precautionary statements

Danger

Hazard statements

2. HAZARDS IDENTIFICATION-CONTINUED

Causes eye irritation
 Suspected of causing cancer
 May cause respiratory irritation
 Causes damage to organs through prolonged or repeated exposure



Precautionary Statements - Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Wear protective gloves/protective clothing/eye protection/face protection
 Wash face, hands and any exposed skin thoroughly after handling
 Do not breathe dust/fume/gas/mist/vapors/spray
 Do not eat, drink or smoke when using this product
 Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing

Precautionary Statements - Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other information

Unknown acute toxicity 0 % of the mixture consists of ingredient(s) of unknown toxicity
 0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
 0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Aluminum Oxide	1344-28-1	75-85
Silicon	7440-21-3	10-20
Titanium Dioxide	13463-67-7	<5
Aluminum	7429-90-5	<5

4. FIRST AID MEASURES

Description of first aid measures

General advice	IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air. IF exposed or concerned: Get medical advice/attention.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Get medical attention if irritation develops and persists. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin contact	Wash skin with soap and water.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms	No information available.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	No information available.
Hazardous Combustion Products	Product is non-combustible.
Explosion Data	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas.
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6. ACCIDENTAL RELEASE MEASURES-CONTINUED

Other Information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Avoid breathing vapors or mists. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Aluminum Oxide 1344-28-1	TWA: 1 mg/m ³ respirable particulate matter	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	
Silicon 7440-21-3	-	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Titanium Dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³
Aluminum 7429-90-5	TWA: 1 mg/m ³ respirable particulate matter	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust

8. EXPOSURE CONTROLS/PERSONAL PROTECTION-CONTINUED

Chemical name	Alberta	British Columbia	Ontario TWAEV	Quebec
Aluminum Oxide 1344-28-1	TWA: 10 mg/m ³	TWA: 1.0 mg/m ³	TWA: 1 mg/m ³	TWA: 10 mg/m ³
Silicon 7440-21-3		TWA: 10 mg/m ³ TWA: 3 mg/m ³		TWA: 10 mg/m ³
Titanium Dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 10 mg/m ³ TWA: 3 mg/m ³	TWA: 10 mg/m ³	TWA: 10 mg/m ³
Aluminum 7429-90-5	TWA: 10 mg/m ³	TWA: 1.0 mg/m ³	TWA: 1 mg/m ³	TWA: 10 mg/m ³

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir. 1992).

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Safety glasses or goggles when there is a reasonable probability of projectiles or high airborne particulate concentration.

Hand protection Suitable for protection against direct skin contact with fine particles.

Skin and body protection Adequate footwear (safety shoes if necessary) and clothing that protects skin from prolonged or repeated contact with dust. Change clothing if there is a reasonable probability of excessive dust contamination.

Respiratory protection When engineering or administrative controls cannot maintain exposures below OSHA permissible limits, use an appropriate NIOSH approved respirator. If respiratory protection is required, all requirements as set forth in 29 CFR 1910.134 must be met. A Certified Industrial Hygienist or other competent health and safety professional should be consulted for respirator selection, fit testing, and training.

General hygiene considerations If airborne dust is generated, provide general dilution ventilation and/or local exhaust ventilation sufficient to maintain personal exposures below OSHA permissible exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Solid
Appearance Granular Powder
Odor Odorless
Color Gray-Tan
Odor Threshold Not applicable

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH	No data available	None known	
Melting / freezing point	No data available	None known	
Boiling point / boiling range	No data available	None known	
Flash Point	No data available	None known	
Evaporation Rate	No data available	None known	
Flammability (solid, gas)	No data available		

9. PHYSICAL AND CHEMICAL PROPERTIES-CONTINUED

Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	7-9	None known
Water Solubility	Insoluble in water	
Solubility(ies)	No data available	None known
Partition coefficient: n-octanol/water	N/A	
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other Information

Explosive properties	No information available
Oxidizing properties	No information available
Softening Point	No information available
Molecular Weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk Density	No information available
Particle Size	No information available
Particle Size Distribution	No information available

10. STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous Polymerization	Hazardous polymerization does not occur.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous Decomposition Products	Carbon oxides. Product will not decompose spontaneously. Thermal decomposition is unlikely, but may occur at temperatures above 3000°C (5000°F).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.
Eye contact	Specific test data for the substance or mixture is not available. Causes eye irritation. (Based on components). May cause redness, itching, and pain.
Skin contact	Specific test data for the substance or mixture is not available.

11. TOXICOLOGICAL INFORMATION-CONTINUED

Ingestion Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms May cause redness and tearing of the eyes.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 15,800.00 mg/kg
ATEmix (inhalation-dust/mist) 149.71 mg/L

Unknown acute toxicity 0 % of the mixture consists of ingredient(s) of unknown toxicity
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 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Aluminum Oxide	> 5000 mg/kg (Rat)	-	-
Silicon	= 3160 mg/kg (Rat)	-	-
Titanium Dioxide	> 10000 mg/kg (Rat)	-	= 5.09 mg/L (Rat) 4 h
Aluminum	-	-	> 0.888 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation May cause skin irritation.

Serious eye damage/eye irritation Classification based on data available for ingredients. Irritating to eyes.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

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

Chemical name	ACGIH	IARC	NTP	OSHA
Titanium Dioxide 13463-67-7	A3	Group 2B	-	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.

STOT - single exposure May cause respiratory irritation.

11. TOXICOLOGICAL INFORMATION-CONTINUED

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity The environmental impact of this product has not been fully investigated.

Persistence and Degradability No information available.

Bioaccumulation No information available.

Mobility No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste
Aluminum 7429-90-5	Ignitable powder

14. TRANSPORT INFORMATION

DOT
Proper Shipping Name NOT REGULATED
Hazard Class NON-REGULATED
 N/A

TDG Not applicable

MEX Not applicable

ICAO Not applicable

IATA
Proper Shipping Name Not applicable
Hazard Class NON REGULATED
 N/A

IMDG/IMO
Hazard Class Not applicable
 N/A

RID Not applicable

ADR Not applicable

ADN Not applicable

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

TSCA	All ingredients are on the inventory or exempt from listing.
DSL/NDSL	Not evaluated.
EINECS/ELINCS	Not evaluated.
ENCS	Not evaluated.
KECL	Not evaluated.
PICCS	Not evaluated.
AICS	Not evaluated.

Legend

- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US 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

Chemical name	CAS No	Weight-%	SARA 313 - Threshold Values %
Aluminum Oxide - 1344-28-1	1344-28-1	75-85	1.0
Aluminum - 7429-90-5	7429-90-5	<5	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition

15. REGULATORY INFORMATION-CONTINUED

This product contains the following Proposition 65 chemicals.

Chemical name	California Proposition 65
Titanium Dioxide - 13463-67-7	Carcinogen

U.S. State Right-to-Know Regulations

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Aluminum Oxide 1344-28-1	X	X	X	X	
Silicon 7440-21-3	X	X	X		
Titanium Dioxide 13463-67-7	X	X	X		
Aluminum 7429-90-5	X	X	X	X	

16. OTHER INFORMATION

NFPA	Health hazards 1	Flammability 0	Instability 0	Physical and Chemical Properties -
HMIS	Health hazards 1*	Flammability 0	Physical hazards 0	Personal Protection X
<i>Chronic Hazard Star Legend</i>	* = Chronic Health Hazard			

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Revision Note	No information available

Disclaimer

Details presented in this SDS were derived from literature sources and regulatory documents believed to be accurate and authoritative. The purpose of this SDS is to serve as a general guide to users of this product. It is the user's responsibility to determine acceptability of this product for their application, to ensure safe usage of this product, and to comply with all applicable federal, state and local regulations. The user must satisfy requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and any other applicable occupational health and environmental regulations. This SDS is not intended as a total regulatory compliance document, nor should it be construed as a license or a recommendation to violate any law or infringe on any patent.

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End of Safety Data Sheet