SAFETY DATA SHEET

1. Identification

Product identifier **ALUMINUM COATED STEEL PRODUCTS, Type 2, all grades "Aluminized Steel"**

Other means of identification

SDS number 6

Product code 21,29,47,50,51,61,71,87,88,110, 112,114,115,120,121,129,161, 151,159,164,167, etc.

Recommended use Industrial use.

Recommended restrictions None known.

Manufacturer / Importer / Supplier / Distributor information

Company name Contech Engineered Solutions, LLC

Address 9025 Centre Pointe Drive West Chester, Ohio 45069, United States

Contact person Dan Moody

Telephone number 513-645-7055

E-mail dmoody@conteches.com

Emergency telephone number 1-800-255-3924

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement None.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Wash hands after handling.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) Not classified.

Supplemental information

Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Iron	7439-89-6	70 - 99
Aluminum	7429-90-5	1 - 30

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation If dust from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist.

Skin contact Contact with dust: Wash off with soap and water. Get medical attention if irritation develops and persists. Cuts or abrasions should be treated promptly with thorough cleansing of the affected area.

Eye contact Dust in the eyes: Do not rub eyes. Rinse with water. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.

Ingestion	Not likely, due to the form of the product. Dust: Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Contact with dust: Irritation of eyes and mucous membranes. Irritation of nose and throat.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Special powder against metal fires. Dry sand. In case of aluminum fires, use a class D dry-powder extinguisher (Lith-X).
Unsuitable extinguishing media	Do not use halogenated extinguishing agents or foam.
Specific hazards arising from the chemical	Not a fire hazard unless in particle form. Suspensions of aluminum dust in air may pose a severe explosion hazard. A potential for explosion exists for a mixture of fine and coarse particles if at least 15% to 20% of the material is finer than 44 microns (325 mesh). Buffing and polishing generate finer material than grinding, sawing and cutting. Fire or high temperatures create: Metal oxides.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Avoid generation and spreading of dust. Ensure adequate ventilation. Avoid inhalation of dust and contact with skin and eyes. Wear protective clothing as described in Section 8 of this safety data sheet.
Methods and materials for containment and cleaning up	The product is immiscible with water and will sediment in water systems. Allow spilled material to solidify and scrape up with shovels into a suitable container for recycle or disposal. Collect dust or particulates using a vacuum cleaner with a HEPA filter.
Environmental precautions	Not relevant, due to the form of the product.

7. Handling and storage

Precautions for safe handling	Welding, burning, sawing, brazing, grinding or machining operations may generate fumes and dusts of metal oxides. Provide adequate ventilation. Avoid contact with sharp edges and hot surfaces. Avoid generation and spreading of dust. Avoid inhalation of dust and contact with skin and eyes. Avoid contact with molten material. Avoid inhalation of fumes from molten product. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store away from incompatible materials (See Section 10).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	PEL	5 mg/m3	Respirable dust.
		15 mg/m3	Total dust.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	1 mg/m3	Respirable fraction.

US NIOSH Pocket Guide to Chemical Hazards: Recommended exposure limit (REL)

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	5 mg/m3	Respirable.
		5 mg/m3	Welding fume or pyrophoric powder.
		10 mg/m3	Total

Biological limit values	No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls	Special ventilation should be used to convey finely divided metallic dust generated by grinding, sawing etc., in order to eliminate explosion hazards. Observe occupational exposure limits and minimize the risk of inhalation of dust.

Individual protection measures, such as personal protective equipment

Eye/face protection	If contact is likely, safety glasses with side shields are recommended. In addition to safety glasses or goggles, a welding helmet with appropriate shaded shield is required during welding, burning, or brazing. A face shield is recommended, in addition to safety glasses or goggles, during sawing, grinding, or machining. Eye wash fountain is recommended.
Skin protection	
Hand protection	Wear suitable protective gloves to prevent cuts and abrasions. When material is heated, wear gloves to protect against thermal burns. Suitable gloves can be recommended by the glove supplier.
Other	Wear suitable protective clothing.
Respiratory protection	Use an approved respirator designed for the hazard, where concentrations exceed exposure limits. The use of both primary and secondary protective equipment is necessary when handling molten metal. Refer to "Aluminum Association" guidelines. Use a NIOSH–approved respirator if there is a potential for exposure to dust exceeding exposure limits (See 29 CRF 1910.134, respiratory protection standard). Seek advice from local supervisor.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Solid.
Form	Pipe. Sheets. Strips.
Color	Metallic.
Odor	Odorless.
Odor threshold	Not applicable.
pH	Not applicable.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Fine particles may form explosive mixtures with air.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not applicable.
Flammability limit - upper (%)	Not applicable.
Explosive limit - lower (%)	Not applicable.
Explosive limit - upper (%)	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	8
Solubility(ies)	Insoluble in water.
Partition coefficient (n-octanol/water)	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not applicable.
Viscosity	Not applicable.

10. Stability and reactivity

Reactivity	The product is stable and non reactive under normal conditions of use, storage and transport.
Chemical stability	Massive metal is stable under normal conditions of use, storage and transport.

Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with acids. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Strong mineral acids.
Hazardous decomposition products	Welding, burning, sawing, brazing, grinding or machining operations may generate dusts and fumes of metal oxides.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Not relevant, due to the form of the product in its manufactured and shipped state.
Inhalation	Dust and fumes generated from the material can enter the body by inhalation. Dust may irritate respiratory system. Inhalation of powder or fumes may cause metal fume fever.
Skin contact	Under normal conditions of intended use, this material does not pose a risk to health. Dust may irritate skin.
Eye contact	Dust may irritate the eyes.
Symptoms related to the physical, chemical and toxicological characteristics	Dust: Irritation of eyes and mucous membranes. Irritation of nose and throat.

Information on toxicological effects

Acute toxicity Inhalation of powder or fumes may cause metal fume fever.

Components	Species	Test Results
Iron (CAS 7439-89-6)		
Acute		
Oral		
LD50	Rat	30 g/kg

Skin corrosion/irritation	May cause irritation through mechanical abrasion.
Serious eye damage/eye irritation	May cause irritation through mechanical abrasion.
Respiratory sensitization	Not classified.
Skin sensitization	Not a skin sensitizer.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
Specific target organ toxicity - single exposure	Based on available data, the classification criteria are not met.
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Not classified.
Chronic effects	Chronic inhalation of high concentrations of iron oxide fumes or dust may lead to benign pneumoconiosis (siderosis). May cause damage to the liver.
Further information	Heating above the melting point releases metallic oxides which may cause metal fume fever by inhalation. The symptoms are shivering, fever, malaise and muscular pain. Aluminum fumes generated during welding or melting present low health risks. Welding or plasma arc cutting of aluminum alloys can generate ozone, nitric oxides and ultraviolet radiation. Ozone overexposure may result in mucous membrane irritation or pulmonary discomfort.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Iron (CAS 7439-89-6)			
Aquatic			
Fish	LC50	Channel catfish (Ictalurus punctatus)	> 500 mg/l, 96 hours

Persistence and degradability	The product is not biodegradable.
Bioaccumulative potential	The product is not bioaccumulating.
Mobility in soil	No data available.
Mobility in general	No data available.
Other adverse effects	No data available.

13. Disposal considerations

Disposal instructions	Dispose of waste and residues in accordance with local authority requirements.
Hazardous waste code	Not regulated.
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	No special precautions.

14. Transport information

DOT

Not regulated as a hazardous material by DOT.

IATA

Not regulated as a dangerous good.

IMDG

Not regulated as a dangerous good.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
SARA 302 Extremely hazardous substance	No
SARA 311/312 Hazardous chemical	No

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)	Priority pollutant Toxic pollutant
Safe Drinking Water Act (SDWA)	Not regulated.
Food and Drug Administration (FDA)	Not regulated.

US state regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US. Massachusetts RTK - Substance List

Aluminum (CAS 7429-90-5)

US. New Jersey Worker and Community Right-to-Know Act

Aluminum (CAS 7429-90-5)	500 lbs

US. Pennsylvania RTK - Hazardous Substances

Aluminum (CAS 7429-90-5)

US. Rhode Island RTK

Aluminum (CAS 7429-90-5)

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

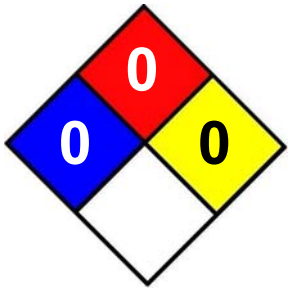
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Version # 01

Further information NFPA Ratings: Health: 0. Flammability: 0. Physical hazard: 0.
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

NFPA Ratings



List of abbreviations NFPA: National Fire Protection Association.

Disclaimer This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.