



Safety Data Sheet

8176 Aluminum Alloy Bare Wire

SECTION 1: Identification

1.1 Product identifier

Product name 8176 Aluminum Alloy Bare Wire

1.2 Other means of identification

Product code AA 8176, A98176

1.3 Recommended use of the chemical and restrictions on use

Industrial use.

1.4 Supplier's details

Name Rea Magnet Wire Company, Inc.
Address 3400 E Coliseum Blvd. Suite 200
Fort Wayne, IN 46805
USA

Phone 260-421-7358

1.5 Emergency phone number(s)

CHEMTREC 1-800-424-9300 (24 hour)

SECTION 2: Hazard identification

General hazard statement

The product is considered non-hazardous as delivered in its solid form.

2.1 Classification of the substance or mixture

GHS classification in accordance with: (US) OSHA (29 CFR 1910.1200)

Not a hazardous substance or mixture.

2.2 GHS label elements, including precautionary statements

None.

2.3 Other hazards which do not result in classification

Inhalation of metallic oxides fumes may cause metal fume fever, characterized by flu-like symptoms such as chills, fever, nausea, and vomiting. Aluminum dust is a flammable solid and releases flammable gases in contact with water. Airborne aluminum dusts in the presence of an ignition source may constitute an explosion hazard.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable.

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3.2 Mixtures

Components

Component	Concentration
Aluminum (CAS no.: 7429-90-5)	>98.5 % (weight)
Iron (CAS no.: 7439-89-6)	<1 % (weight)
Silicon (CAS no.: 7440-21-3)	<0.15 % (weight)
Zinc (CAS no.: 7440-66-6)	<0.1 % (weight)
Gallium (CAS no.: 7440-55-3)	<0.05 % (weight)

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	Rinse skin with water/shower. Call a poison center or doctor if irritation develops or persists. Wash contaminated clothing before reuse.
In case of eye contact	Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention/advice.
If swallowed	Rinse mouth. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Call a poison center or doctor.

4.2 Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2) and/or in section 11.

If inhaled	Inhalation of dust may cause respiratory irritation. Inhalation of metallic oxides fumes may cause metal fume fever, characterized by flu-like symptoms such as chills, fever, nausea, and vomiting.
In case of skin contact	Exposure to dust may cause skin irritation.
In case of eye contact	Direct exposure to dust may cause eye irritation.
If swallowed	May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically and supportively.

SECTION 5: Fire-fighting measures

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5.1 Suitable extinguishing media

Use extinguishing media appropriate for surrounding fire.

For molten metal: use a Class D fire extinguisher. Do not use fire extinguishers rated for Class A, B, or C fires. Do not use water or halogenated fire extinguishing agents.

5.2 Specific hazards arising from the chemical

Metal powder may form combustible dust concentrations in air. Molten metal may react violently with water.

Aluminum dust releases flammable gases in contact with water. Combustion products may contain metal oxides.

5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid actions that cause dust generation. Do not breathe dust and fumes. Ensure adequate ventilation. Airborne dusts in the presence of an ignition source may constitute an explosion hazard. Keep all ignition sources away.

Wear appropriate personal protective equipment as described in Section 8.

6.2 Environmental precautions

Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Do not use water for dust/powder spill clean-up. Keep in suitable, closed containers for disposal or recycling.

Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Do not handle until all safety precautions have been read and understood. Handle in accordance with good industrial hygiene and safety practices. Avoid dust or fume formation. Ensure adequate ventilation. Wash hands before breaks and immediately after handling the product. Avoid dust contact with skin, eyes and clothing. Avoid ingestion and inhalation. Avoid accumulation of dusts. Wear appropriate personal protective equipment as described in Section 8.

7.2 Conditions for safe storage, including any incompatibilities

Keep away from incompatible materials. Avoid storage near extreme heat, ignition sources or open flames.

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Aluminum (CAS no.: 7429-90-5)

PEL-TWA: 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction) (OSHA)

REL-TWA: 10 mg/m³ (total dust), 5 mg/m³ (respirable fraction) (NIOSH)

TLV-TWA: 1 mg/m³ (respirable particulate matter) (ACGIH)

PEL-TWA: 10 mg/m³ (total dust), 5 mg/m³ (respirable fraction) (Cal/OSHA)

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Silicon (CAS no.: 7440-21-3)

PEL-TWA: 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction) (OSHA)

REL-TWA: 10 mg/m³ (total dust), 5 mg/m³ (resp) (NIOSH)

PEL-TWA: 10 mg/m³ (total dust), 5 mg/m³ (respirable fraction) (Cal/OSHA)

8.2 Appropriate engineering controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Use explosion-proof electrical/ventilating/lighting/equipment.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Pictograms



Eye/face protection

Wear safety glasses/goggles. In extremely dusty environments and unpredictable environments, wear unvented or indirectly vented goggles to avoid eye irritation or injury. Wear face shield during welding. Eye protection equipment must be tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

Skin protection

Wear protective gloves suitable for the material handled. Consult manufacturer specifications for further information.

Body protection

Wear protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Avoid actions that cause dust or fume exposure to occur. Use local or general ventilation to control exposures below applicable exposure limits. NIOSH or MSHA approved particulate filter respirators should be used in the context of respiratory protection program meeting the requirements of the OSHA respiratory protection standard [29 CFR 1910.134] to control exposures when ventilation or other controls are inadequate or discomfort or irritation is experienced. Respirator and/or filter cartridge selection should be based on American National Standards Institute (ANSI) Standards Z88.2 Practices for Respiratory Protection.

Thermal hazards

No data available.

Environmental exposure controls

Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Solid.
Appearance	Silver gray solid.
Color	Silver gray.
Odor	Characteristic.
Odor threshold	No data available.
Melting point/freezing point	643 - 657.2°C
Initial boiling point and boiling range	2519°C

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Lower and upper explosion limit/flammability limit	No data available.
Flash point	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
pH	Not applicable.
Kinematic viscosity	Not applicable.
Viscosity	Not applicable.
Solubility	Not soluble in water.
Partition coefficient n-octanol/water (log value)	No data available.
Vapor pressure	No data available.
Relative density	No data available.
Density	2.71 g/cm ³
Relative vapor density	No data available.
Particle characteristics	No data available.

Other safety information

No further information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2 Chemical stability

Stable under normal storage conditions.

10.3 Possibility of hazardous reactions

Molten material may react violently with water. Aluminum dust releases flammable gases in contact with water. Material may react violently with strong oxidizers.

10.4 Conditions to avoid

Avoid generating dust.

10.5 Incompatible materials

Strong acids and oxidizing agents.

10.6 Hazardous decomposition products

Metal oxides.

SECTION 11: Toxicological information

Information on toxicological effects

Likely Routes of Exposure: Eye contact. Skin contact. Inhalation.

If inhaled	Inhalation of dust may cause respiratory irritation. Inhalation of metallic oxides fumes may cause metal fume fever, characterized by flu-like symptoms such as chills, fever, nausea, and vomiting.
In case of skin contact	Exposure to dust may cause skin irritation.
In case of eye contact	Direct exposure to dust may cause eye irritation.
If swallowed	May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

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Acute toxicity

Based on available data, classification criteria are not met

Skin corrosion/irritation

Based on available data, classification criteria are not met

Serious eye damage/irritation

Based on available data, classification criteria are not met

Respiratory or skin sensitization

Based on available data, classification criteria are not met

Germ cell mutagenicity

Based on available data, classification criteria are not met

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

Based on available data, classification criteria are not met

STOT-single exposure

Based on available data, classification criteria are not met

STOT-repeated exposure

Based on available data, classification criteria are not met

Aspiration hazard

Based on available data, classification data are not met

Interactive effects

No data available

SECTION 12: Ecological information

Toxicity

No data available on product.

Persistence and degradability

No data available on product.

Bioaccumulative potential

No data available on product.

Mobility in soil

No data available.

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

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Other adverse effects

No data available.

SECTION 13: Disposal considerations

Disposal of the product

Disposal should be in accordance with applicable Federal, State and local laws and regulations. Local regulations may be more stringent than State or Federal requirements.

Disposal of contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Hazards

No SARA hazards

SARA 313 Components

Aluminum (CAS no.: 7429-90-5)

SECTION 16: Other information

16.1 Further information/disclaimer

Date of issue: March 12, 2026.

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