

**SAFETY DATA SHEET**

Revision: 03/21/17 Replaces version: 07/28/15

SECTION 1- IDENTIFICATION OF SUBSTANCE

Classification: ALUMINUM PARTICULATES

Product(s) Name: RSA- xxx(x)- xx(x); AL SHOT/ NEEDLES. K-1xx- (xxxx); AL FLAKE/ GRANULES

Family: Inert Material/ Metal

Transmet Corporation**4290 Perimeter Drive Columbus, OH 43228****614-276-5522****Revision: 03/01/2017 Replaces version: 07/28/15****SECTION 2- HAZARDS IDENTIFICATION*****Not hazardous in solid form (GHS Classification – not classified).***

The materials present in this product in their powdered forms include aquatic toxicity to the environment, pyrophoric, flammability, self-heating capabilities, water reactivity, and acute toxicity. Inhalation of dusts and fumes can cause metal fume fever. Symptoms can include a metallic or sweet taste in the mouth, sweating, shivering, headache, throat irritation, fever, chills, thirstiness, muscle aches, nausea, vomiting, weakness, fatigue, and shortness of breath. Under normal use and handling of the solid form of this material there are few health hazards. Cutting, welding, melting, grinding etc. of these materials will produce dust, fume or particulate containing the component elements. Exposure to the dust, fume or particulate of these materials may present significant health hazards. Exposure to dust or fume may cause irritation of the eyes, skin and respiratory tract. Fine particulates dispersed in air may present an explosion hazard. Avoid generating dust, generating sparks, ignition sources, and take necessary precautions.

SECTION 3- COMPOSITION/ INFORMATION ON INGREDIENTS

<u>Identity</u>	<u>CAS No.</u>	<u>OSHA PEL</u>	<u>ACGIH- TLV</u>	<u>% By Weight</u>
<u>mgm/ m³</u>	<u>mgm/ m³</u>			
Aluminum	7429- 90- 5	15 (dust) 5 (resp.)	10.0	94.5
Silicon	7440- 21- 3	15 (dust) 5 (resp.)	10.0	9.4 max
Copper	7440- 50- 8	00.1 (fume)	00.2 (fume)	1.0 max
Zinc	7440- 66- 6	5.0 (fume)	5.0 (ZnO fume)	1.0 max
Other	Not Hazardous	--	--	1.1 max

SECTION 4- FIRST AID MEASURES

First-aid measures after inhalation: Unlikely route of exposure. Dust from processing: Allow victim to breathe fresh air. Allow the victim to rest. If feel unwell, seek medical attention.

First-aid measures after skin contact: Wash hands with water and soap. Dust from processing: Wash all exposed skin area with mild soap and water, followed by warm water rinse. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact: Unlikely route of exposure. Dust from processing: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion: Unlikely route of exposure. Dust from processing: Ingestion is not considered a potential route of exposure. In case of accidental intake, rinse mouth.

SECTION 5- FIRE FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Dry earth, sand, or Class D media ONLY. Do not use halogenated extinguishing media.

Unsuitable extinguishing media: Do not use water or foam.

Fire Fighting Procedures: Wear full protective clothing. Use firefighting materials and procedures adapted to the immediate environment.

Special hazards arising from the substance or mixture

Fire hazard: This product does not present fire or explosion hazards as shipped. Fine turnings, fine dust from processing may be readily ignitable. Flammable solid. May form combustible dust concentrations in air.

Explosion hazard: This product does not present fire or explosion hazards as shipped. Avoid generation of dust; fine dust dispersed in air in sufficient concentration, and in the presence of an ignition source is a potential dust explosion hazards.

Reactivity: This product is not reactive as supplied. Dust or fine particles are violently reactive to strong oxidizers with considerable heat generation.

SECTION 6- ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

General measures: Dust and fumes from processing: Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.

For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to Section 8: "Exposure controls/personal protection".

Environmental precautions

Avoid release to the environment.

Methods and material for containment and cleaning up

For containment: In solid form, recycle unused/ scrap product if possible.

Methods for cleaning up: Recover mechanically the product. No special precautions for large product fragments. For dust cleanup use protective equipment. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly. Avoid dispersal of dust in the air (i.e. cleaning dust surfaces with compressed air). In case of formation of dust during processing, non-sparking tools should be used.

Other information: Dispose of materials or solid residues at an authorized site. Clean up spilled material and place in dry containers.

SECTION 7- HANDLING AND STORAGE

Precautions for safe handling

Precautions for safe handling: Wear appropriate personal protective equipment. In case of formation of dust during processing, routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixture operations. Provide adequate precautions, such as electrical grounding and bonding or inert atmospheres.

Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a dry area.

Incompatible materials: Strong acids and alkalis. Strong oxidizers.

SECTION 8- EXPOSURE CONTROLS/ PERSONAL PROTECTION

Exposure controls

Appropriate engineering controls: Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation.

In case of formation of dust during processing: It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust dusts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area. Use only appropriately classified electrical equipment and powered industrial trucks.

Personal protective equipment: Safety glasses. Gloves. Protective clothing.

Hand protection: Protective gloves.

Eye protection: Safety glasses.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: Dust from processing: If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations.

SECTION 9- PHYSICAL AND CHEMICAL PROPERTIES

Physical appearance/ form: Silver to Gray. Odorless. Solid, (Flake, Granule, Shot, Needle).

Melting point: 1050- 1220°F (565- 660°C) Boiling point: 3733°F (2056°C)

Flash Point: N/A NFPA fire code: 0 Specific gravity: 2.71

pH: N/A Water solubility: N/A Vapor pressure/ density: N/A

SECTION 10- STABILITY AND REACTIVITY

Stability: Material is stable and non- reactive under normal condition of use, storage, and transport.

Conditions to avoid: STORE INDOORS, KEEP DRY. DO NOT ALLOW DUST TO ACCUMULATE.

Possibility of hazardous reactions: Heat generation and release of flammable hydrogen gas may occur when exposed to water, strong oxidizers, acids and alkalis, and halogenated compounds. A violent thermite reaction may occur if exposed to certain metal oxides, (ie. iron oxide, (rust), or copper and lead oxides.) This product is not reactive as supplied. Dust or fine particles are violently reactive to strong oxidizers with considerable heat generation.

Incompatible materials: Halocarbons, mercury, chlorine, chlorates, bromates, iodates, peroxides, perchlorates, nitrates, nitrites, oxides, performates, persulfates, halogens, oxides of nitrogen, melted sulfates, sulfur dioxide, propylene dichloride sodium carbide, sodium carbonate and sodium hydroxide.

SECTION 11- TOXOLOGICAL INFORMATION

Aluminum in solid form does not present any acute health effects.

SECTION 12- ECOLOGICAL INFORMATION

Aluminum and its alloys under solid form, such as manufactured items, do not present any environmental hazard.

Exotoxicity: Not demonstrated using OECD protocol. Biodegradability: N/A

SECTION 13- DISPOSAL CONSIDERATIONS

Reuse or recycle material whenever possible. Recycle or dispose of material in accordance to local, state, or federal regulations.

SECTION 14- TRANSPORT INFORMATION

There are no special handling/ shipping procedures for this product.

SECTION 15- REGULATORY INFORMATION

USA: Section 313: This product contains no chemicals in concentrations subject to reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act, (EPCRA Title III of SARA) and 40 CFR 372.

EU: Warning Symbol(s); Risk Phrase(s); Safety Phrase(s). N/A

SECTION 16- OTHER INFORMATION

This Safety Data Sheet is in accordance with-

OSHA (USA), WHMIS (Canada), and EC Directive 2001/58/EC (Europe)

Abbreviations and acronyms:

ACGIH (American Conference of Government Industrial Hygienists).

ATE - acute toxicity estimate.

CAS - Chemical Abstracts Service.

GHS - Globally Harmonized System.

TWA- Time Weighted Average.

PEL- Permissible Exposure Level.

STEL- Short-Term Exposure Limit.

OSHA - Occupational Safety and Health Administration.

IARC-International Agency for Research on Cancer.

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