SECTION 1: Identification of the substance/mixture and of the supplier

Product name :

Aluminum Metal Strips

Manufacturer/Supplier

Trade name:

Recommended uses of the product and uses restrictions on use:

Manufacturer Details:

Stanford Advanced Materials Lake Forest, California, 92630

Emergency telephone number :

(949) 407-8904

### SECTION 2: Hazards identification

## Classification of the substance or mixture :

Not classified for physical or health hazards under GHS.

### Hazard statements :

#### Precautionary statements:

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

Keep out of reach of children

Read label before use

Do not eat, drink or smoke when using this product

Wear protective gloves/protective clothing/eye protection/face protection

Protect from moisture

## Other Non-GHS Classification :

**WHMIS** 



**NFPA/HMIS** 





HMIS RATINGS(0-4)

Ingredients:					,				
CAS7429-90-5	,	 1 1	Alumi	num	1 1	,	100 %		
1		 1		, '			Percentages	are by wei	ght

#### SECTION 4: First aid measures

#### Description of first aid measures

**After** inhalation: Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. If breathing difficult, give oxygen.

After skin contact: Wash affected area with water for at least 15 minutes. Seek medical attention if irritation persists or if concerned.

After eye contact: Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

**After swallowing:** Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention immediately. Have exposed individual drink sips of water.

#### Most important symptoms and effects, both acute and delayed:

Irritation, Nausea, Headache, Shortness of breath.;

#### Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician. Treat patient symptomatically.

### SECTION 5 : Firefighting measures

#### Extinguishing media

**Suitable extinguishing agents:** If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition. Smother with suitable dry powder for extinction. (Pressure from this media may cause severe dusting)

For safety reasons unsuitable extinguishing agents: Do not use water.

### Special hazards arising from the substance or mixture:

Combustion products may include metallic oxides or other toxic vapors. Combustible Solid, finely divided dust is easily ignited; may cause explosions.

#### Advice for firefighters:

**Protective equipment:** Use NIOSH-approved respiratory protection/breathing apparatus. Wear fire/flame resistant/retardant clothing.

Additional information (precautions): Use spark-proof tools and explosion-proof equipment.

### SECTION 6: Accidental release measures

#### Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation.Keep away from ignition sources. Protect from heat.Stop the spill, if possible. Contain spilled material by diking or using inert absorbent. Transfer to a disposal or recovery container.

#### Environmental precautions:

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13 Methods and material for containment and cleaning up:

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor. Avoid contact with skin, eyes and clothing. Vacuum or sweep up material and place into a suitable, dry disposal container. Always obey local regulations.

Reference to other sections:

# SECTION 7: Handling and storage

#### Precautions for safe handling:

Follow good hygiene procedures when handling chemical materials. Wash thoroughly after handling. Do not eat, drink, smoke, or use personal products when handling chemical substances. If in a laboratory setting, follow Chemical Hygiene Plan. Use only in well ventilated areas. Avoid generation of dust or fine particulate. Dust may form flammable or explosive mixture with air, especially when damp. Wash thoroughly after handling. Avoid contact with skin and eyes. Avoid ingestion and inhalation.

# Conditions for safe storage, including any incompatibilities:

Store in a cool location. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Keep container tightly sealed.

SECTION 8: Exposure controls/personal protection





Control Parameters: 7429-90-5, Aluminum (as Al) (pyrophoric powder), ACGIHTLVTWA 5

mg/m3

7429-90-5, Aluminum (as Al) (metal dust), ACGIHTLVTWA: 10 mg/m3 7429-90-5, Aluminum (as Al) (respirable), OSHAPELTWA: 5 mg/m3 7429-90-5, Aluminum (as Al) (total), OSHAPELTWA: 15 mg/m3 7429-90-5, Aluminum (as Al) (respirable), NIOSHREL: TWA 5 mg/m3 7429-90-5, Aluminum (as Al) (total), NIOSHREL: TWA 10 mg/m3

Appropriate Engineering controls: Emergency eye wash fountains and safety showers should be available in

the immediate vicinity of use/handling.Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or dusts (total/respirable) below the applicable workplace exposure limits

(Occupational Exposure Limits-OELs)indicated above.

**Respiratory** protection: Not required under normal conditions of use. Use suitable respiratory

protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills,

respiratory protection may be advisable.

Protection of skin: The glove material has to be impermeable and resistant to the product/

the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and

the degradation.

**Eye protection:** Safety glasses with side shields or goggles.

General hygienic measures: The usual precautionary measures are to be adhered to when handling

chemicals. Keep away from food, beverages and feed sources.

Immediately remove all soiled and contaminated clothing. Wash hands

before breaks and at the end of work. Do not inhale

gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and

skin.

## SECTION 9: Physical and chemical properties

Appearance (physical state,color)	Silver-gray solid	Explosion limit lower : Explosion limit upper :	Not determined Not determined		
Odor:	Odorless	Vapor pressure :	Not determined		
Odor threshold :	Not determined	Vapor density :	Not determined		
pH-value :	Not Applicable	Relative density:	2.7 g/cm3		
Melting/Freezing point :	660 °C, 1220°F	Solubilities :	Insoluble in water.		
Boiling point/Boiling	2327 °C, 4221°F	Partition coefficient (n - octanol/water)	Not determined		
Flash point (closed	Not determined	Auto/Self -ignition temperature :	Not determined		
Evaporation rate :	Not determined	Decomposition temperature	Not determined		
Flammability (solid,gaseous)	Not determined	Viscosity :	a. Kinematic:Not determined     b. Dynamic: Not applicable		

Density: Not Determined
Molecular Weight:: 26.98
Specific Gravity: :2.7020 g/cm3

### SECTION 10: Stability and reactivity

Reactivity: Corrodes in contact with acids & other metals.

Chemical stability: No decomposition if used and stored according to specifications. Stable under normal temps and pressures.

Possible hazardous reactions: Combustible Solid, finely divided dust is easily ignited; may cause explosions.

Conditions to avoid: Store away from oxidizing agents, strong acids or bases. Air and moisture sensitive.

**Incompatible materials:** Strong oxidizers & acids.Halogenated hydrocarbons.

Hazardous decomposition products: Aluminum Oxide.

SECTION 11: Toxicological information

Acute Toxicity :							
Oral:		; '	111		; '	LD50 rat >15900 mg/kg bw	100
Chronic Toxicity: No	additional i	nformatior	١.				
Corrosion Irritation	: No addition	naİ informa	ation.				1 1
Sensitization :						No additional information.	
Single Target Organ	(STOT):	1 1		;		No additional information.	
Numerical Measures	:					No additional information.	
Carcinogenicity :		:	1.1.1			No additional information.	111
Mutagenicity :					ű	No additional information.	
Reproductive Toxicit	y:	1	1 1	1		No additional information.	

# SECTION 12: Ecological information

#### **Ecotoxicity**

LC50 Fish: Ctenopharyngodon idella (Grass carp, white amur) [Al 7429 -90 -5]: 260 ug/L/96 hr

LC50 Crustacea: Daphnia magna (Water flea) [Al 7429 -90 -5]: 2.6 mg/L/24 hr

LC50 Fish: Oncorhynchus mykiss (Rainbow trout) [Al 7429 -90-5]: 120 ug/L/96 hr; static

Persistence and degradability

**Bioaccumulative** potential: Birds and mammals are most likely exposed through dietary ingestion of soil or Alcontaminated foods.

Mobility in soil:

Other adverse effects:

## SECTION 13: Disposal considerations

#### Waste disposal recommendations

Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product.

#### SECTION 14: Transport information

## **UN-Number**

Not Regulated.

UN proper shipping name

Not Regulated.

Transport hazard class(es)
Packing group :Not Regulated
Environmental hazard :

Transport in bulk:

Special precautions for user:

## SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings)

Reactive

SARA Section 313 (Specific toxic chemical listings) :

7429-90-5 Aluminum (fume or dust)

RCRA (hazardous waste code):

None of the ingredients is listed

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients is listed

### Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for females :

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for males :

None of the ingredients is listed

Chemicals known to cause developmental toxicity:

None of the ingredients is listed

## Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients is listed

Canadian NPRI Ingredient Disclosure list (limit 1%):

7429-90-5 Aluminum, elemental

# SECTION 16: Other information

This material safety data sheet is offered solely for your information, consideration, and investigation. Stanford Advanced Materials provides no warranties, either express or implied, and assumes no responsibility for the accuracy or completeness of the data contained herein.

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