



## Safety Data Sheet

Material Name: Aluminum Paste

MSDS ID: TA-002

### \*\*\* Section 1 - IDENTIFICATION\*\*\*

#### Manufacturer Information

Toyol America, Inc.  
17401 South Broadway

Lockport, IL 60441

Phone: 815-740-3000

Emergency # 800-424-9300 in USA (Chemtrec)  
+1-703-527-3887 (International Call Collect, 24 Hours)

#### PRODUCT IDENTIFICATION

**Material Name:** Aluminum Paste

**Grade Names:** 65-466; 7130N; 7150N; 7155N; 7160N; 8105N-AR; 8160N-AR; 8225A-AR; 8260N-AR

#### Product Use

Pigments and coatings manufacturing

#### Restrictions on Use

None known.

### \*\*\* Section 2 - HAZARDS IDENTIFICATION\*\*\*

#### EMERGENCY OVERVIEW

##### COMBUSTIBLE

**Color:** Silver

**Physical Form:** Paste

**Odor:** Solvent odor

**Health Hazards:** Harmful if inhaled. May cause irritation of the skin and eyes. Contains small amounts of chemicals (cumene, ethylbenzene, and naphthalene) that are classified as possibly carcinogenic to humans. May cause damage to central nervous system, kidneys, liver, lungs, respiratory system, and testes.

#### POTENTIAL HEALTH EFFECTS

##### Inhalation

**Short Term:** Harmful if inhaled, respiratory tract irritation, central nervous system effects, liver damage, kidney damage

**Long Term:** Kidney damage, liver damage, lung damage, effects on the testes, nerve damage, respiratory disorders

##### Skin

**Short Term:** Irritation

**Long Term:** Irritation

##### Eye

**Short Term:** Irritation

**Long Term:** Irritation



# Safety Data Sheet

Material Name: Aluminum Paste

MSDS ID: TA-002

## Ingestion

**Short Term:** Central nervous system effects, kidney damage, liver damage, lung congestion

**Long Term:** No information on significant adverse effects

## OSHA and Canada Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This product is a controlled product according to Canada's Controlled Product Regulation.

### \*\*\* Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS\*\*\*

CAS	Component	Percent
7429-90-5	Aluminum	64-67
8052-41-3	Stoddard solvent	13-14.5
64742-95-6	Petroleum naphtha, light aromatic	17.5-20
112-80-1	Oleic acid	1-3

The two solvent ingredients listed above, Stoddard Solvent (8052-41-3) and Petroleum Naphtha, Light Aromatic (64742-95-6), are both complex substances (UVCB) with their own CAS numbers and registrations. The compounds listed below are identified by the manufacturers as constituents of these substances.

CAS	Constituents Contained in <i>Stoddard Solvent (8052-41-3)</i> and/or <i>Petroleum naphtha, light aromatic (64742-95-6)</i>	Percent in Final Product
95-63-6	Benzene, 1,2,4-trimethyl-	<7.4
620-14-4	m-Ethyltoluene	<4.0
108-67-8	1,3,5-Trimethylbenzene	<2.2
622-96-8	p-Ethyltoluene	<1.4
611-14-3	Benzene, 1-ethyl-2-methyl-	<1.8
1330-20-7	Xylenes (o-, m-, p- isomers)	<1.45
526-73-8	1,2,3-Trimethylbenzene	<1.6
103-65-1	Propyl benzene	<1.4
111-84-2	Nonane	<0.75
98-82-8	Cumene	<0.6
100-41-4	Ethylbenzene	<0.17
91-20-3	Naphthalene	<0.075

### \*\*\* Section 4 - FIRST AID MEASURES\*\*\*

#### Inhalation

If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

#### Skin

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.



## Safety Data Sheet

Material Name: Aluminum Paste

MSDS ID: TA-002

### Eyes

Flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Then get immediate medical attention.

### Ingestion

Aspiration hazard. Do NOT induce vomiting. If vomiting occurs, keep head lower than hips to help prevent aspiration. Get immediate medical attention. Give artificial respiration if not breathing.

### Notes to Physician

For inhalation, consider oxygen

## \*\*\* Section 5 - FIRE FIGHTING MEASURES\*\*\*

See Section 9 for Flammability Properties

### Flammable Properties

If the solvent or additive has been removed, either by evaporation or burning, dry aluminum flake will remain. The aluminum particles will burn at a very high temperature as a mass of material or be potentially explosive if loosened and dispersed in air. Follow the listed fire fighting procedures carefully.

### Extinguishing Media

Dry chemical, foam or carbon dioxide.

### Unsuitable Extinguishing Media

Do not use halogenated extinguishing agents. Do not use water.

### Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

### Fire Fighting Measures

An aluminum paste fire usually begins as a solvent fire. The solvent fire can be fought with Class "B" extinguishing agents. \*\*\*Halogenated or vaporizing liquids must never be used.\*\*\* If during the application of the Class "B" agent it becomes evident the fire has spread to become a powder fire, discontinue the use of the Class "B" and use either a Class "D" extinguisher or dry sand. If the aluminum metal has ignited, it should be gently covered with the sand or Class "D" agent and allowed to burn itself out under the crust. Once covered do not disturb until totally cooled. Suitable, commonly used Class "B" agents are dry chemical and carbon dioxide. Carbon dioxide may be used to extinguish fires involving solvent-wetted aluminum. However, re-ignition is possible due to high localized heat or spontaneous heating.

To avoid re-ignition, the residual material must be immediately, gently smothered with a Class "D" extinguishing agent or dry sand without causing the material to become airborne. Refer to the Aluminum Association TR-2 Bulletin or NFPA 484 for further information.

### Thermal Decomposition Products

**Combustion:** oxides of aluminum, oxides of carbon

## \*\*\* Section 6 - ACCIDENTAL RELEASE MEASURES\*\*\*

### Occupational spill/release

Avoid heat, flames, sparks and other sources of ignition. Remove sources of ignition. Do not touch or walk through spilled material. Stop leak if possible without personal risk. Do not get water directly on material. Eliminate the generation of static electricity. Collect material into suitable container for disposal. Move containers away from spill to a safe area. **Do not form dust cloud.** Aluminum dust can be potentially explosive when dispersed in air in sufficient concentrations.



## Safety Data Sheet

Material Name: Aluminum Paste

MSDS ID: TA-002

### \*\*\* Section 7 - HANDLING AND STORAGE\*\*\*

#### Handling Procedures

Keep away from heat, sparks and flame. Do not breathe vapor or mist. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Wear protective gloves/clothing and eye/face protection. Do not eat, drink, or smoke when using this product. Use only with adequate ventilation.

#### Storage Procedures

Store and handle in accordance with all current regulations and standards. Store in a well-ventilated place. Store in a cool, dry place. Store in a tightly closed container. Store locked up. Keep separated from incompatible substances.

### \*\*\* Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION\*\*\*

#### Component Exposure Limits

##### Aluminum (7429-90-5)

**ACGIH:** 1 mg/m<sup>3</sup> TWA (respirable fraction)  
**OSHA:** 15 mg/m<sup>3</sup> TWA (total dust); 5 mg/m<sup>3</sup> TWA (respirable fraction)  
**NIOSH:** 10 mg/m<sup>3</sup> TWA (total dust); 5 mg/m<sup>3</sup> TWA (respirable dust)  
**Mexico** 10 mg/m<sup>3</sup> TWA LMPE (dust)

##### Stoddard solvent (8052-41-3)

**ACGIH:** 100 ppm TWA  
**OSHA:** 500 ppm TWA; 2900 mg/m<sup>3</sup> TWA  
**NIOSH:** 350 mg/m<sup>3</sup> TWA  
1800 mg/m<sup>3</sup> Ceiling (15 min)  
**Mexico** 100 ppm TWA LMPE; 523 mg/m<sup>3</sup> TWA LMPE  
200 ppm STEL [LMPE-CT]; 1050 mg/m<sup>3</sup> STEL [LMPE-CT]

##### Benzene, 1,2,4-trimethyl- (95-63-6)

**NIOSH:** 25 ppm TWA; 125 mg/m<sup>3</sup> TWA

##### 1,3,5-Trimethylbenzene (108-67-8)

**NIOSH:** 25 ppm TWA; 125 mg/m<sup>3</sup> TWA

##### Xylenes (o-, m-, p- isomers)(1330-20-7)

**ACGIH:** 100 ppm TWA  
150 ppm STEL  
**OSHA:** 100 ppm TWA; 435 mg/m<sup>3</sup> TWA  
**Mexico** 100 ppm TWA LMPE; 435 mg/m<sup>3</sup> TWA LMPE  
150 ppm STEL [LMPE-CT]; 655 mg/m<sup>3</sup> STEL [LMPE-CT]

##### 1,2,3-Trimethylbenzene (526-73-8)

**NIOSH:** 25 ppm TWA; 125 mg/m<sup>3</sup> TWA

##### Nonane (111-84-2)

**ACGIH:** 200 ppm TWA  
**NIOSH:** 200 ppm TWA

##### Cumene (98-82-8)

**ACGIH:** 50 ppm TWA  
**OSHA:** 50 ppm TWA; 245 mg/m<sup>3</sup> TWA- Skin notation  
**NIOSH:** 50 ppm TWA; 245 mg/m<sup>3</sup> TWA- Potential for skin absorption  
900 ppm IDLH



## Safety Data Sheet

Material Name: Aluminum Paste

MSDS ID: TA-002

**Mexico:** 50 ppm TWA LMPE-PPT; 245 mg/m<sup>3</sup> TWA LMPE-PPT  
75 ppm STEL [LMPE-CT]; 365 mg/m<sup>3</sup> STEL [LMPE-CT]- Potential for cutaneous absorption

### Ethylbenzene (100-41-4)

**ACGIH:** 20 ppm TWA  
125 ppm STEL

**OSHA:** 100 ppm TWA

**NIOSH:** 100 ppm TWA; 435 mg/m<sup>3</sup> TWA  
125 ppm STEL; 545 mg/m<sup>3</sup> STEL  
800 ppm IDLH

**Mexico:** 100 ppm TWA LMPE-PPT; 435 mg/m<sup>3</sup> TWA LMPE-PPT  
125 ppm STEL [LMPE-CT]; 545 mg/m<sup>3</sup> STEL [LMPE-CT]

### Naphthalene (91-20-3)

**ACGIH:** 10 ppm TWA  
15 ppm STEL  
Skin- potential significant contribution to overall exposure by the cutaneous route

**OSHA:** 10 ppm TWA; 50 mg/m<sup>3</sup> TWA

**NIOSH:** 10 ppm TWA; 50 mg/m<sup>3</sup> TWA  
15 ppm STEL; 75 mg/m<sup>3</sup> STEL

**Mexico:** 10 ppm TWA LMPE-PPT; 50 mg/m<sup>3</sup> TWA LMPE-PPT  
15 ppm STEL [LMPE-CT]; 75 mg/m<sup>3</sup> STEL [LMPE-CT]

### Engineering Controls

Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

### PERSONAL PROTECTIVE EQUIPMENT

#### Eyes/Face

The appropriate eye/face protection must be determined by the user of the material, based upon the conditions of use. Safety glasses with side shields should be worn at a minimum. Chemical safety goggles provide a greater level of protection, and should be considered based upon the material's anticipated exposure levels. A face shield (in addition to safety goggles) should be considered when significant exposures are expected.

#### Protective Clothing

Wear appropriate chemical resistant clothing.

#### Glove Recommendations

Wear appropriate chemical resistant gloves.

#### Respiratory Protection

Use a full face piece respirator with an organic vapor cartridge for concentrations exceeding the occupational exposure limit.

Protection provided by air-purifying respirators is limited.

Use a positive-pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known, or any other circumstance where air-purifying respirators may not provide adequate protection.



# Safety Data Sheet

Material Name: Aluminum Paste

MSDS ID: TA-002

## \*\*\* Section 9 - PHYSICAL AND CHEMICAL PROPERTIES\*\*\*

<b>Physical State:</b> Paste	<b>Appearance:</b> Silver paste
<b>Color:</b> Silver	<b>Physical Form:</b> Paste
<b>Odor:</b> Solvent odor	<b>Odor Threshold:</b> Not available
<b>pH:</b> Not available	<b>Melting Point:</b> Not available
<b>Boiling Point:</b> 266-398F (Solvent)	<b>Flash Point:</b> 105°F (Solvent)*
<b>Decomposition:</b> Not available	<b>Evaporation Rate:</b> <1.0 (butyl acetate=1)
<b>LEL:</b> 0.6% (Solvent)	<b>UEL:</b> 7.0% (Solvent)
<b>Vapor Pressure (Solvent):</b> <10 mmHg @ 20 °C	<b>Vapor Density (air = 1):</b> < 1
<b>Density:</b> 12.5 lbs/gal	<b>Specific Gravity (water = 1):</b> 1.5
<b>Water Solubility:</b> Not available	<b>Log KOW:</b> Not available
<b>Coeff. Water/Oil Dist:</b> Not available	<b>Auto Ignition:</b> Not available
<b>Viscosity:</b> Not available	<b>Volatility:</b> Not available

### Other Property Information

\*The product is considered a solid per ASTM D4359-84 for transportation purposes, therefore flashpoint is not applicable to the product itself for transport classification. The flashpoint of the solvent component of this product is 105°F.

## \*\*\* Section 10 - STABILITY AND REACTIVITY\*\*\*

### Chemical Stability

Stable at normal temperatures and pressure.

### Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat. Take precautionary measures against static discharge.

### Possibility of Hazardous Reactions

Will not polymerize.

### Materials to Avoid

Water, acids, bases, combustible materials, oxidizing materials

### Decomposition Products

**Combustion:** oxides of aluminum, oxides of carbon

### Possibility of Hazardous Reactions

Will not polymerize.

### Hazardous Reactions

Aluminum reacts with water, acids, or alkalis to form hydrogen gas.

## \*\*\* Section 11 - TOXICOLOGICAL INFORMATION\*\*\*

### Acute and Chronic Toxicity

Contains small amounts of chemicals (cumene, ethylbenzene, and naphthalene) that are classified by IARC as possibly carcinogenic to humans (Group 2B). May cause damage to central nervous system, kidneys, liver, lungs, nervous system, respiratory system, and testes through prolonged or repeated exposure.



## Safety Data Sheet

Material Name: Aluminum Paste

MSDS ID: TA-002

### Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

**Benzene, 1,2,4-trimethyl- (95-63-6)**

Inhalation LC50 Rat 18 g/m<sup>3</sup> 4 h; Oral LD50 Rat 3400 mg/kg; Dermal LD50 Rabbit >3160 mg/kg

**Oleic acid (112-80-1)**

Oral LD50 Rat 25 g/kg

**Petroleum naphtha, light aromatic (64742-95-6)**

Inhalation LC50 Rat >5.2 mg/L 4 h; Inhalation LC50 Rat 3400 ppm 4 h; Oral LD50 Rat 8400 mg/kg; Dermal LD50 Rabbit >2000 mg/kg

**1,3,5-Trimethylbenzene (108-67-8)**

Inhalation LC50 Rat 24 g/m<sup>3</sup> 4 h; Oral LD50 Rat 5000 mg/kg

**Benzene, 1-ethyl-2-methyl- (611-14-3)**

Inhalation LC50 Mouse 54 g/m<sup>3</sup> 4 h

**p-Ethyltoluene (622-96-8)**

Oral LD50 Rat 4850 mg/kg; Inhalation LC50 Mouse 54000 mg/m<sup>3</sup> 4 h

**Xylenes (o-, m-, p- isomers) (1330-20-7)**

Inhalation LC50 Rat 5000 ppm 4 h; Inhalation LC50 Rat 47635 mg/L 4 h; Oral LD50 Rat 4300 mg/kg; Dermal LD50 Rabbit >1700 mg/kg

**Propyl benzene (103-65-1)**

Oral LD50 Rat 6040 mg/kg

**Nonane (111-84-2)**

Inhalation LC50 Rat 3200 ppm 4 h

**Cumene (98-82-8)**

Oral LD50 Rat 1400 mg/kg; Inhalation LC50 Rat 4 h 39000 mg/m<sup>3</sup>; Dermal LD50 Rabbit >3160 mg/kg

**Ethylbenzene (100-41-4)**

Oral LD50 Rat 3500 mg/kg; Inhalation LC50 Rat 17.2 mg/L 4h; Dermal LD50 Rabbit 15354 mg/kg

**Naphthalene (91-20-3)**

Inhalation LC50 Rat >340 mg/m<sup>3</sup> 1 h; Oral LD50 Rat 490 mg/kg; Dermal LD50 Rat >2500 mg/kg; Dermal LD50 Rabbit >20 g/kg

### Component Carcinogenicity

**Aluminum (7429-90-5)**

ACGIH: A4 - Not Classifiable as a Human Carcinogen

**Xylenes (o-, m-, p- isomers) (1330-20-7)**

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

**Cumene (98-82-8)**

IARC: 2B- Group 2B- Monograph 101- Possibly Carcinogenic to Humans

**Ethylbenzene (100-41-4)**

ACGIH: A3- Confirmed Animal Carcinogen with Unknown Relevance to Humans

IARC: 2B- Group 2B- Monograph 77- Possibly Carcinogenic to Humans

**Naphthalene (91-20-3)**

ACGIH: A4- Not classifiable as a Human Carcinogen

NTP: Reasonably Anticipated to be a Human Carcinogen (Possible Select Carcinogen)



## Safety Data Sheet

Material Name: Aluminum Paste

MSDS ID: TA-002

IARC: Monograph 82 [2002] (Group 2B (possibly carcinogenic to humans))

### Irritation

Respiratory tract irritation, skin irritation, eye irritation

### Medical Conditions Aggravated by Exposure

None known.

## \*\*\* Section 12 - ECOLOGICAL INFORMATION\*\*\*

### Ecotoxicity

Toxic to aquatic life with long lasting effects.

### Component Analysis - Aquatic Toxicity

#### Benzene, 1,2,4-trimethyl- (95-63-6)

**Fish:** 96 Hr LC50 Pimephales promelas: 7.19-8.28 mg/L [flow-through]

**Invertebrate:** 48 Hr EC50 Daphnia magna: 6.14 mg/L

#### Oleic acid (112-80-1)

**Fish:** 96 Hr LC50 Pimephales promelas: 205 mg/L [static]

#### Petroleum naphtha, light aromatic (64742-95-6)

**Fish:** 96 Hr LC50 Oncorhynchus mykiss: 9.22 mg/L

**Invertebrate:** 48 Hr EC50 Daphnia magna: 6.14 mg/L

#### 1,3,5-Trimethylbenzene (108-67-8)

**Fish:** 96 Hr LC50 Pimephales promelas: 3.48 mg/L

**Invertebrate:** 24 Hr EC50 Daphnia magna: 50 mg/L

#### Xylenes (o-, m-, p- isomers) (1330-20-7)

**Fish:** 96 Hr LC50 Pimephales promelas: 13.4 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 2.661-4.093 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 13.5-17.3 mg/L; 96 Hr LC50 Lepomis macrochirus: 13.1-16.5 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 19 mg/L; 96 Hr LC50 Lepomis macrochirus: 7.711-9.591 mg/L [static]; 96 Hr LC50 Pimephales promelas: 23.53-29.97 mg/L [static]; 96 Hr LC50 Cyprinus carpio: 780 mg/L [semi-static]; 96 Hr LC50 Cyprinus carpio: >780 mg/L; 96 Hr LC50 Poecilia reticulata: 30.26-40.75 mg/L [static]

**Invertebrate:** 48 Hr EC50 water flea: 3.82 mg/L; 48 Hr LC50 Gammarus lacustris: 0.6 mg/L

#### Cumene (98-82-8)

**Fish:** 96 Hr LC50 Pimephales promelas: 6.04-6.61 mg/L (flow-through); 96 Hr LC50 Oncorhynchus mykiss: 4.8 mg/L (flow-through); 96 Hr LC50 Oncorhynchus mykiss: 2.7 mg/L (semi-static); 96 Hr LC50 Poecilia reticulata: 5.1 mg/L (semi-static).

**Invertebrate:** Water Flea-48 Hr EC50 Daphnia magna: 0.6 mg/L; 48 Hr EC50 Daphnia magna: 7.9-14.1 mg/L (Static)

Freshwater Algae- 72 Hr EC50 Pseudokirchneriella subcapitata: 2.6 mg/L

#### Ethylbenzene (100-41-4)

**Fish:** 96 Hr LC50 Oncorhynchus mykiss: 11.0-18.0 mg/L (static); 96 Hr LC50 Oncorhynchus mykiss 4.2 mg/L (semi-static); 96 Hr LC50 Pimephales promelas: 7.55-11 mg/L (flow-through); 96 Hr LC50 Lepomis macrochirus: 32 mg/L (static); 96 Hr LC50 Pimephales promelas: 9.1-15.6 mg/L (static); 96 Hr LC50 Poecilia reticulata: 9.6 mg/L (static).

**Invertebrate:** 48 Hr EC50 Daphnia magna: 1.8-2.4 mg/L

Freshwater Algae- 72 Hr EC50 Pseudokirchneriella subcapitata: 4.6 mg/L; 96 Hr EC50 Pseudokirchneriella subcapitata: >438 mg/L; 72 Hr EC50 Pseudokirchneriella





# Safety Data Sheet

Material Name: Aluminum Paste

MSDS ID: TA-002

Subcapitata: 2.6-11.3 mg/L (static); 96 Hr EC50 Pseudokirchneriella subcapitata: 1.7-7.6 mg/L (static).

### Naphthalene (91-20-3)

**Fish:** 96 Hr LC50 Pimephales promelas: 5.74-6.44 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 1.6 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 0.91-2.82 mg/L [static]; 96 Hr LC50 Pimephales promelas: 1.99 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 31.0265 mg/L [static]

**Algae:** 72 Hr EC50 Skeletonema costatum: 0.4 mg/L

**Invertebrate:** 48 Hr LC50 Daphnia magna: 2.16 mg/L; 48 Hr EC50 Daphnia magna: 1.96 mg/L [Flow through]; 48 Hr EC50 Daphnia magna: 1.09 - 3.4 mg/L [Static]

### Persistence & Degradability

Not readily biodegradable

## \*\*\* Section 13 - DISPOSAL CONSIDERATIONS \*\*\*

### Disposal Methods

Dispose in accordance with all applicable regulations. Reprocess whenever possible. Co-process or incinerate in authorized facilities. Incineration should be done in accordance with prevailing municipal, state, and federal laws and standards from local environmental agencies.

## \*\*\* Section 14 - TRANSPORT INFORMATION \*\*\*

### US DOT Information

Not regulated as a hazardous material.

### TDG Information

Not regulated as dangerous goods.

## \*\*\* Section 15 - REGULATORY INFORMATION \*\*\*

### U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 311/312 (40 CFR 370.21), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

#### SARA 313

	Max. % in Product
Aluminum (7429-90-5) –dust or fume only	67%
Benzene, 1,2,4-trimethyl- (95-63-6)	7.4%
Xylenes (o-, m-, p- isomers) (1330-20-7)	1.45%
Cumene (98-82-8)	0.6%
Ethylbenzene (100-41-4)	0.17%
Naphthalene (91-20-3)	0.075%

#### CERCLA:

**Xylene (1330-20-7)** 100 lb final RQ; 45.4 kg final RQ as xylene; **Cumene (98-82-8)** 5,000 lb RQ as cumene; **Ethylbenzene (100-41-4)** 1000 lb RQ as ethylbenzene; **Naphthalene (91-20-3)** 100 lb RQ as naphthalene



# Safety Data Sheet

Material Name: Aluminum Paste

MSDS ID: TA-002

**TSCA 12(b)**

**Nonane (111-84-2):** Section 4; (1.0% de minimus concentration)

SARA 311/312

Acute Health: Yes Chronic Health: Yes Fire: Yes Pressure: No Reactive: No

### U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Aluminum	7429-90-5	Yes	Yes	Yes	Yes	Yes
Stoddard solvent	8052-41-3	Yes	Yes	Yes	Yes	Yes
Benzene, 1,2,4-trimethyl-	95-63-6	No	Yes	Yes	Yes	Yes
Oleic acid	112-80-1	No	No	No	No	Yes
1,3,5-Trimethylbenzene	108-67-8	Yes	Yes	No	No	No
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	Yes	Yes	Yes	Yes
Propyl benzene	103-65-1	No	Yes	No	Yes	Yes
Nonane	111-84-2	Yes	Yes	Yes	Yes	Yes
Cumene	98-82-8	Yes	Yes	Yes	Yes	Yes
Ethylbenzene	100-41-4	Yes	Yes	Yes	Yes	Yes
Naphthalene	91-20-3	Yes	Yes	Yes	Yes	Yes

### Canada

This product has been classified in accordance with the criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

WHMIS CLASSIFICATION: D2B

### Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which fall under WHMIS criteria specified in the Controlled Products Regulations and present above the threshold limits listed on the IDL.

**Aluminum (7429-90-5)**

1 %

**Stoddard solvent (8052-41-3)**

1 %

**Benzene, 1,2,4-trimethyl- (95-63-6)**

0.1 %

**Oleic acid (112-80-1)**

1 %

**1,3,5-Trimethylbenzene (108-67-8)**

0.1 %

**Cumene (98-82-8)**

1%

**Ethylbenzene (100-41-4)**

0.1%



## Safety Data Sheet

Material Name: Aluminum Paste

MSDS ID: TA-002

### Inventory List Status

**U.S. TSCA:** All components listed or exempt  
**Canada DSL:** All components listed or exempt  
**EINECS:** All components listed or exempt  
**Australia (AICS):** All components listed or exempt  
**Philippines (PICCS):** All components listed or exempt  
**Japanese Inventory:** All components listed or exempt  
**Korea Inventory:** All components listed or exempt  
**China Inventory:** All components listed or exempt  
**New Zealand (NZIoC):** All components listed or exempt

<b>*** Section 16 - OTHER INFORMATION***</b>
--

#### Summary of Changes

Revision 1.0000, 10 October, 2012: New MSDS.  
Revision 2.0000, 10 December, 2012: Revised Grade Name Section 1

#### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; CAS - Chemical Abstracts Service; DOT - Department of Transportation; EC50 - Effective Concentration, 50%; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; Kow - Octanol/water partition coefficient; LD50 - Lethal Dose, 50%; LEL - Lower Explosive Limit; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NIOSH - National Institute for Occupational Safety and Health; NTP = National Toxicology Program; STEL - Short-term Exposure Limit; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UEL - Upper Explosive Limit; WHMIS - Workplace Hazardous Materials Information System

#### Other Information

The information set forth in this Safety Data Sheet does not purport to be all-inclusive and should be used only as a guide. While the information and recommendations set forth herein are believed to be accurate, the company makes no warranty regarding such information and recommendations and disclaims all liability from reliance thereon.

End of Sheet TA-002