A L E X T U R C O

A R T D E S I G N E R

Material Safety Data Sheet

ID: 1426

* * * Section 1 - Chemical Product and Company Identification * * *

Chemical Formula: Mixture
Product Use: Architectural panels, specialty applications.

Alcoa Inc.
201 Isabella Street
Pittsburgh, PA 15212-5858

Phone: Health and Safety: 1-412-553-4649

Manufacturer/Supplier

The Art Of Alex, LLC
6100 Ne 3 Rd Avenue,
Miami, FL 33137 (USA)
AlexTurco Art Designer panels division

* * * Section 2 - Hazards Identification * * *

EMERGENCY OVERVIEW

Solid, panels. Various colors. Odorless. Non-combustible as supplied. Small chips, fine turnings and dust from processing may be readily ignitable.

Explosion/fire hazards may be present during processing (sawing, grinding, remelting) when (See Sections 5, 7 and 10 for additional information):
* Dust or fines are dispersed in the air.
* Chips, dust or fines are in contact with water.
* Dust or fines are in contact with certain metal oxides (e.g. rust).
* Molten metal is in contact with water/moisture or certain metal oxides (e.g. rust).

Dust and fume from processing can cause irritation of eyes, skin and upper respiratory tract. Contact with molten polymer can cause thermal burns. Combustion of the coatings can generate toxic and irritating gases.

POTENTIAL HEALTH EFFECTS

The following statements summarize the health effects generally expected in cases of overexposures. User specific situations should be assessed by a qualified individual. Additional health information can be found in Section 11.
The following health effects are not likely to occur unless sawing or cutting generates dust or unless material is heated to melting.

Eyes: Dust or fume from processing: Can cause irritation.

Skin

Dust or fume from processing: Can cause irritation. Contact with molten polymer can cause thermal burns.

Inhalation

Health effects from mechanical processing (e.g., cutting, grinding): Can cause irritation of upper respiratory tract.
Chronic overexposures: Can cause scarring of the lungs (pulmonary fibrosis), central nervous system damage, secondary Parkinson's disease and reproductive harm in males.

Carcinogenicity and Reproductive Hazard

Product as shipped: Does not present any cancer or reproductive hazards.

Dust and fumes from mechanical processing: Does not present any cancer hazards. Can present a reproductive hazard for males (manganese).

Medical Conditions Aggravated By Exposure to Product, Components or Compounds Formed During Processing

Dust or fume from processing: Asthma, chronic lung disease, skin rashes and secondary Parkinson's disease.

* * * Section 3 - Composition / Information on Ingredients * * *

Complete composition is provided below and may include some components classified as non-hazardous.

CAS #	Component	Percent
Not Available	**Aluminum Face Sheets**	-
7429-90-5	Aluminum	>80
7439-95-4	Magnesium	<6
7439-96-5	Manganese	<1.5
Not Available	**Polymeric Core**	-
Proprietary	Thermoplastic polymer	<60
Proprietary	Fire retardant	<25
	Coatings	-
Not Available	Resins	<14
Not Available	Chromium (III) oxide	<1

* * * Section 4 - First Aid Measures * * *

First Aid: Eyes

Dust or fume from processing: Flush eyes with plenty of water or saline for at least 15 minutes. Consult a physician.

First Aid: Skin

Dust or fume from processing: Wash skin with soap and water for at least 15 minutes. Consult a physician if irritation persists. Molten polymer: If molten material gets on skin, cool rapidly with cold water. Do not attempt to peel material from skin. Get medical treatment for thermal burns.

First Aid: Inhalation

Dust or fume from processing: Remove to fresh air. If unconscious or severely injured, check for clear airway, breathing and presence of pulse. Perform CPR if there is no pulse or respiration. Consult a physician.

* * * Section 5 - Fire Fighting Measures * * *

Flammable/Combustible Properties

This product does not present fire or explosion hazards as shipped. Small chips, turnings, dust and fines from processing may be readily ignitable.

Fire/Explosion

May be a potential hazard under the following conditions:

* Dust or fines dispersed in the air can be explosive. Even a minor dust cloud can explode violently. Dust accumulation on the floor, ledges and beams can present a risk of ignition, flame propagation and secondary explosions.
* Chips, dust or fines in contact with water can generate flammable/explosive hydrogen gas. Hydrogen gas could present an explosion hazard in confined or poorly ventilated spaces.
* Dust or fines in contact with certain metal oxides (e.g., rust). A thermite reaction, with considerable heat generation, can be initiated by a weak ignition source.
* Molten metal in contact with water/moisture or other metal oxides (e.g., rust, copper oxide). Moisture entrapped by molten metal can be explosive. Contact of molten aluminum with other metal oxides can initiate a thermite reaction. Finely divided metals (e.g., powders or wire) may have enough surface oxide to produce thermite reactions/explosions.

Extinguishing Media

Use Class D extinguishing agents on dusts, fines or molten metal. Use coarse water spray on chips and turnings.

Unsuitable Extinguishing Media

DO NOT USE:

* Halogenated agents on small chips, dusts or fines.
* Water around molten metal.

These agents will react with the burning material.

Fire Fighting Equipment/Instructions

Fire fighters should wear NIOSH approved, positive pressure, self-contained breathing apparatus and full protective clothing when appropriate.

* * * Section 6 - Accidental Release Measures * * *

Small/Large Spill

Collect scrap for recycling. .*If molten:* Contain the flow using dry sand or salt flux as a dam. Do not use shovels or hand tools to halt the flow of molten aluminum. Allow the spill to cool before remelting as scrap.

* * * Section 7 - Handling and Storage * * *

Handling/Storage

Avoid generating dust. Avoid contact with sharp edges or heated metal. Hot and cold aluminum are not visually different. Hot aluminum does not necessarily glow red.

Requirements for Processes Which Generate Dusts or Fines

If processing of these products includes operations where dust or extremely fine particulate is generated, obtain and follow the safety procedures and equipment guides contained in Aluminum Association Bulletin F-1 and National Fire Protection Association (NFPA) brochures listed in Section 16. Cover and reseal partially empty containers. Use non-sparking handling equipment. Provide grounding and bonding where necessary to prevent accumulation of static charges during dust handling and transfer operations. (See Section 15).

Local ventilation and vacuum systems must be designed to handle explosive dusts. Dry vacuums and electrostatic precipitators must not be used. Dust collection systems must be dedicated to aluminum dust only and should be clearly labeled as such. Do not co-mingle fines of aluminum with fines of iron, iron oxide (rust) or other metal oxides.

Do not allow chips, fines or dust to contact water, particularly in enclosed areas.

Avoid all ignition sources. Good housekeeping practices must be maintained. Do not use compressed air to remove settled material from floors, beams or equipment.

Requirements for Remelting Scrap Material

Molten metal and water can be an explosive combination. The risk is greatest when there is sufficient molten metal to entrap or seal off the water. Water and other forms of contamination on or contained in scrap are known to have caused explosions in melting operations. While the products may have minimal surface roughness and internal voids, there remains the possibility of moisture contamination or entrapment. If confined, even a few drops of water can lead to violent explosions.

All tooling and containers which come in contact with molten metal must be preheated or specially coated and rust free. Molds and ladles must be preheated or oiled prior to casting. Any surfaces that may contact molten metal (e.g., concrete) should be specially coated.

Drops of molten metal in water (e.g. from plasma arc cutting), while not normally an explosion hazard, can generate enough flammable hydrogen gas to present an explosion hazard. Vigorous circulation of the water and removal of the particles minimize the hazards.

During melting operations, the following minimum guidelines should be observed:
* Inspect all materials prior to furnace charging and completely remove surface contamination such as water, ice, snow, deposits of grease and oil or other surface contamination resulting from weather exposure, shipment, or storage.
* Store materials in dry, heated areas with any cracks or cavities pointed downwards.
* Preheat and dry large or heavy items adequately before charging into a furnace containing molten metal. This is typically done by use of a drying oven or homogenizing furnace. The drying cycle should bring the internal metal temperature of the coldest item of the batch to 400°F and then hold at that temperature for 6 hours.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Engineering Controls

If dust is generated through processing: Use with adequate explosion-proof ventilation to meet the limits listed in Section 8, Exposure Guidelines.

Personal Protective Equipment

Respiratory Protection

If dust is generated through processing:
Use NIOSH-approved respiratory protection as specified by an Industrial Hygienist or other qualified professional if concentrations exceed the limits listed in Section 8, Exposure Guidelines. Suggested respiratory protection: N95.

Eye Protection: Wear safety glasses/goggles to avoid eye injury.

Skin Protection: Wear appropriate gloves to avoid any skin injury.

General

Personnel who handle and work with **molten metal** should utilize primary protective clothing like polycarbonate face shields, fire resistant tapper's jackets, neck shades (snoods), leggings, spats and similar equipment to prevent burn injuries. In addition to primary protection, secondary or day-to-day work clothing that is fire resistant and sheds metal splash is recommended for use with molten metal. Synthetic materials should never be worn even as secondary clothing (undergarments).

Exposure Guidelines

A: General Product Information

Alcoa recommends Occupational Exposure Limits for **Manganese** of 0.05 mg/m3 TWA (total particulate) and 0.02 mg/m3 TWA (respirable fraction).

B: Component Exposure Limits

Aluminum (7429-90-5)
ACGIH 10 mg/m3 TWA (metal dust)
OSHA 15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)

Manganese (7439-96-5)
ACGIH 0.2 mg/m3 TWA
OSHA 5 mg/m3 Ceiling (fume)

Chromium (III) oxide (Not Available)
ACGIH 0.5 mg/m3 TWA (as Cr)
OSHA 0.5 mg/m3 TWA (as Cr)

* * * Section 9 - Physical & Chemical Properties * * *

Physical State:	Solid panels	**Appearance:**	Various colors
Boiling Point:	Not applicable	**Melting Point:**	Aluminum: 896-1220°F (480-660°C); Polymer ~220°F (~104°C)
Vapor Pressure:	Not applicable	**Vapor Density:**	Not applicable
Solubility in Water:	None	**Specific Gravity:**	See Density
Density:	1.10-2.27 g/cm3 (0.040-0.075 lb/in3)	**pH Level:**	Not applicable
Odor:	Odorless	**Odor Threshold:**	Not applicable
Octanol-Water Coefficient:	Not applicable		

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Stability

Stable under normal conditions of use, storage, and transportation as shipped.

Conditions to Avoid

Chips, fines, dust and molten metal are considerably more reactive with the following:

* **Water:** Slowly generates flammable/explosive hydrogen gas and heat. Generation rate is greatly increased with smaller particles (e.g., fines and dusts). Molten metal can react violently/explosively with water or moisture, particularly when the water is entrapped.
* **Heat:** Oxidizes at a rate dependent upon temperature and particle size.
* **Strong oxidizers:** Violent reaction with considerable heat generation. Can react explosively with nitrates (e.g., ammonium nitrate and fertilizers containing nitrate) particularly when heated or molten.
* **Acids and alkalis:** Reacts to generate flammable/explosive hydrogen gas. Generation rate is greatly increased with smaller particles (e.g., fines and dusts).
* **Halogenated compounds:** Many halogenated hydrocarbons, including halogenated fire extinguishing agents, can react violently with finely divided aluminum.
* **Iron oxide (rust) and other metal oxides (e.g., copper and lead oxides):** A violent thermite reaction generating considerable heat can occur. Reaction with aluminum fines and dusts requires only very weak ignition sources for initiation. Molten aluminum can react violently with iron oxide without external ignition source.
* **Iron powder and water:** An explosive reaction forming hydrogen gas occurs when heated above 1470°F (800°C).

Hazardous Decomposition

Combustion of the coatings can generate carbon monoxide, carbon dioxide and aldehydes.

* * * Section 11 - Toxicological Information * * *

Health Effects Associated with Individual Ingredients

Aluminum dust, fines and fumes Low health risk by inhalation. Generally considered to be biologically inert (milling, cutting, grinding).

Manganese dust or fumes Chronic overexposures: Can cause inflammation of the lung tissue, scarring of the lungs (pulmonary fibrosis), central nervous system damage, secondary Parkinson's disease and reproductive harm in males.

Chromium (III) compounds Can cause irritation of eyes, skin and respiratory tract. IARC/NTP: Not classifiable as to their carcinogenicity to humans by IARC.

Acute Toxicity of Ingredients/Formed Compounds

A: General Product Information

No information available for product.

B: Component Analysis - LD50/LC50

Magnesium (7439-95-4)
Oral LD50 Rat: 230 mg/kg
Manganese (7439-96-5)
Oral LD50 Rat: 9 g/kg
Thermoplastic polymer (Proprietary)
Inhalation LC50 Mouse: 12 g/m3/30M
Fire retardant (Proprietary)
Oral LD50 Rat: >5000 mg/kg

C: Formed Compound Toxicity - LD50s/LC50s

This material has no components listed.

Carcinogenicity of Ingredients
A: Ingredient Carcinogenicity - IARC/NTP

Component	CAS	IARC 1	IARC 2A	IARC 2B	IARC 3	IARC 4	NTP K	NTP RA
Thermoplastic polymer	Proprietary	No	No	No	Yes	No	No	No
Chromium (III) oxide	Not Available	No	No	No	Yes	No	No	No

B: Ingredient Carcinogenicity - ACGIH

Chromium (III) oxide (Not Available)
ACGIH A4 - Not Classifiable as a Human Carcinogen

C: Ingredient References

Thermoplastic polymer (Proprietary)
IARC Supplement 7 [1987], Monograph 19 [1979]

Chromium (III) oxide (Not Available)
IARC Monograph 49 [1990], Supplement 7 [1987], Monograph 23 [1980], Monograph 2 [1973]

Carcinogenicity of Compounds Formed During Processing
A: General Product Information

No new/additional compounds are expected to be formed during processing.

Descriptions of IARC and NTP Classifications

IARC 1: The agent is carcinogenic to humans. There is sufficient evidence that a causal relationship existed between exposure to the agent and human cancer.
IARC 2A: The agent is probably carcinogenic to humans. Generally includes agents for which there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
IARC 2B: The agent is possibly carcinogenic to humans. Generally includes agents for which there is limited evidence in humans and less than sufficient evidence in experimental animals.
IARC 3: The agent is not classifiable as to its carcinogenicity to humans. Generally includes agents for which there is inadequate evidence in humans and inadequate or limited evidence in experimental animals.
IARC 4: The agent is probably not carcinogenic to humans. Generally includes agents for which there is evidence suggesting lack of carcinogenicity in humans and in experimental animals.
NTP K: Known to be a human carcinogen.
NTP RA: Reasonably anticipated to be a human carcinogen.

* * * Section 12 - Ecological Information * * *

Ecotoxicity
A: General Product Information

No information available for product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

No ecotoxicity data was found for this product's components.

Environmental Fate

No information available for product.

* * * Section 13 - Disposal Considerations * * *

Disposal Instructions: Reuse or recycle material whenever possible.
US EPA Waste Number & Descriptions
A: General Product Information

If reuse or recycle is not possible, then characterize in accordance with applicable regulations (40 CFR 261 or state equivalent in the U.S.) prior to disposal. TCLP testing is recommended for chromium.

B: Component Waste Numbers

RCRA waste codes other than described under Section A may apply depending on use of product. Refer to 40 CFR 261 or state equivalent in the U.S.

* * * Section 14 - Transportation Information * * *

Special Transportation

	PSN #1	PSN #2	PSN #3	PSN #4
Notes:	(1)			
UN NA Number:	-			
Proper Shipping Name:	Not regulated			
Hazard Class:	-			
Packing Group:	-			
RQ:	-			
Other - Tech Name:	-			
Other - Marine Pollutant:	-			

Notes:

(1) When "Not regulated", enter the proper freight classification, "MSDS Number", and "Product Name" on the shipping paperwork.

Canadian Controlled Products Regulation PIN:	Not regulated

* * * Section 15 - Regulatory Information * * *

US Federal Regulations

A: General Product Information

All electrical equipment must be suitable for use in hazardous atmospheres involving aluminum powder in accordance with 29 CFR 1910.307. The National Electrical Code, NFPA 70, contains guidelines for determining the type and design of equipment and installation that will meet this requirement. In reference to Title VI of the Clean Air Act of 1990, this material does not contain nor was it manufactured using ozone-depleting chemicals.

B: Component Analysis

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 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Aluminum (7429-90-5)
SARA 313: 1.0 % de minimis concentration (dust or fume only)

Manganese (7439-96-5)
SARA 313: 1.0 % de minimis concentration

Chromium (III) oxide (Not Available)
SARA 313: 1.0 % de minimis concentration (except for chromite ore mined in the Transvaal Region of South Africa and the unreacted ore component of the chromite ore processing residue (COPR). Chemical Category N090)

SARA 311/312 Physical and Health Hazard Categories:

Immediate (acute) Health Hazard: Yes, if particulates/fumes generated during processing.
Delayed (chronic) Health Hazard: Yes, if particulates/fumes generated during processing.
Fire Hazard: No
Sudden Release of Pressure: No
Reactive: Yes, if molten

State Regulations

A: General Product Information

No information available for product.

B: Component Analysis - State

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

Component	CAS #	CA	FL	MA	MN	NJ	PA
Aluminum	7429-90-5	Yes	No	Yes	Yes	Yes	Yes
Magnesium	7439-95-4	Yes	No	Yes	No	Yes	Yes
Manganese	7439-96-5	Yes	No	Yes	Yes	Yes	Yes
Chromium (III) oxide	Not Available	No	No	Yes	Yes	Yes	No

Other Regulations

A: General Product Information

Material meets the criteria for inclusion in WHMIS D2A.

B: Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Aluminum	7429-90-5	1 %
Manganese	7439-96-5	1 %
Chromium (III) oxide	Not Available	1 %

C: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS	AUST.	MITI
Aluminum	7429-90-5	Yes	Yes	Yes	Yes	No
Magnesium	7439-95-4	Yes	Yes	Yes	Yes	No
Manganese	7439-96-5	Yes	Yes	Yes	Yes	No
Thermoplastic polymer	Proprietary	Yes	Yes	No	Yes	Yes
Fire retardant	Proprietary	Yes	Yes	Yes	Yes	Yes
Chromium (III) oxide	Not Available	Yes	Yes	Yes	Yes	Yes

Inventory information

All additional components not identified above are listed on the TSCA Inventory.

MITI Inventory: Pure metals are not specifically listed by CAS or MITI number on the MITI Inventory. However, the class of compounds for each of these metals is listed.

* * * Section 16 - Other Information * * *

MSDS History

Original: January 25, 2008

MSDS Status

01/25/2008: New MSDS.

Prepared By

Hazardous Materials Control Committee
Preparer: Stephanie Williams, 412-553-1479/Jon N. Peace, 412-553-2293

MSDS System Number

214550

Other Information

* Aluminum Association's Bulletin F-1, "Guidelines for Handling Aluminum Fines Generated During Various Aluminum Fabricating Operations." The Aluminum Association, 1525 Wilson Boulevard, Suite 600, Arlington, Virginia 22209, www.aluminum.org.
* Aluminum Association, "Guidelines for Handling Molten Aluminum, The Aluminum Association, 1525 Wilson Boulevard, Suite 600, Arlington, Virginia 22209, www.aluminum.org.
* NFPA 65, Standard for Processing and Finishing of Aluminum (NFPA phone: 800-344-3555)
* NFPA 651, Standard for Manufacture of Aluminum and Magnesium Powder
* NFPA 70, Standard for National Electrical Code (Electrical Equipment, Grounding and Bonding)
* NFPA 77, Standard for Static Electricity
* Guide to Occupational Exposure Values-2007, Compiled by the American Conference of Governmental Industrial Hygienists (ACGIH).
* Documentation of the Threshold Limit Values and Biological Exposure Indices, Sixth Edition, 1991, Compiled by the American Conference of Governmental Industrial Hygienists, Inc. (ACGIH).
* NIOSH Pocket Guide to Chemical Hazards, U.S. Department of Health and Human Services, February 2004.
* Patty's Industrial Hygiene and Toxicology: Volume II: Toxicology, 4th ed., 1994, Patty, F. A.; edited by Clayton, G. D. and Clayton, F. E.: New York: John Wiley & Sons, Inc.
* expub, www.expub.com, Expert Publishing, LLC.

Key-Legend:

ACGIH	American Conference of Governmental Industrial Hygienists
AICS	Australian Inventory of Chemical Substances
CAS	Chemical Abstract Service
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CPR	Cardio-pulmonary Resuscitation
DOT	Department of Transportation
DSL	Domestic Substances List (Canada)
EC	Effective Concentration
ED	Effective Dose
EINECS	European Inventory of Existing Commercial Chemical Substances
EPA	Environmental Protection Act
IARC	International Agency for Research on Cancer
LC_{50}	Lethal concentration (50 percent kill)
LC_{Lo}	Lowest published lethal concentration
LD_{50}	Lethal dose (50 percent kill)
LD_{Lo}	Lowest published lethal dose
LFL	Lower Flammable Limit
MITI	Ministry of International Trade & Industry
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NORM	Naturally Occurring Radioactive Materials
NTP	National Toxicology Program
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PIN	Product Identification Number
PSN	Proper Shipping Name
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
STEL	Short Term Exposure Limit
TCLP	Toxic Chemicals Leachate Program
TDG	Transportation of Dangerous Goods
TLV	Threshold Limit Value
TSCA	Toxic Substance Control Act
TWA	Time Weighted Average
UFL	Upper Flammable Limit
WHMIS	Workplace Hazardous Materials Information System
atm	atmosphere
cm	centimeter
g, gm	gram
in	inch
kg	kilogram
lb	pound
m	meter
mg	milligram
ml, ML	milliliter
mm	millimeter
mppcf	million particles per cubic foot
n.o.s.	not otherwise specified
ppb	parts per billion
ppm	parts per million
psia	pounds per square inch absolute
u	micron
ug	microgram

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This is the end of MSDS # 1426