

1. Identification

GHS product identifier	Corrugated Aluminum Pipe and Accessories
Product code	104, 105, 106, 109
SDS number	1
Version #	01
Issue date	05-July-2013
Revision date	-
Supersedes date	-
CAS #	Mixture
Recommended use	Industrial use.
Recommended Restrictions	Not available.
Manufacturer	
Company name	Contech Engineered Solutions, LLC
Address	9025 Centre Pointe Drive West Chester, Ohio 45069, United States
Contact person	Dan Moody
Telephone number	513-645-7055
E-mail	dmoody@conteches.com
Emergency telephone number	1-800-255-3924

2. Hazards identification

GHS classification	
Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.
GHS label elements	
Signal word	None.
Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Specific hazards	No inhalation hazard in manufactured and shipped state. Chronic exposure to breathing low levels of manganese dust or fume over a long period of time can result in "manganism," a disease of the central nervous system similar to Parkinson's Disease, gait impairment, muscle spasms and behavioral changes. Solid aluminum does not present an inhalation hazard. Some chromium compounds (primarily hexavalent chromium) can cause sensitization (chrome allergy). Elevated temperatures or mechanical action may form dust and fumes which may be irritating to the eye, mucous membranes and respiratory tract. Heating above the melting point releases metallic oxides which may cause metal fume fever by inhalation. The symptoms are shivering, fever, malaise and muscular pain. The effects might be delayed. Molten material will produce thermal burns. Mechanical processing may generate dust. Suspensions of aluminum dust in air may pose a severe explosion hazard, especially in confined atmosphere.

3. Composition/information on ingredients

Components	CAS #	Percent
Aluminum	7429-90-5	95
Manganese	7439-96-5	1.8
Silicon	7440-21-3	1.8
Other components below reportable levels		1.4

4. First aid measures

First aid procedures

Inhalation	In case of inhalation of dusts or fumes from heated product: Move to fresh air. Call a physician if symptoms develop or persist.
Skin	Contact with dust: Wash off with soap and water. Get medical attention if irritation develops and persists. Cuts or abrasions should be treated promptly with thorough cleansing of the affected area. In case of burns with hot metal, rinse with plenty of cold water. If burns are severe, consult a physician.
Eye	Dust in the eyes: Do not rub eyes. Rinse with water. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.
Ingestion	Not likely, due to the form of the product. Dust: Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. Get medical attention if symptoms occur.

Most important symptoms and effects, both acute and delayed

Contact with dust: Irritation of eyes and mucous membranes. Irritation of nose and throat.

Notes to physician

Treat symptomatically.

General advice

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media

Use fire-extinguishing media appropriate for surrounding materials.
In case of aluminum fires, use a class D dry-powder extinguisher (Lith-X).

Unsuitable extinguishing media

Do not use water or halogenated extinguishing media.

Specific hazards arising from the chemical

Not a fire hazard unless in particle form. Suspensions of aluminum dust in air may pose a severe explosion hazard. A potential for explosion exists for a mixture of fine and coarse particles if at least 15% to 20% of the material is finer than 44 microns (325 mesh). Buffing and polishing generate finer material than grinding, sawing and cutting.
During fire, gases hazardous to health may be formed.

Protective equipment and precautions for firefighters

Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Protection of fire-fighters

Move containers from fire area if you can do so without risk. Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions

Aluminum in the form of particles may be reactive. Its hazardous characteristics, including fire and explosion, should be considered prior to handling. Avoid generation and spreading of dust. Avoid inhalation of dust and contact with skin and eyes. For personal protection, see Section 8 of the SDS.

Environmental precautions

Prevent further leakage or spillage if safe to do so.

Methods for containment

Stop the flow of material, if this is without risk.

Methods for cleaning up

The product is immiscible with water and will sediment in water systems. Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas.

Dust: Collect dust using a vacuum cleaner equipped with HEPA filter. If not possible, gently moisten dust before it is collected with shovel, broom or the like. Collect in approved containers and seal securely. Containers must be labeled.

For waste disposal, see Section 13 of the SDS.

7. Handling and storage

Handling

Welding, burning, sawing, brazing, grinding or machining operations may generate fumes and dusts of metal oxides. Provide adequate ventilation. Keep away from heat, spark, open flames and other sources of ignition. Use work methods which minimize dust production. Avoid inhalation of dust and contact with skin and eyes. Avoid contact with sharp edges and hot surfaces. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Storage

Store away from incompatible materials.

8. Exposure controls / personal protection

Control parameters

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	1 mg/m3	Respirable fraction.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Manganese (CAS 7439-96-5)	TWA	0.2 mg/m3	
Recommended monitoring procedures	Follow standard monitoring procedures.		
Engineering controls	Special ventilation should be used to convey finely divided metallic dust generated by grinding, sawing etc., in order to eliminate explosion hazards. Observe occupational exposure limits and minimize the risk of inhalation of dust.		
Personal protective equipment			
Eye/face protection	If contact is likely, safety glasses with side shields are recommended. In addition to safety glasses or goggles, a welding helmet with appropriate shaded shield is required during welding, burning, or brazing. A face shield is recommended, in addition to safety glasses or goggles, during sawing, grinding, or machining. Eye wash fountain is recommended.		
Skin protection	Wear suitable protective clothing.		
Respiratory protection	Use an approved respirator designed for the hazard, where concentrations exceed exposure limits. The use of both primary and secondary protective equipment is necessary when handling molten metal. Refer to "Aluminum Association" guidelines. Seek advice from local supervisor.		
Hand protection	Wear suitable protective gloves to prevent cuts and abrasions. When material is heated, wear gloves to protect against thermal burns. Suitable gloves can be recommended by the glove supplier.		

9. Physical and chemical properties

Appearance

Physical state	Solid.
Color	Silver-gray.
Form	Solid.
Odor	None.
Odor threshold	Not applicable.
pH	Not applicable.
Melting point/Freezing point	950 °F (510 °C)
Boiling point	Not available.
Flash point	Not available.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Fine particles may form explosive mixtures with air.
Flammability limits in air, lower, % by volume	Not available.
Flammability limits in air, upper, % by volume	Not available.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	2.5 - 2.9
Solubility (H2O)	Insoluble in water.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not applicable.

10. Stability and reactivity

Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur. In the form of particles (small chips, fine turnings, dusts), aluminum reacts with water and air humidity, strong basic solutions, strong acidic solutions, halogenated acids (eg.: hydrofluoric acid), producing flammable hydrogen gas.

Conditions to avoid	Contact with incompatible materials. Avoid conditions which create dust.
Incompatible materials	Molten aluminum may explode in contact with water. In the form of particles, aluminum may explode when mixed with halogenated acids, halogenated solvents, bromates, iodates or ammonium nitrate. Aluminum particles in contact with copper, lead or iron oxides can react vigorously with release of heat if there is a source of ignition or intense heat.
Hazardous decomposition products	Welding, burning, sawing, brazing, grinding or machining operations may generate dusts and fumes of metal oxides.

11. Toxicological information

Toxicological data

Components	Species	Test Results
Manganese (CAS 7439-96-5)		
Acute		
<i>Oral</i>		
LD50	Rat	9000 mg/kg
Silicon (CAS 7440-21-3)		
Acute		
<i>Oral</i>		
LD50	Rat	3160 mg/kg

Routes of exposure	Inhalation. Eyes. Skin.
Toxicological information	Occupational exposure to the substance or mixture may cause adverse effects.
Acute toxicity	Dust may irritate respiratory system. High concentrations of freshly formed fumes/dusts of metal oxides can produce symptoms of metal fume fever.
Skin corrosion/irritation	May cause irritation through mechanical abrasion.
Serious eye damage/eye irritation	May cause irritation through mechanical abrasion.
Respiratory sensitizer	Not classified.
Skin sensitization	Product contains chromium, which may cause an allergic skin sensitization reaction.
Mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Chromium VI compounds are regarded as human carcinogens by IARC, NTP, OSHA and ACGIH.
Reproductive toxicity	Based on available data, the classification criteria are not met.
Specific target organ toxicity - single exposure	Based on available data, the classification criteria are not met.
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Not classified.
Local effects	Dust may irritate the eyes. May cause irritation through mechanical abrasion. Skin contact with hot metal can cause burns.
Chronic effects	Prolonged inhalation may be harmful.
Symptoms	Dust: Irritation of eyes and mucous membranes. Irritation of nose and throat.
Epidemiology	Based on epidemiological studies, pre-existing pulmonary disorders may be aggravated by prolonged exposure to high concentrations of metal dust or fumes.
Other information	Exposure to manganese fume/dust can affect the central nervous system (apathy, drowsiness, weakness and other chronic symptoms such as postural tremors). Aluminum fumes generated during welding or melting present low health risks. Welding or plasma arc cutting of aluminum alloys can generate ozone, nitric oxides and ultraviolet radiation. Ozone overexposure may result in mucous membrane irritation or pulmonary discomfort. UV radiation can cause skin erythema and welders flash.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Environmental effects	Not classified as an environmental hazard.
Persistence / degradability	No data is available on the degradability of this product.
Bioaccumulation	No data available for this product.
Aquatic toxicity	Not classified.
Mobility	Not relevant, due to the form of the product.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal methods	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

ADR

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available.
List of abbreviations	Not available.