SAFETY DATA SHEET

Alloy SN100C M8



Section 1. Identification

GHS product identifier : Alloy SN100C M8

Reference number : GHS003

Other means of : Not applicable identification

Product type : Solid. [Solder Paste]

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Supplier's details : AIM

9100 Henri Bourassa East

Montreal, QC H1E 2S4 (514) 494-2000

In the United States:

AIM

25 Kenney Drive Cranston, RI 02920 (800) CALL-AIM

In México

AlM Soldadura de México Circuito Interior Norte # 460 Parque Industrial Salvarcar Ciudad Juárez, Chih. (656) 630-0032

Emergency telephone number (with hours of

number (with hours of operation)

: INFOTRAC

North America: (800) 535-5053 International: (352) 323-3500

Section 2. Hazards identification

OSHA/HCS status

: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

: SKIN SENSITIZATION - Category 1

GHS label elements

Hazard pictograms :



Signal word

Warning

Hazard statements

: May cause an allergic skin reaction.

Precautionary statements

Prevention

: Wear protective gloves. Avoid breathing dust. Contaminated work clothing must not be allowed out of the workplace.

anowed out of the

Response

: IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.

Storage : Not applicable.

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Section 2. Hazards identification

Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified

: None known.

Section 3. Composition/information on ingredients

Substance/mixture
Other means of
identification

: Mixture: Not applicable

Ingredient name	%	CAS number
Tin	≥75 - ≤90	7440-31-5
Rosin	≤3	65997-06-0
copper	≤1	7440-50-8
Amine Decanoic Acid Salt	≤1	-
Nickel	<0.1	7440-02-0

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact

: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation

: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact

: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

Inhalation

: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

: No known significant effects or critical hazards.

Skin contact: May cause an allergic skin reaction.

Ingestion: No known significant effects or critical hazards.

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Section 4. First aid measures

Over-exposure signs/symptoms

Eye contact : No specific data. Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:

irritation redness

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large

quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash

contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing

media

: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing

media

: None known.

Specific hazards arising from the chemical

Hazardous thermal

: No specific fire or explosion hazard.

decomposition products

: Decomposition products may include the following materials: carbon dioxide

carbon monoxide metal oxide/oxides

Special protective actions for fire-fighters

: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable

training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

Environmental precautions

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

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Section 6. Accidental release measures

Small spill

: Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill

: Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

including any incompatibilities

Conditions for safe storage, : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Tin	ACGIH TLV (United States, 3/2019). TWA: 2 mg/m³, (as Sn) 8 hours. Form: Inhalable fraction NIOSH REL (United States, 10/2016). TWA: 2 mg/m³ 10 hours. OSHA PEL (United States, 5/2018).
Rosin copper	TWA: 2 mg/m³, (as Sn) 8 hours. None. ACGIH TLV (United States, 3/2019). TWA: 1 mg/m³, (as Cu) 8 hours. Form: Dust and mist TWA: 0.2 mg/m³ 8 hours. Form: Fume OSHA PEL 1989 (United States, 3/1989). TWA: 1 mg/m³, (as Cu) 8 hours. Form: Dusts and Mists TWA: 0.1 mg/m³, (as Cu) 8 hours. Form: Fume NIOSH REL (United States, 10/2016). TWA: 1 mg/m³, (as Cu) 10 hours. Form: Dusts and Mists OSHA PEL (United States, 5/2018). TWA: 1 mg/m³ 8 hours. Form: Dusts and Mists TWA: 0.1 mg/m³ 8 hours. Form: Fume

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Section 8. Exposure controls/personal protection

Amine Decanoic Acid Salt

Nickel

None.

ACGIH TLV (United States, 3/2019).

TWA: 1.5 mg/m³ 8 hours. Form: Inhalable

fraction

OSHA PEL 1989 (United States, 3/1989).

TWA: 1 mg/m³, (as Ni) 8 hours.

NIOSH REL (United States, 10/2016).

TWA: 0.015 mg/m³, (as Ni) 10 hours.

OSHA PEL (United States, 5/2018).

TWA: 1 mg/m³, (as Ni) 8 hours.

Appropriate engineering controls

Environmental exposure controls

: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with sideshields.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid. [Solder Paste]

Color : Not available.
Odor : Not available.
Odor threshold : Not available.
pH : Not available.

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Section 9. Physical and chemical properties

Melting point : Not available. : Not available. **Boiling point** Flash point Not available. : Not available. **Evaporation rate** : Not available. Flammability (solid, gas) Lower and upper explosive : Not available.

(flammable) limits

: Not available. Vapor pressure Vapor density : Not available. **Relative density** : Not available. : Not available. **Solubility** : Not available. Solubility in water Not available.

Partition coefficient: noctanol/water

: Not available. **Auto-ignition temperature Decomposition temperature** : Not available. **Viscosity** : Not available. Flow time (ISO 2431) : Not available.

Section 10. Stability and reactivity

: No specific test data related to reactivity available for this product or its ingredients. Reactivity

Chemical stability : The product is stable.

Possibility of hazardous reactions

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition

: Under normal conditions of storage and use, hazardous decomposition products should

: Under normal conditions of storage and use, hazardous reactions will not occur.

products

not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Rosin	LD50 Oral	Guinea pig	5000 mg/kg	-
	LD50 Oral	Rat	8400 mg/kg	-
Nickel	LDLo Oral	Guinea pig	5 mg/kg	-

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

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Section 11. Toxicological information

Classification

Product/ingredient name	OSHA	IARC	NTP
Rosin	None.	4	-
copper	-	-	Known to be a human carcinogen.
Amine Decanoic Acid Salt	None.	4	-
Nickel	-	2B	Reasonably anticipated to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely

routes of exposure

: Not available.

Potential acute health effects

Eye contactInhalationNo known significant effects or critical hazards.No known significant effects or critical hazards.

Skin contact: May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact: Adverse symptoms may include the following:

irritation redness

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Long term exposure

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to

very low levels.

Carcinogenicity : No known significant effects or critical hazards.Mutagenicity : No known significant effects or critical hazards.

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Section 11. Toxicological information

Teratogenicity

Developmental effects

: No known significant effects or critical hazards.

Developmental effects Fertility effects No known significant effects or critical hazards.No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	195000 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
copper	Acute EC50 1100 μg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute EC50 2.1 µg/l Fresh water	Daphnia - Daphnia longispina -	48 hours
		Juvenile (Fledgling, Hatchling,	
		Weanling)	
	Acute IC50 13 μg/l Fresh water	Algae - Pseudokirchneriella	72 hours
		subcapitata - Exponential growth	
		phase	
	Acute IC50 5.4 mg/l Marine water	Aquatic plants - Plantae -	72 hours
		Exponential growth phase	
	Acute LC50 0.072 μg/l Marine water	Crustaceans - Amphipoda - Adult	48 hours
	Acute LC50 7.56 μg/l Marine water	Fish - Periophthalmus waltoni - Adult	96 hours
	Chronic NOEC 2.5 µg/l Marine water	Algae - Nitzschia closterium -	72 hours
		Exponential growth phase	
	Chronic NOEC 7 mg/l Fresh water	Aquatic plants - Ceratophyllum	3 days
		demersum	
	Chronic NOEC 0.02 mg/l Fresh water	Crustaceans - Cambarus bartonii - Mature	21 days
	Chronic NOEC 2 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 0.8 µg/l Fresh water	Fish - Oreochromis niloticus -	6 weeks
		Juvenile (Fledgling, Hatchling,	
		Weanling)	
Nickel	Acute EC50 2 ppm Marine water	Algae - Macrocystis pyrifera -	4 days
		Young	
	Acute EC50 450 µg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute EC50 1000 µg/l Marine water	Daphnia - Daphnia magna	48 hours
	Acute IC50 0.31 mg/l Marine water	Crustaceans - Americamysis	48 hours
		bahia - Juvenile (Fledgling,	
		Hatchling, Weanling)	
	Acute LC50 47.5 ng/L Fresh water	Fish - Heteropneustes fossilis	96 hours
	Chronic NOEC 100 mg/l Marine water	Algae - Glenodinium halli	72 hours
	Chronic NOEC 3.5 µg/l Fresh water	Fish - Cyprinus carpio	4 weeks

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Rosin	3.42	-	low

Mobility in soil

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Section 12. Ecological information

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-	-
Packing group	-	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.	No.
Additional information	-	-	-	-	-	-

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according : Not available. to Annex II of MARPOL and

the IBC Code

Section 15. Regulatory information

U.S. Federal regulations : United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112

(b) Hazardous Air **Pollutants (HAPs)** : Listed

Clean Air Act Section 602

: Not listed

Class I Substances

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Section 15. Regulatory information

Clean Air Act Section 602

Class II Substances

Not listed

DEA List I Chemicals

: Not listed

(Precursor Chemicals)

DEA List II Chemicals

: Not listed

(Essential Chemicals)

State regulations

Massachusetts : The following components are listed: TIN

New York : None of the components are listed.

New Jersey : The following components are listed: TIN; bis(2-butoxyethyl) ether Pennsylvania : The following components are listed: TIN; bis(2-butoxyethyl) ether

California Prop. 65

WARNING: This product can expose you to Nickel, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Ingredient name	Cancer	•	level	Maximum acceptable dosage level
Nickel	Yes.	No.	_	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Ingredient name	List name	Status
Triethanolamine	Schedule III	Listed

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

Australia : Not determined.
Canada : Not determined.
China : Not determined.
Europe : Not determined.

Japan : Japan inventory (ENCS): Not determined.

Japan inventory (ISHL): Not determined.

Malaysia: Not determinedNew Zealand: Not determinedPhilippines: Not determinedRepublic of Korea: Not determinedTaiwan: Not determinedTurkey: Not determined

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Section 16. Other information

Hazardous Material Information System (U.S.A.)



National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
SKIN SENSITIZATION - Category 1	Calculation method

History

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revision

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Key to abbreviations : ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973

as modified by the Protocol of 1978. ("Marpol" = marine pollution)

UN = United Nations

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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