SAFETY DATA SHEET

Alloy SAC305 WS 483

Section 1. Identification

GHS product identifier	: Alloy SAC305 WS 483
Reference number	: GHS023
Other means of	: Not available.
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
	AIM Soldadura de México Circuito Interior Norte # 460 Parque Industrial Salvarcar Ciudad Juárez, Chih. (656) 630-0032
Emergency telephone number (with hours of operation)	INFOTRAC North America: (800) 535-5053 International: (352) 323-3500

Section 2. Hazards identification

OSHA/HCS status	: While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Classification of the substance or mixture	: Not classified.
GHS label elements	
Signal word	: No signal word.
Hazard statements	: No known significant effects or critical hazards.
Precautionary statements	
Prevention	: Not applicable.
Response	: Not applicable.
Storage	: Not applicable.
Disposal	: Not applicable.
Hazards not otherwise classified	: None known.

Section 3. Composition/information on ingredients

Substance/mixture

Other means of identification

- : Mixture
- : Not available.

Ingredient name	%	CAS number
Tin	≥75 - ≤90	7440-31-5
Poly(oxy-1,2-ethanediyl), α-(1-oxooctadecyl)-ω-hydroxy-	≤6.7	9004-99-3
silver	≤3	7440-22-4
2-methylpentane-2,4-diol	≤3	107-41-5
bis(2-(2-methoxyethoxy)ethyl) ether	≤3	143-24-8
copper	≤1	7440-50-8

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. Get medical attention if irritation occurs.
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	 Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: Wash out mouth with water. 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. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effe	ects			
Eye contact	No known significant effects or critical hazards.			
Inhalation	: No known significant effects or critical hazards.			
Skin contact	: No known significant effects or critical hazards.			
Ingestion	: No known significant effects or critical hazards.			
Over-exposure signs/sym	<u>ptoms</u>			
Eye contact	: No specific data.			
Inhalation	: No specific data.			
Skin contact	: No specific data.			
Ingestion	: No specific data.			
Indication of immediate me	edical 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.			

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	: No specific fire or explosion hazard.
Hazardous thermal 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. 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 non-emergency 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 co	nta	ainment and cleaning up			
Small spill	:	Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.			
Large spill	:	Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, 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 handl	ing
Protective measures	: Put on appropriate personal protective equipment (see Section 8).
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.

Section 7. Handling and storage

materials before handling or use.	Conditions for safe storage, including any incompatibilities	:	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.
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Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Exposure limits
ACGIH TLV (United States, 3/2019). TWA: 2 mg/m ³ , (as Sn) 8 hours. Form: Inhalable fraction NIOSH REL (United States, 10/2016). TWA: 2 mg/m ³ 10 hours. OSHA PEL (United States, 5/2018). TWA: 2 mg/m ³ , (as Sn) 8 hours.
ACGIH TLV (United States, 3/2019). TWA: 10 mg/m ³ 8 hours. Form: Inhalable fraction TWA: 3 mg/m ³ 8 hours. Form: Respirable fraction
OSHA PEL 1989 (United States, 3/1989). TWA: 0.01 mg/m ³ , (as Ag) 8 hours. ACGIH TLV (United States, 3/2019). TWA: 0.1 mg/m ³ 8 hours. Form: Dust and fumes OSHA PEL (United States, 5/2018). TWA: 0.01 mg/m ³ , (as Ag) 8 hours. NIOSH REL (United States, 10/2016). TWA: 0.01 mg/m ³ , (as Ag) 10 hours. Form: METAL DUST AND SOLUBLE
OSHA PEL 1989 (United States, 3/1989). CEIL: 25 ppm CEIL: 125 mg/m ³ NIOSH REL (United States, 10/2016). CEIL: 25 ppm CEIL: 125 mg/m ³ ACGIH TLV (United States, 3/2019). STEL: 10 mg/m ³ 15 minutes. Form: Inhalable fraction. Aerosol only. STEL: 50 ppm 15 minutes. Form: Vapor fraction TWA: 25 ppm 8 hours. Form: Vapor fraction
None. ACGIH TLV (United States, 3/2019). TWA: 1 mg/m ³ , (as Cu) 8 hours. Form: Dust and mist TWA: 0.2 mg/m ³ 8 hours. Form: Fume OSHA PEL 1989 (United States, 3/1989). TWA: 1 mg/m ³ , (as Cu) 8 hours. Form: Dusts and Mists TWA: 0.1 mg/m ³ , (as Cu) 8 hours. Form: Fume NIOSH REL (United States, 10/2016). TWA: 1 mg/m ³ , (as Cu) 10 hours. Form: Dusts and Mists OSHA PEL (United States, 5/2018).

Section 8. Exposure controls/personal protection

TWA: 1	mg/m³ 8	hours.	Form: Du	usts and
Mists	-			
TWA: 0).1 ma/m³	8 hours	s. Form:	Fume

Appropriate engineering controls	: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
Environmental exposure controls	: 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 meas	<u>'es</u>
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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safet 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 side-shields.
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 necessary.
Body protection	: Personal protective equipment for the body should be selected based on the task bein 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 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

<u>Appearance</u>	
Physical state	: Solid. [Solder Paste]
Color	: Not available.
Odor	: Not available.
Odor threshold	: Not available.
рН	Not available.
Melting point	: Not available.
Boiling point	: Not available.
Flash point	: Not applicable.
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Not applicable.
Vapor pressure	: Not available.
Vapor density	: Not applicable.

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Section 9. Physical and chemical properties

Relative density	: Not available.
Solubility	: Not available.
Solubility in water	: Not available.
Partition coefficient: n- octanol/water	: Not applicable.
Auto-ignition temperature	: Not applicable.
Decomposition temperature	: Not available.
Viscosity	: Not applicable.
Flow time (ISO 2431)	: Not available.

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific data.
Incompatible materials	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Poly(oxy-1,2-ethanediyl), α- (1-oxooctadecyl)-ω-hydroxy-	LD50 Oral	Rat	>20 g/kg	-
2-methylpentane-2,4-diol	LD50 Oral LD50 Oral LD50 Oral LD50 Oral	Guinea pig Rabbit Rat Rat	2800 mg/kg 3200 mg/kg 3700 mg/kg 3700 mg/kg	- - -
bis(2-(2-methoxyethoxy)ethyl) ether	LD50 Dermal LD50 Oral	Rat Rat	>6900 mg/kg 3850 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Poly(oxy-1,2-ethanediyl), α- (1-oxooctadecyl)-ω-hydroxy-	Eyes - Mild irritant	Rabbit	-	24 hours 100 UI	-
(* =//======;), == :.;=: =/;	Skin - Moderate irritant	Rabbit	-	24 hours 500 Ul	-
	Skin - Severe irritant	Rabbit	-	24 hours 500 Ul	-
2-methylpentane-2,4-diol	Skin - Mild irritant	Rabbit	-	465 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500	-
bis(2-(2-methoxyethoxy)ethyl) ether	Eyes - Mild irritant	Rabbit	-	500 mg	-

Not available.

Section 11. Toxicological information

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification Product/ingredient name **OSHA** IARC NTP copper _ Known 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. : Not available. Information on the likely routes of exposure Potential acute health effects Eye contact : No known significant effects or critical hazards. Inhalation : No known significant effects or critical hazards. **Skin contact** : No known significant effects or critical hazards. Ingestion : No known significant effects or critical hazards. Symptoms related to the physical, chemical and toxicological characteristics : No specific data. Eye contact Inhalation : No specific data. **Skin contact** : No specific data. : No specific data. Ingestion 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 : No known significant effects or critical hazards. Carcinogenicity : No known significant effects or critical hazards.

Date of issue/Date of revision

Mutagenicity

: No known significant effects or critical hazards.

Section 11. Toxicological information

Teratogenicity
Developmental effects
Fertility effects

: No known significant effects or critical hazards.

: 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	154773.87 mg/kg

Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
silver	Acute EC50 1.4 µg/l Marine water	Algae - Chroomonas sp.	4 days
	Acute EC50 0.24 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 11 µg/l Fresh water	Crustaceans - Ceriodaphnia reticulata	48 hours
	Acute LC50 2.13 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 5 mg/l Marine water	Algae - Glenodinium halli	72 hours
2-methylpentane-2,4-diol	Acute EC50 2800000 µg/l Fresh water	Crustaceans - Ceriodaphnia reticulata - Larvae	48 hours
	Acute EC50 3200000 µg/l Fresh water	Daphnia - Daphnia magna - Larvae	48 hours
	Acute LC50 8000000 µg/l Marine water	Fish - Alburnus alburnus	96 hours
bis(2-(2-methoxyethoxy)ethyl) ether	EC10 2871 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours
	EC50 8996 mg/l	Aquatic plants - Pseudokirchneriella subcapitata	72 hours
	EC50 7467 mg/l	Daphnia	48 hours
	LC50 >5000 mg/l	Fish - Brachydanio rerio	96 hours
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 - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute IC50 13 μg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute IC50 5.4 mg/l Marine water	Aquatic plants - Plantae - Exponential growth phase	72 hours
	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 - Exponential growth phase	72 hours
	Chronic NOEC 7 mg/l Fresh water	Aquatic plants - Ceratophyllum demersum	3 days
	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 - Juvenile (Fledgling, Hatchling, Weanling)	6 weeks

Persistence and degradability

Not available.

Section 12. Ecological information

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
silver 2-methylpentane-2,4-diol bis(2-(2-methoxyethoxy)ethyl) ether	- 0.58 -0.84	70 - -	low low low

Mobility in soil

Soil/water partition : Not available. coefficient (Koc)

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. 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	ΙΑΤΑ
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	Reportable quantity 38095.2 lbs / 17295.2 kg. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation	-	-	-	-	-

1	Alloy SAC305 WS 483									
(Section 14. Transport information									
	requ	uirements.						Ī		

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 IMO instruments

Section 15. Regulatory information

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)	: Not listed
Clean Air Act Section 602 Class I Substances	: Not listed
Clean Air Act Section 602 Class II Substances	: Not listed
DEA List I Chemicals (Precursor Chemicals)	: Not listed
DEA List II Chemicals (Essential Chemicals)	: Not listed
State regulations	
Massachusetts	: The following components are listed: TIN; SILVER; 2-methylpentane-2,4-diol
New York	: The following components are listed: Silver
New Jersey	: The following components are listed: TIN; SILVER; 2-methylpentane-2,4-diol
Pennsylvania	: The following components are listed: TIN; SILVER COMPOUNDS; 2-methylpentane- 2,4-diol

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

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 (CSCL): Not determined. Japan inventory (ISHL): Not determined.
Malaysia	: Not determined
New Zealand	: Not determined.

Section 15. Regulatory information

Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Turkey	: Not determined.

Section 16. Other information



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.

	Classification	Justification
Not classified.		
<u>History</u>		
Date of printing	: 4/26/2024	
Date of issue/Date of revision	: 4/26/2024	
Date of previous issue	: 4/24/2024	
Version	: 0.08	
Key to abbreviations	 0.08 ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Internediate 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 the	at has changed from previously issued version.	

Procedure used to derive the classification

Notice to reader

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Section 16. Other information

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.