THE G. A. AVRIL COMPANY

SOLDER ALLOYS

SAFETY DATA SHEET

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According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

SECTION I: IDENTIFICATION

Product Identifier

Date Prepared: January 2, 2018

Product Form: Substance

Product Name: Solder Alloys of Lead, Tin and Antimony

Tin	15 - 63%
Lead	37 - 85%
Antimony	less than 1.0%

Intended Use of the Product

Use of the substance/mixture: For professional use only.

Name, Address, and Telephone of the Responsible Party

Company

The G. A. Avril Company
2108 Eagle Court
Cincinnati, OH 45237
(513) 731-5133

Emergency Telephone Number

Emergency Number: 513-731-5133, 800-331-9173

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification according to Regulation (EC) No 1272/2008

GHS08 Health Hazard

Resp. 2 H361 Suspected of damaging fertility or the unborn child.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Aquatic Chronic 4 H413 May cause long lasting harmful effects to aquatic life.

Label Elements

Labeling according to Regulation (EC) No 1272/2008

This product is classified and labelled according to the CLP regulation.

Hazard Pictograms

GHS08

GHS07

Signal Word Warning

Hazard-determining components of labeling:
Lead (Pb)
Hazard statements
H302 - Harmful if swallowed.
H361 - Suspected of damaging fertility or the unborn child.
H373 - May cause damage to organs through prolonged or repeated exposure.
H413 - May cause long lasting harmful effects to aquatic life.
Precautionary statements
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P302+P352 IF ON SKIN: Gently wash with plenty of soap and water.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification systems:
NFPA Ratings (scale 0-4)
Health = 1
Fire = 0
Reactivity = 0

HMIS - ratings (scale 0-4)
Health = *2
Fire = 0
Reactivity = 0

Others Hazards
Results of PBT and vPvB assessment
PBT: Not applicable
vPvB: Not applicable

SECTION 3: COMPOSITION OF MIXTURE
Chemical characterization: Mixture
Description: Mixture: consisting of the following components.

CAS No.	Description		% Range
CAS: 7440-31-5 EINECS: 231-141-8	Tin (Sn)		15 - 63%
CAS: 7439-92-1 EINECS: 231-100-4	Lead (Pb)	Repr. 2 H361; STOT RE 2, H373 Acute Tox. 4, H302 Aquatic Chronic 4, H413	37 - 85%
CAS: 7440-36-0 EINECS: 231-146-5	Antimony		< 1.0%

Additional information:
Composition and weight percent of solder alloys varies widely and can be determined by product label. This solder product does not contain any Substance of Very High Concern (SVHC) on the European Chemicals Agency.
(ECHA) candidate list.

SECTION 4: FIRST AID MEASURES
Description of First Aid Measures
General information: Follow general first aid procedures.
After Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing.
Obtain medical attention if breathing difficulty persists.
After skin contact: Immediately wash with water and soap and rinse thoroughly.
After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do.
Continue rinsing. Obtain medical attention.
After Ingestion: Seek immediate medical advice.
Information for doctor:
Most Important symptoms and effects, both acute and delayed No further relevant information available. Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5: FIRE-FIGHTING MEASURES
Extinguishing Media
Suitable Extinguishing Agents: CO_2, sand, extinguishing powder. Do not use water.
Special hazards arising from the substance or mixture
In case of fire, the following can be released.
Nitrogen oxides (NOx)
Carbon monoxide (CO)
Carbon dioxide (CO_2)

ADVICE FOR FIREFIGHTERS
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, protective equipment and emergency procedures: Ensure adequate ventilation.
Environmental Precautions Do not allow to enter sewers/surface or ground water.
Method and material for Containment and Clean Up
Dispose contaminated material as waste according to Item 13.
Ensure adequate ventilation.
Melted solder will solidify on cooling and can be scraped up. Use caution to avoid breathing fumes if a gas torch is used to cut up large pieces.
Reference to other sections.
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: HANDLING AND STORAGE

Handling **Precautions for safe handling:** Prevent formation of dust.
Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: Store in cool location.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: None.
Store in dry conditions.
Exposure to sulfur or high humidity will tarnish solder surface.
Specific end use (s) No further relevant information available.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Additional information about design of technical systems: No further data: see item 7.

Control parameters

Components with limit values that require monitoring at the workplace:			
Component	**ACGIH TLV**	**OSHA PEL**	**REL**
Tin (7440-31-5)	2 mg/m3	2 mg/m3	2 mg/m3
Lead (7439-92-1)	0.05 mg/m3	0.05 mg/m3	0.05 mg/m3
Antimony (7440-36-9)	0.5 mg/m3	0.5 mg/m3	0.5 mg/m3

Additional information:
PEL = Permissible Exposure Limit (OSHA)
TLV = Threshold Limit Value (ACGIH)
ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration

Exposure controls
Personal protective equipment:
General protective and hygienic measures:
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Breathing equipment:
Exposure controls: Use appropriate engineering control such as process enclosures, local exhaust ventilation to control airborne levels below recommended exposure limits.
When ventilation is not sufficient to remove airborne levels from the breathing zone, a NIOSH safety approved respirator or self-contained breathing apparatus should be worn. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.




Eye/face Protection	Wear appropriate protective eyeglasses or chemical safety googles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin and Body Protection	Wear appropriate protective gloves and clothing to prevent skin exposure. Material of gloves: Cloth gloves, Nitrile rubber, NBR; Natural rubber, NR Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Respiratory Protection	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid metal preform; wire or bar
Appearance:	Silver grey
Odor	Odorless
pH	Not Applicable
Change in condition	No data available
Melting point/Melting range:	361 - 460 °F (183 - 238 °C)
Flash Point	Undetermined
Flammability (solid, gas)	Not determined
Danger of explosion	Product does not present an explosion hazard.
Auto-Ignition Temperature	Product is not selfigniting
Vapor Pressure	Not Applicable
Density at 20°C (68° F):	8.4 - 9.3 g/cm3 (70.098 - 77.60 lbs/gal)
Vapor density	Not Applicable
Solubility in/ miscibility with	
Water	Insoluble
Solvent content:	
Organic solvents:	0.0%
Solids content:	100.0%

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Chemical Stability Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Possibility of hazardous reactions: No dangerous reactions known.

Conditions to avoid: No further relevant information available.

Incompatible materials: Strong acids, strong oxidizers.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity

Primary irritant effect:
on the skin: No irritant effect.
on the eye: No irritating effect.
through ingestion:
May cause gastrointestinal irritation
May be harmful if swallowed.

Additional Toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful

Carcinogenic categories

IARC (International Agency for Research on Cancer)	
7439-92-1	Lead (Pb)
NTP (National Toxicology Program)	
7439-92-1	Lead (Pb)

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Aquatic toxicity: No further relevant information available.

Additional ecological information:

General Notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Danger to drinking water if even extremely small quantities leak into the ground.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Methods

Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Disposal must be made according to official regulations.

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

SECTION 14: TRANSPORT INFORMATION

UN-Number	Not regulated
ADR	Not regulated
UN proper shipping name	Not regulated
IMDG, IATA	Not regulated
Transport hazard class(es)	

DOT, ADR, IMDG, IATA

Class	Not regulated
Packing group	Not regulated
Marine pollutant:	No
Special marking (ADR):	Not regulated
Special marking (IATA):	Not regulated
Special precautions for user	Not applicable
Transport in bulk according to Annex II of MARPOL73/78 and the IBC code	Not applicable

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

USA The following information relates to product regulation specific to the USA.

SARA (Superfund Amendments and Reauthorization Act)

Section 355 (extremely hazardous substances):	
None of the ingredient is listed.	
Section 313 (Specific toxic chemical listings):	
7439-92-1	Lead (Pb)

TSCA (Toxic Substances Control Act): Avril certifies that all components listed below for the subject finished product are on the TSCA Inventory of Chemical Substances and are not subject to any chemical specific regulation under TSCA Section 12(b) export notification requirements delineated at 40 CFR part 707, subpart D.

All ingredients are listed or exempt from listing.	

California Proposition 65

Chemicals known to cause cancer:

WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

LEAD (Pb)

Chemicals known to cause reproductive toxicity:

WARNING: This product contains a chemical(s) known to the State of California to cause birth defects and/or other reproductive harm.

LEAD (Pb)

Carcinogenic categories

EPA (Environmental Protection Agency)		
7439-92-1	LEAD (Pb)	B2
NIOSH-Ca (National Institute for Occupational Safety and Health		
None of the ingredients is listed.		
OSHA-Ca (Occupational Safety & Health Administration)		
None of the ingredients is listed.		

SECTION 16 - OTHER INFORMATION

The information contained herein is based on data considered accurate and is offered solely for information, consideration and investigation. Avril extends no warranties, makes no representations and assumes no responsibility as to the accuracy, completeness or suitability of this data for any purchaser's use. The data on the Safety Data Sheet relates only to this product and does not relate to use with any other material or in any process. All chemical products should be used only by, or under the direction of, technically qualified personnel who are aware of the hazards involved and the necessity for reasonable care in handling. Hazard communication regulations require that employees must be trained on how to use a Safety Data Sheet as a source for hazard information.

Abbreviations and acronyms:

RID: Regulations Concerning the International Transport of Dangerous Goods by Rail.
ICAO: International Civil Aviation Organization
ADR: European Agreement concerning the International Carriage of Dangerous Good by Road
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Exiting Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
Acute Tox. 4: Acute Toxicity, Hazard Category 4
Repr. 2: Reproductive toxicity, Hazard Category 2
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
Aquatic Chronic 4: Hazardous to the aquatic environment - Chronic Hazard, Category 4