



Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by UK REACH Regulation SI 2019/758

## SAFETY DATA SHEET

Sn62 Pb36 Ag2 1.60X0.80X0.80mm Rectangular PS-PF-000

FOR REGULATORY AND SDS QUESTIONS (EUROPE)  
CALL THE PRODUCT STEWARDSHIP LINE  
(ENGLISH SPEAKING ONLY)  
+1-908-791-2336 (15:00 – 21:00 CET; MONDAY-FRIDAY)

### SECTION 1: Identification of the substance/mixture and of the company/ undertaking

#### 1.1 Product identifier

**Product name** : Sn62 Pb36 Ag2 1.60X0.80X0.80mm Rectangular PS-PF-000  
**Product code** : 52627

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

##### Identified uses

soldering  
Industrial applications.

#### 1.3 Details of the supplier of the safety data sheet

**e-mail address of person responsible for this SDS** : Europeanregulatory@macdermid.com

**Supplier** : Fernox UK Ltd  
2 Genesis Business Park  
Albert Drive  
Sheerwater, Surrey  
Woking GU21 5RW

**Information contact** : Contact info: Tel: +44 (0) 330 100 7750  
e-mail: salesEU@AlphaAssembly.com

#### 1.4 Emergency telephone number

##### National advisory body/Poison Centre

**Telephone number** :

##### Supplier

**Telephone number** : Carechem24: (+44) 1865 407333; (+44) 1235 239 670 (across Europe)  
**Hours of operation** : 24/7

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Product definition** : Mixture**Classification according to UK CLP/GHS**

Repr. 1A, H360FD

Lact., H362

STOT RE 1, H372 (blood system, central nervous system (CNS), kidneys)

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

**2.2 Label elements****Hazard pictograms** :**Signal word** : Danger

**Hazard statements** : H360FD - May damage fertility. May damage the unborn child.  
 H362 - May cause harm to breast-fed children.  
 H372 - Causes damage to organs through prolonged or repeated exposure. (blood system, central nervous system (CNS), kidneys)

**Precautionary statements**

**Prevention** : P201 - Obtain special instructions before use.  
 P280 - Wear protective gloves: < 1 hour (breakthrough time): disposable vinyl. Wear protective clothing: Recommended: overall. Wear eye or face protection: Recommended: face shield .  
 P260 - Do not breathe dust.  
 P263 - Avoid contact during pregnancy and while nursing.

**Response** : P308 + P313 - IF exposed or concerned: Get medical advice or attention.**Storage** :**Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.**Hazardous ingredients** : lead massive [particle diameter > 1 mm]**Supplemental label elements** : Not applicable.**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Restricted to professional users.**Special packaging requirements****2.3 Other hazards****Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.**Other hazards which do not result in classification** : None known.

**SECTION 3: Composition/information on ingredients****3.2 Mixtures** : Mixture

Product/ingredient name	Identifiers	%	Classification	Type
tin	REACH #: 01-2119486474-28 EC: 231-141-8 CAS: 7440-31-5	≥50 - ≤75	Not classified.	[2]
lead massive [particle diameter > 1 mm]	REACH #: 01-2119513221-59 EC: 231-100-4 CAS: 7439-92-1 Index: 082-014-00-7	≥25 - ≤50	Repr. 1A, H360FD Lact., H362 STOT RE 1, H372 (blood system, central nervous system (CNS), kidneys) (oral, inhalation)	[1] [2]
silver	REACH #: 01-2119555669-21 EC: 231-131-3 CAS: 7440-22-4	≤3	Not classified.	[2]
			<b>See Section 16 for the full text of the H statements declared above.</b>	

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, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

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

**SECTION 4: First aid measures****4.1 Description of first aid measures**

- Eye contact** : Get medical attention.
- Inhalation** : Not applicable.
- Skin contact** : Flush contaminated skin with plenty of water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Cuts should be treated promptly and covered.
- Ingestion** : Not applicable.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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.

**4.2 Most important symptoms and effects, both acute and delayed**Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations

## SECTION 4: First aid measures

**Ingestion** : Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations

### 4.3 Indication of any immediate medical attention and special treatment needed

**Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

### 5.2 Special hazards arising from the substance or mixture

**Hazards from the substance or mixture** : No specific fire or explosion hazard.

**Hazardous combustion products** : Decomposition products may include the following materials:  
metal oxide/oxides

### 5.3 Advice for firefighters

**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** : No special protection is required.

## SECTION 6: Accidental release measures

### 6.1 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. Put on appropriate personal protective equipment.

**For emergency responders** : If specialised 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".

**6.2 Environmental precautions** : No specific hazard.

### 6.3 Methods and material for containment and cleaning up

**Small spill** : Restack safely. Take care with items that are sharp or heavy.

**Large spill** : Restack safely. Take care with items that are sharp or heavy. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid contact during pregnancy or while nursing. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Take care with items that are sharp or heavy.
- Advice on general occupational hygiene** : 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.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store locked up. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

- Recommendations** : No specific measures identified.
- Industrial sector specific solutions** : No specific measures identified.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
tin	<b>EH40/2005 WELs (United Kingdom (UK), 2002).</b> TWA: 2 mg/m <sup>3</sup> 8 hours. STEL: 4 mg/m <sup>3</sup> 15 minutes.
lead massive [particle diameter > 1 mm]	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> TWA: 0.15 mg/m <sup>3</sup> 8 hours.
silver	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> TWA: 0.1 mg/m <sup>3</sup> 8 hours.

**Recommended monitoring procedures** : Not applicable.

#### EU DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
tin	DNEL	Long term Oral	5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	10 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	17 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	71 mg/m <sup>3</sup>	Workers	Systemic
silver	DNEL	Long term Dermal	80 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	0.04 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	0.1 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Oral	1.2 mg/kg bw/day	General population	Systemic

#### EU PNECs

No PNECs available

## SECTION 8: Exposure controls/personal protection

### 8.2 Exposure controls

**Appropriate engineering controls** : No special ventilation requirements. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

#### Individual protection measures

**Hygiene measures** : Wash thoroughly after handling.

**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. Recommended: face shield

#### Skin protection

**Hand protection** : Use strong, cut-resistant gloves suitable for handling metals. < 1 hour (breakthrough time): disposable vinyl

**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. Recommended: overall

**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** : Not applicable. Recommended: particulate filter

**Environmental exposure controls** : Not applicable.

## SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### 9.1 Information on basic physical and chemical properties

#### Appearance

**Physical state** : Solid.

**Colour** : Silvery.

**Odour** : None.

**Odour threshold** : There are no data available on the mixture itself.

**Melting point/freezing point** : 179°C

**Initial boiling point and boiling range** : Not available.

**Flammability (solid, gas)** : There are no data available on the mixture itself.

**Upper/lower flammability or explosive limits** : Not applicable.

**Flash point** : Not applicable.

**Auto-ignition temperature** : Not applicable.

**Decomposition temperature** : There are no data available on the mixture itself.

**pH** : Testing not technically possible.

**Viscosity** : Not applicable.

**Solubility(ies)** :

Media	Result
cold water	Not soluble
hot water	Not soluble

**Solubility in water** : There are no data available on the mixture itself.

**Partition coefficient: n-octanol/ water** : Not applicable.

**SECTION 9: Physical and chemical properties**

<b>Vapour pressure</b>	: Not available.
<b>Evaporation rate</b>	: There are no data available on the mixture itself.
<b>Relative density</b>	: There are no data available on the mixture itself.
<b>Density</b>	: 8.41 g/cm <sup>3</sup> [20°C (68°F)]
<b>Vapour density</b>	: Not applicable.
<b>Explosive properties</b>	: There are no data available on the mixture itself.
<b>Oxidising properties</b>	: There are no data available on the mixture itself.
<b>Particle characteristics</b>	
<b>Median particle size</b>	: Not relevant/applicable due to nature of the product.

**9.2 Other information**

<b>SAPT</b>	: Not relevant/applicable due to nature of the product.
-------------	---

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	: Not available.
<b>10.2 Chemical stability</b>	: The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: No specific data.
<b>10.5 Incompatible materials</b>	: No specific data.
<b>10.6 Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity**

**Conclusion/Summary** : Not tested

**Acute toxicity estimates**

N/A

**Irritation/Corrosion****Conclusion/Summary**

**Skin** : Not tested

**Eyes** : Not tested

**Respiratory** : Not tested

**Sensitisation****Conclusion/Summary**

**Skin** : Not tested

**Respiratory** : Not tested

**Mutagenicity**

**Conclusion/Summary** : Not tested

**Carcinogenicity**

**Conclusion/Summary** : Not tested

**Reproductive toxicity**

**Conclusion/Summary** : Not tested

**Teratogenicity**



**SECTION 11: Toxicological information****Conclusion/Summary** : Not tested**Specific target organ toxicity (single exposure)**

Not available.

**Specific target organ toxicity (repeated exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
lead massive [particle diameter > 1 mm]	Category 1	oral, inhalation	blood system, central nervous system (CNS), kidneys

**Aspiration hazard**

Not available.

**Information on likely routes of exposure** : Not tested**Potential acute health effects****Eye contact** : Not applicable.**Inhalation** : Not applicable.**Skin contact** : No known significant effects or critical hazards.**Ingestion** : Not applicable.**Symptoms related to the physical, chemical and toxicological characteristics****Eye contact** : No specific data.**Inhalation** : Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations**Skin contact** : Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations**Ingestion** : Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Short term exposure****Potential immediate effects** : Not available.**Potential delayed effects** : Not available.**Long term exposure****Potential immediate effects** : Not available.**Potential delayed effects** : Not available.**Potential chronic health effects**

Not available.

**Conclusion/Summary** : Not available.**General** : Causes damage to organs through prolonged or repeated exposure.**Carcinogenicity** : No known significant effects or critical hazards.**Mutagenicity** : No known significant effects or critical hazards.



**SECTION 11: Toxicological information**

**Reproductive toxicity** : May damage fertility. May damage the unborn child.  
May cause harm to breast-fed children.

**Other information** : No known significant effects or critical hazards.

**SECTION 12: Ecological information****12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure
lead massive [particle diameter > 1 mm]	Acute EC50 105 ppb Marine water	Algae - Diatom - Chaetoceros sp. - Exponential growth phase	72 hours
	Acute EC50 0.489 mg/l Marine water	Algae - Green algae - Ulva pertusa	96 hours
	Acute EC50 8000 µg/l Fresh water	Aquatic plants - Duckweed - Lemna minor	4 days
	Acute LC50 530 µg/l Fresh water	Crustaceans - Water flea - Ceriodaphnia reticulata	48 hours
	Acute LC50 0.594 mg/l Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Acute LC50 0.44 ppm Fresh water	Fish - common carp - Cyprinus carpio - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 0.25 mg/l Marine water	Algae - Green algae - Ulva pertusa	96 hours
	Chronic NOEC 17 µg/l Fresh water	Fish - common carp - Cyprinus carpio	4 weeks
silver	Acute LC50 4500 ppb Fresh water	Crustaceans - Scud - Gammarus pseudolimnaeus	48 hours
	Acute LC50 0.24 µg/l Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 5 mg/l Marine water	Algae - Dinoflagellate - Glenodinium halli	72 hours

**Conclusion/Summary** : Ecological testing has not been conducted on this product.

**12.2 Persistence and degradability**

**Conclusion/Summary** : Not available.

**12.3 Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
silver	-	70	low

**12.4 Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

**12.5 Results of PBT and vPvB assessment**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimised 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.

**Hazardous waste** : Yes.

#### Waste catalogue

Waste code	Waste designation
06 04 05*	wastes containing other heavy metals

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues.

## SECTION 14: Transport information

	ADR/RID	IMDG	IATA
<b>14.1 UN number</b>	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-
<b>14.4 Packing group</b>	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.

#### Additional information

**IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.

**14.6 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.

**14.7 Transport in bulk according to IMO instruments** : Not applicable - not transported in bulk

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****UK (GB) /REACH****Annex XIV - List of substances subject to authorisation****Annex XIV**

None of the components are listed.

**Substances of very high concern**

Intrinsic property	Ingredient name	Status	Reference number	Date of revision
Toxic to reproduction	lead	Candidate	-	27-Jun-18

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Restricted to professional users.

**National regulations**

Product/ingredient name	List name	Name on list	Classification	Notes
lead massive [particle diameter > 1 mm]	UK Occupational Exposure Limits EH40 - WEL	lead	Carc.	-

**EU regulations**

**Industrial emissions (integrated pollution prevention and control) - Air** : Listed

**Industrial emissions (integrated pollution prevention and control) - Water** : Listed

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments are still required.

**SECTION 16: Other information**

🔍 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms**

: ATE = Acute Toxicity Estimate  
 GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EUH statement = GB CLP-specific Hazard statement  
 N/A = Not available  
 PBT = Persistent, Bioaccumulative and Toxic  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number  
 SGG = Segregation Group  
 vPvB = Very Persistent and Very Bioaccumulative

**Procedure used to derive the classification**

**SECTION 16: Other information**

Classification	Justification
Repr. 1A, H360FD Lact., H362 STOT RE 1, H372 (blood system, central nervous system (CNS), kidneys)	Calculation method Calculation method Calculation method

**Full text of abbreviated H statements**

H360FD	May damage fertility. May damage the unborn child.
H362	May cause harm to breast-fed children.
H372	Causes damage to organs through prolonged or repeated exposure.

**Full text of classifications**

Lact.	REPRODUCTIVE TOXICITY - Effects on or via lactation
Repr. 1A	REPRODUCTIVE TOXICITY - Category 1A
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1

**Date of printing** : 24 May 2023

**Date of issue/ Date of revision** : 28 April 2023

**Date of previous issue** : 19 December 2020

**Version** : 4.02

**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.

MacDermid Alpha SDS CLP Europe