



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

SAFETY DATA SHEET

SAC405 1.6X0.8x0.8mm Angular 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 : SAC405 1.6X0.8x0.8mm Angular PS-PF-000
Product code : 56541

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

Not classified.

The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

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

2.2 Label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

Prevention :

Response :

Storage :

Disposal :

Supplemental label elements : EUH210 - Safety data sheet available on request.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

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	≥90	Not classified.	[1]
silver	REACH #: 01-2119555669-21 EC: 231-131-3 CAS: 7440-22-4	≤5	Not classified. See Section 16 for the full text of the H statements declared above.	[1]

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 with a workplace exposure limit

SECTION 3: Composition/information on ingredients

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 if any damage to the eye is caused by the metal.
- Inhalation** : Not applicable.
- Skin contact** : Flush contaminated skin with plenty of water. 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.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

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".

SECTION 6: Accidental release measures

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). 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. 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	EH40/2005 WELs (United Kingdom (UK), 2002). TWA: 2 mg/m ³ 8 hours. STEL: 4 mg/m ³ 15 minutes.
silver	EH40/2005 WELs (United Kingdom (UK), 1/2020). TWA: 0.1 mg/m ³ 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 ³	General population	Systemic
	DNEL	Long term Inhalation	71 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	80 mg/kg bw/day	General population	Systemic
silver	DNEL	Long term	0.04 mg/m ³	General	Systemic

SECTION 8: Exposure controls/personal protection

	DNEL	Inhalation Long term Inhalation	0.1 mg/m ³	population Workers	Systemic
	DNEL	Long term Oral	1.2 mg/kg bw/day	General population	Systemic

EU PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls : No special ventilation requirements.

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: None assigned.

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** : 217 to 220°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** : [Product does not sustain combustion.]
- 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)** :

SECTION 9: Physical and chemical properties

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.
- Vapour pressure** : Not available.
- Evaporation rate** : There are no data available on the mixture itself.
- Relative density** : There are no data available on the mixture itself.
- Density** : 7.44 g/cm³ [20°C (68°F)]
- Vapour density** : Not applicable.
- Explosive properties** : There are no data available on the mixture itself.
- Oxidising properties** : There are no data available on the mixture itself.
- Particle characteristics**
- Median particle size** : Not relevant/applicable due to nature of the product.

9.2 Other information

- SAPT** : Not relevant/applicable due to nature of the product.

SECTION 10: Stability and reactivity

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

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

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

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** : No specific data.**Skin contact** : No specific data.**Ingestion** : No specific data.**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** : No known significant effects or critical hazards.**Carcinogenicity** : No known significant effects or critical hazards.**Mutagenicity** : No known significant effects or critical hazards.**Reproductive toxicity** : No known significant effects or critical hazards.**Other information** : No known significant effects or critical hazards.

SECTION 12: Ecological information**12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure
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 _{ow}	BCF	Potential
silver	-	70	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : 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 : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

Waste catalogue

Waste code	Waste designation
10 08 11	dross and skimmings other than those mentioned in 10 08 10

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
14.1 UN number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	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

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

EU regulations

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

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

SECTION 15: Regulatory information

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

Not classified.

Full text of abbreviated H statements

Not applicable.

Full text of classifications

Not applicable.

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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