

SAFETY DATA SHEET

**Manufacturer: Surclean Materials Technology, SMT Technology Centre
Cowes, I.o.W., UK, PO31 7AD.**

Emergency Contact – Tel: +44 (0)1983 290333 Email: info@surclean.co.uk

Tinmans No. 3 Soldering Flux

1. Composition/Information on ingredients

Hazardous ingredients in preparation for EC

Ingredient Name	CAS	Concentration
Ammonium Chloride	12125-02-9	1.00 - 5.00%
Zinc Chloride	7646-85-7	20.00 - 50.00%

P Phrases - P102 + P305 + P338 + P280 + P281 + P314 + P301 + P302 + P330 + P501 + P101 + P262 + P264 + P270. P & H Phrase detailed definitions P2 Sect.15

2. Main hazardous effects

Main hazards	Causes burns.
Health effects - Eyes	Liquid will cause severe conjunctival irritation and corneal damage. Serious damage may result if treatment is delayed.
Health effects - Skin	Material will cause chemical burns.
Health effects - Ingestion	Swallowing may have the following effects: Corrosion of mouth, throat and digestive tract, abdominal pain and nausea.
Health effects - Inhalation	Exposure to vapour or mist may have the following effects: Severe irritation of nose, throat and respiratory tract and possible lung damage.

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3. First Aid Measures

First Aid - Eyes	Immediately flood eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention urgently.
First Aid - Skin	Wash skin with soap and water. Remove contaminated clothing as washing proceeds. Obtain medical attention urgently.
First Aid - Ingestion	Wash out mouth with water. Have victim drink 1 - 3 glasses of water to dilute stomach contents. Do not induce vomiting. Obtain medical attention urgently.
First Aid - Inhalation	Remove from exposure. Keep warm and at rest. Obtain medical attention urgently.
Advice to physicians	Treat burns conventionally. Administer cycloplegics and ophthalmic antibiotics if there is corneal damage and obtain advice. Avoid gastric lavage or emetics - these increase the possibility of perforation.

4. Firefighting Measures

Extinguishing Media	Not combustible. Select extinguishing agent appropriate to other materials involved.
Unsuitable Extinguishing Media	Treat burns conventionally. Administer cycloplegics and ophthalmic antibiotics if there is corneal damage and obtain specialist advice. Avoid gastric lavage or emetics - these increase the possibility of perforation.
Special hazards of product	This product may give rise to hazardous fumes in a fire. Dangerous when exposed to heat or flame.

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Protective Equipment	Wear full protective clothing and self-contained breathing apparatus.
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5. Accidental Release Measures

Personal Precautions	Wear appropriate protective clothing.
Environmental Precautions	Try to prevent the material from entering drains or water courses. Advise Authorities if spillage has entered water course or sewer or has contaminated soil or vegetation.
Spillage	Neutralise by careful addition of hydrated lime or soda ash. Finally flush area with plenty of water.

6. Handling and Storage

Handling	Use in well ventilated area. Avoid inhaling vapour. Avoid contact with eyes, skin and clothing. Keep container tightly closed when not in use. Emergency shower and eye wash facilities should be readily available.
Storage	Storage area should be: Cool, dry, well ventilated, under cover. Store in original containers. Because of its corrosive nature, extreme care should be exercised in the choice of materials for pumps, gaskets and lines.

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7. Exposure Controls/Personal Protection

Occupational Exposure Standards

Ammonium Chloride	UK EH40: OES 10mg/m ³ 8h TWA (fume). UK EH40: OES, STEL 20mg/m ³ 15min (fume).
Tin	UK EH40: OES 1.0mg/m ³ 8h TWA (fume). UK EH40: OES, STEL 2.0mg/m ³ 15min (fume).
Engineering Control Measures	Fumes from soldering process should not be breathed. Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust) and control of process conditions. Administrative controls and personal protective equipment may also be required.
Respiratory Protection	Respiratory protection if there is a risk of exposure to high vapour concentrations.
Hand Protection	Butyl rubber gloves. Nitrile rubber gloves. PVC gloves. Neoprene gloves.
Eye Protection	Chemical goggles and face shield.
Body Protection	If there is danger of splashing, wear an overall or apron.

8. Physical and Chemical Properties

Physical State	Liquid.
Colour	Clear.

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Odour	Odourless.
pH	Strongly acidic.
Boiling Range/Point (°C)	100
Solubility in Water (kg/m³)	Completely soluble.
Auto-flammable (°C)	Not auto-flammable.
Vapour Density (Air = 1)	Heavier than air.
Viscosity (cSt)	2 at 20° C
Density (Kg/m³)	1.2 at 20° C

9. Stability and Reactivity

Stability	Stable under normal conditions.
Conditions to avoid	High temperatures.
Materials to avoid	Alkalis.
Hazardous Decomposition Products	Combustion will generate: Metal oxide fumes, hydrogen chloride.

10. Toxicological Information

Acute Toxicity	Low order of acute toxicity.
Irritancy - Eyes	Data for a closely related material suggests that this product will produce severe conjunctival irritation and corneal damage.
Irritancy - Skin	Data for a closely related material suggests that this product will produce burns (full thickness destruction of skin).

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Skin Sensitisation	None known.
Chronic Toxicity/Carcinogenicity	None known.
Reproductive/Developmental Toxicity	None known.

11. Ecological Information

Mobility	The product will dissolve rapidly in water.
Persistence/Degradability	The product is partially or slowly biodegradable.
Bio-accumulation	Limited information indicates a potential to bioaccumulate.
Ecotoxicity	The product is rated as slightly toxic to aquatic species.

12. Disposal Considerations

Product Disposal	Landfill after ensuring that material is no longer reactive and has been neutralised. This material will be classified as a 'special waste' under the COPA (Special Waste) Regulations 1996 and must be disposed of in accordance with those regulations. The product will dissolve rapidly in water.
Container Disposal	Labels should not be removed from the containers until they have been cleaned. Empty containers may contain hazardous residues. Dispose of containers with care. Contaminated containers must not be re-used.

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13. Transport Information

UN, ADR/RID Substance ID No	1760
UN, IMDG, IATA Proper Shipping Name	Corrosive liquid, N.O.S.
UN, ADR/RID, IMDG, IATA Class	8
UN, IMDG, IATA Packing Group	III
ADR/RID Description	Corrosive or slightly corrosive liquids, non-inflammable or having a flash-point above 55° C
ADR/RID Item Number	65° (b)
ADR/RID Hazard ID No	80
IMDG Marine Pollutant	Yes.
Tremcard Number TEC(R)	80G 20 C

14. Regulatory Information

Labelling Information



H Phrases	H302 Harmful if swallowed. H314 Causes burns. H319 Serious irritation to eyes. H400 Harmful to Aquatic life.
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P Phrases	<p>P102 Keep locked up and out of reach of children.</p> <p>P305 In case of contact with eyes, rinse immediately with plenty of water.</p> <p>P338 Remove contact lenses.</p> <p>P280/281 Wear suitable protective clothing, gloves and eye/face protection.</p> <p>P314 In case of accident or if you feel unwell, seek medical advice immediately.</p> <p>P101 (show the label).</p> <p>P262 Do not get in eyes, on skin, or on clothing.</p> <p>P501 Dispose the contents/container in accordance with national and regional regulations.</p> <p>P330 if swallowed rinse mouth immediately.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P264 Wash exposed skin thoroughly after handling this product.</p>
EINECS Listings	Not listed.
EC Annex I classification	C - Corrosive.

15. Other information: Issued 02/2023 : v.1.0

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