

## SAFETY DATA SHEET

### LEAD FREE SOLDER PASTE LFS UFP T5 ZQ

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

##### 1.1. Product identifier

**Product name** LEAD FREE SOLDER PASTE LFS UFP T5 ZQ

**Product number** 7274T5

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

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

**Supplier** BLT Circuit Services Limited  
Brome Industrial Estate  
Brome, Eye  
Suffolk. IP23 7HN

+44 1379 870870  
01379 870970  
sales@blt.keme.co.uk

##### 1.4. Emergency telephone number

**Emergency telephone** +44 1379 870870 09:00 ---17:00

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Classification (SI 2019 No. 720)

**Physical hazards** Not Classified

**Health hazards** Eye Irrit. 2 - H319

**Environmental hazards** Aquatic Acute 1 - H400

Classification (67/548/EEC or 1999/45/EC) R43.

##### 2.2. Label elements

###### Hazard pictograms



**Signal word** Warning

**Hazard statements** H319 Causes serious eye irritation.  
H400 Very toxic to aquatic life.

**Precautionary statements** P264 Wash contaminated skin thoroughly after handling.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313 If eye irritation persists: Get medical advice/ attention.  
P391 Collect spillage.  
P501 Dispose of contents/ container in accordance with national regulations.

## LEAD FREE SOLDER PASTE LFS UFP T5 ZQ

### 2.3. Other hazards

#### SECTION 3: Composition/information on ingredients

##### 3.2. Mixtures

<b>TIN</b>		<b>60-100%</b>
CAS number: 7440-31-5		
<b>Classification</b>	<b>Classification (67/548/EEC or 1999/45/EC)</b>	
Not Classified	-	
<b>SILVER</b>		<b>1-5%</b>
CAS number: 7440-22-4		
M factor (Acute) = 1000		
<b>Classification</b>	<b>Classification (67/548/EEC or 1999/45/EC)</b>	
Aquatic Acute 1 - H400	-	
<b>Polymerised rosin</b>		<b>1-5%</b>
CAS number: 65997-05-9                      EC number: 500-163-2		
<b>Classification</b>	<b>Classification (67/548/EEC or 1999/45/EC)</b>	
Not Classified	Not classified	
<b>2-(2-HEXYLOXYETHOXY)ETHANOL</b>		<b>1-5%</b>
CAS number: 112-59-4                      EC number: 203-988-3		
<b>Classification</b>	<b>Classification (67/548/EEC or 1999/45/EC)</b>	
Acute Tox. 4 - H312	Xn;R21 Xi;R41	
Eye Dam. 1 - H318		
<b>COPPER</b>		<b>&lt;1%</b>
CAS number: 7440-50-8		
<b>Classification</b>	<b>Classification (67/548/EEC or 1999/45/EC)</b>	
Not Classified	-	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

#### SECTION 4: First aid measures

##### 4.1. Description of first aid measures

<b>General information</b>	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
<b>Inhalation</b>	Move affected person to fresh air at once. Get medical attention. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.
<b>Ingestion</b>	Do not induce vomiting. Never give anything by mouth to an unconscious person. Do not induce vomiting. Remove affected person from source of contamination. Give plenty of water to drink. Get medical attention immediately. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.

## LEAD FREE SOLDER PASTE LFS UFP T5 ZQ

**Skin contact** Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention promptly if symptoms occur after washing.

**Eye contact** Remove affected person from source of contamination. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

**Inhalation** May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Ingestion** Harmful if swallowed.

**Skin contact** Irritating to skin.

**Eye contact** Irritating to eyes.

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

**Notes for the doctor** If in doubt, get medical attention promptly.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable extinguishing media** Water spray. Alcohol-resistant foam. Carbon dioxide (CO<sub>2</sub>).

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

**Specific hazards** Fire creates: Toxic gases/vapours/fumes of: Heavy metals and Aldehydes

### 5.3. Advice for firefighters

**Protective actions during firefighting** Fire can be extinguished using: Carbon dioxide (CO<sub>2</sub>). Water spray. Powder Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

**Special protective equipment for firefighters** Wear self contained breathing apparatus

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions** Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet.

### 6.2. Environmental precautions

**Environmental precautions** PREVENT CONTAMINATION OF SOIL AND WATER. PREVENT FROM ENTERING INTO DRAINS

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

**Methods for cleaning up** Scrape up spilled material and put in sealed container for disposal. Avoid contact with skin.

### 6.4. Reference to other sections

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Usage precautions** Provide adequate ventilation. Do not eat, drink or smoke during use. Wash hands after handling solder paste. Avoid spilling. Avoid contact with skin and eyes.

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

**Storage precautions** Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep only in the original container.

## LEAD FREE SOLDER PASTE LFS UFP T5 ZQ

### 7.3. Specific end use(s)

#### SECTION 8: Exposure controls/Personal protection

### 8.1. Control parameters

#### Occupational exposure limits

##### TIN

Long-term exposure limit (8-hour TWA): WEL 0.2 mg/m<sup>3</sup>

##### SILVER

Long-term exposure limit (8-hour TWA): WEL 0,1 mg/m<sup>3</sup>

##### Polymerised rosin

Long-term exposure limit (8-hour TWA): WEL 0.05 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 0.15 mg/m<sup>3</sup>

##### COPPER

Long-term exposure limit (8-hour TWA): WEL 1 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 2 mg/m<sup>3</sup>

as Cu

WEL = Workplace Exposure Limit.

#### TIN (CAS: 7440-31-5)

##### DNEL

Industry - Dermal; Short term : 133.3 mg/kg/day  
 Industry - Inhalation; Short term : 11.75 mg/m<sup>3</sup>  
 Industry - Dermal; Long term : 133.3 mg/kg/day  
 Industry - Inhalation; Long term : 11.75 mg/m<sup>3</sup>  
 Consumer - Dermal; Short term : 80 mg/kg/day  
 Consumer - Inhalation; Short term : 3.476 mg/m<sup>3</sup>  
 Consumer - Oral; Short term : 80 mg/kg/day  
 Consumer - Dermal; Long term : 80 mg/kg/day  
 Consumer - Inhalation; Long term : 3.476 mg/m<sup>3</sup>

#### SILVER (CAS: 7440-22-4)

##### DNEL

Workers - Inhalation; Long term : 0.1 mg/m<sup>3</sup>  
 General population - Inhalation; Long term : 0.04 mg/m<sup>3</sup>

##### PNEC

- Fresh water; 0.04 microgram /l  
 - marine water; 0.86 microgram /l

#### COPPER (CAS: 7440-50-8)

##### DNEL

Workers - Dermal; Long term systemic effects: 0.041 mg/kg/day  
 Workers - Inhalation; Long term systemic effects: 0.041 mg/kg/day  
 Workers - Dermal; Short term systemic effects: 0.082 mg/kg/day  
 Workers - Inhalation; Short term systemic effects: 0.082 mg/kg/day

##### PNEC

- Fresh water; 7.8 microgram /l  
 - marine water; 5.2 microgram /l  
 - Sediment (Freshwater); 87 mg/kg  
 - Sediment (Marinewater); 676 mg/kg  
 - Soil; 65.5 mg/kg

### 8.2. Exposure controls

## LEAD FREE SOLDER PASTE LFS UFP T5 ZQ

### Protective equipment



<b>Appropriate engineering controls</b>	Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients.
<b>Hand protection</b>	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.
<b>Other skin and body protection</b>	AVOID ALL SKIN AND RESPIRATORY CONTACT!
<b>Hygiene measures</b>	Use engineering controls to reduce air contamination to permissible exposure level. Wash hands after handling.
<b>Respiratory protection</b>	If ventilation is inadequate, suitable respiratory protection must be worn.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Paste
<b>Colour</b>	Grey.
<b>Odour</b>	Mild (or faint).
<b>Odour threshold</b>	Not determined.
<b>pH</b>	Not determined.
<b>Melting point</b>	221°C
<b>Initial boiling point and range</b>	270 (solvent in flux)°C @
<b>Flash point</b>	180 (solvent in flux)°C Closed cup.
<b>Evaporation rate</b>	Not determined.
<b>Flammability (solid, gas)</b>	Not determined.
<b>Upper/lower flammability or explosive limits</b>	: Not determined
<b>Vapour pressure</b>	Not determined @ °C
<b>Vapour density</b>	Not determined.
<b>Relative density</b>	4-6 @ @ 20°C
<b>Bulk density</b>	Not determined.
<b>Partition coefficient</b>	Not determined.
<b>Auto-ignition temperature</b>	Not determined.
<b>Decomposition Temperature</b>	Not determined.
<b>Viscosity</b>	180 Pa.s
<b>Explosive properties</b>	Not considered to be explosive.
<b>Explosive under the influence of a flame</b>	No

## LEAD FREE SOLDER PASTE LFS UFP T5 ZQ

**Oxidising properties** There are no chemical groups present in the product that are associated with oxidising properties.

### 9.2. Other information

**Particle size** 10-25 MICRONS

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

#### 10.2. Chemical stability

**Stability** Stable at normal ambient temperatures. SHELF LIFE 6 MONTHS WHEN STORED AT<5 DEGREES CENTIGRADE IN SEALED CONTAINERS

#### 10.3. Possibility of hazardous reactions

#### 10.4. Conditions to avoid

**Conditions to avoid** Avoid contact with the following materials: Acids. Oxidising agents.

#### 10.5. Incompatible materials

#### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Fire creates: Thermal decomposition or combustion products may include the following substances: Irritating gases or vapours. Aldehydes

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

**Toxicological effects** No data recorded.

#### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** TIN , no toxicity at 2000mg/kg (oral) animal data suggests that the oral absorption of Tin is low.

#### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** Not determined.

**ATE dermal (mg/kg)** 44,000.0

#### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** Not determined.

#### Skin corrosion/irritation

**Skin corrosion/Irritation** Causes skin irritation.

**Animal data** Not determined.

**Human skin model test** Not determined.

**Extreme pH** Moderate pH ( > 2 and < 11.5).

#### Serious eye damage/irritation

**Serious eye damage/irritation** Irritation of eyes is assumed.

#### Respiratory sensitisation

**Respiratory sensitisation** May cause allergy or asthma symptoms or breathing difficulties if inhaled.

#### Skin sensitisation

**Skin sensitisation** May cause an allergic skin reaction.

#### Germ cell mutagenicity

## LEAD FREE SOLDER PASTE LFS UFP T5 ZQ

<b>Genotoxicity - in vitro</b>	Not determined.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	There is no evidence that the product can cause cancer.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	Not determined.
<b>Reproductive toxicity - development</b>	This substance has no evidence of toxicity to reproduction.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Not anticipated to present an aspiration hazard, based on chemical structure.
<b><u>Inhalation</u></b>	
<b>Inhalation</b>	May cause sensitisation by inhalation.
<b><u>Ingestion</u></b>	
<b>Ingestion</b>	Very toxic if swallowed.
<b><u>Skin contact</u></b>	
<b>Skin contact</b>	May cause sensitisation by skin contact.
<b><u>Eye contact</u></b>	
<b>Eye contact</b>	Irritation of eyes and mucous membranes.
<b><u>Acute and chronic health hazards</u></b>	
<b>Acute and chronic health hazards</b>	May cause liver and/or renal damage. The product irritates mucous membranes and may cause abdominal discomfort if swallowed.
<b><u>Target organs</u></b>	
<b>Target organs</b>	Skin Eyes Respiratory system, lungs

### SECTION 12: Ecological information

<b>Ecotoxicity</b>	This product is not biodegradable
<b><u>12.1. Toxicity</u></b>	
<b>Toxicity</b>	Very toxic to aquatic organisms.
<b><u>12.2. Persistence and degradability</u></b>	
<b>Persistence and degradability</b>	The product contains mainly inorganic substances which are not biodegradable.
<b><u>12.3. Bioaccumulative potential</u></b>	
<b>Bioaccumulative potential</b>	The product does not contain any substances expected to be bioaccumulating.
<b><u>Partition coefficient</u></b>	
<b>Partition coefficient</b>	Not determined.
<b><u>12.4. Mobility in soil</u></b>	
<b>Mobility</b>	Not considered mobile.
<b><u>12.5. Results of PBT and vPvB assessment</u></b>	
<b>Results of PBT and vPvB assessment</b>	This substance is not classified as PBT or vPvB according to current UK criteria.
<b><u>12.6. Other adverse effects</u></b>	

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

<b>General information</b>	WASTE PRODUCT SHOULD BE DISPOSED OF VIA REGISTERED WASTE DISPOSAL COMPANY
<b>Disposal methods</b>	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Whenever possible unwanted solder paste should be sent for metal recovery by a licensed contractor.

**LEAD FREE SOLDER PASTE LFS UFP T5 ZQ****SECTION 14: Transport information**

**General** NOT CLASSIFIED IN RID/ADR OR IATA

**Road transport notes** Not regulated.

**Rail transport notes** Not regulated.

**Sea transport notes** Not regulated.

**Air transport notes** Not regulated.

**14.1. UN number**

Not classified for transport

**14.2. UN proper shipping name**

**14.3. Transport hazard class(es)**

No transport warning sign required.

**Transport labels**

No transport warning sign required.

**14.4. Packing group**

**14.5. Environmental hazards**

**Environmentally hazardous substance/marine pollutant**

No.

**14.6. Special precautions for user**

Not applicable.

**14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code**

**Transport in bulk according to** Not applicable.

**Annex II of MARPOL 73/78**

**and the IBC Code**

**SECTION 15: Regulatory information**

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

**National regulations**

Control of Substances Hazardous to Health Regulations 2002 (as amended).

EH40/2005 Workplace exposure limits.

The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended).

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out.

**SECTION 16: Other information**

**Revision date** 12/04/2024

**Revision** 2

**SDS number** LFS UFP T5 16-2

**Risk phrases in full** Not classified.

R43 May cause sensitisation by skin contact.



## LEAD FREE SOLDER PASTE LFS UFP T5 ZQ

### Hazard statements in full

H312 Harmful in contact with skin.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H400 Very toxic to aquatic life.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.