

# SAFETY DATA SHEET

## LFM 48 W/U SUC-UI according 91/155EWG (replaced by 2001/58EG)

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name	LFM 48 W/U SUC-UI
Applications	Solder paste
Supplier	 GmbH Dekan-Groh-Strasse 4 D 64720 Michelstadt/near Frankfurt
Emergency telephones	Information-central: +49 6066 96884-0

### 2. COMPOSITION/INFORMATION ON INGREDIENTS (Wt%)

Name	EC no.	CAS no.	Content	Symbol	R-phrases
Tin	231-141-8	7440-31-5	85.4 %		
Silver	231-131-3	7440-22-4	2.66 %		
Copper	231-177-4	7440-50-8	0.44 %		
Flux	-	-	11.5%	Xi	R37, R42/43

See section 16 for explanations of R-phrases

### 3. HAZARDS IDENTIFICATION

#### The most important hazard and harm

**Harm** The inflammation might be caused by coming in contact with the skin.  
The inflammation might be caused to the respiratory system by inhaling vapor.  
Moreover, it might influence the central nerve, the alimentary system, the blood formation system, and the liver by keeping inhaling.

**Environmental harm** Insoluble in water.  
The living body accumulation (concentrate) is not expected.  
The content chemical is not biodegradable.

**Physical/chemical hazard** Liable to catch fire by heating.  
Harmful fume is generated by heating and is emitted.  
This product may react with the oxidant and heat may be generated.

**The main symptom** Stimulation of eyes and respiratory organs by vapor inhalation.  
Headache, stomachache, anemia, vomiting, and paralysis (by absorbing Lead).

**Category** Harmful material

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#### 4. FIRST AID MEASURES

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<b>General</b>	Remove victim immediately from source of exposure. Provide rest, warmth and fresh air. When breathing is difficult, properly trained personnel could assist affected person by administering 100% oxygen. If breathing stops, provide artificial respiration.
<b>Inhalation</b>	Move the exposed person to fresh air at once.
<b>Ingestion</b>	Rinse nose, mouth and throat with water. Drink a few glasses of water or milk. Try to induce vomiting. Get medical attention.
<b>Skin</b>	Promptly flush contaminated skin with soap or mild detergent and water. Promptly remove clothing if penetrated and flush the skin with water. Contact physician if irritation continues. When the inflammation is caused in the skin, obtain medical attention.
<b>Eyes</b>	Promptly wash eyes by stream water for 15 minutes or more, and obtain urgent medical attention.

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#### 5. FIRE FIGHTING MEASURES

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<b>Extinguishing media</b>	Water, powder, carbon dioxide (CO <sub>2</sub> ), dry sand, and bubble (for alcohol).
<b>Special firefighting procedures</b>	The fire fighting is done from the windward. The fire fighting is done by cutting off the combustion source to the fire, and by using the extinguishing media. Promptly inform to necessary locations and request assistance. Move container to the place of safety promptly avoiding surrounding fire. If it's not possible to move container, water the container and surroundings for being cold. If the container is in flames, do fire fighting by watering the container and surroundings. Do the fire fighting by using bags of water, the powder, carbon dioxide, and the bubble (for alcohol). Prohibit the entries other than parties concerned to the fire occurrence site surrounding.
<b>Protective measures in the event of fire</b>	Wear self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products.

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#### 6. ACCIDENTAL RELEASE MEASURES

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<b>Personal protection</b>	Wear appropriate personal protective equipment - see Section 8.
<b>Spill clean-up methods</b>	Limit spread of spilled material. Prevent discharge to drainage systems. Collect and reclaim or dispose in sealed containers in licensed waste.

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#### 7. HANDLING AND STORAGE

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<b>Usage precautions</b>	Avoid spilling, skin and eye contact. Eye wash station should be available at the work place. Provide good ventilation. Avoid inhalation of vapours. Persons susceptible to allergic reactions should not handle this product.
<b>Storage precautions</b>	Keep in cool, dry, ventilated storage and closed containers.

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#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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Ingredient name	CAS no.	Reference	LT Exp 8	Hrs ST Exp 15 - Min	Date
Tin	7440-31-5	OES.	2 mg/m <sup>3</sup>	4mg/m <sup>3</sup>	
Silver	7440-22-4	OES.	0.1mg/m <sup>3</sup>	1mg/m <sup>3</sup>	
Copper	7440-50-8	OES	0.2mg/m <sup>3</sup>	1mg/m <sup>3</sup>	
Flux	-	OES	-		

**Ingredient information** OES = Occupational Exposure Standards (EH40).

**Protective equipment**



<b>Process conditions</b>	Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station.
<b>Ventilation</b>	Provide adequate general and local exhaust ventilation.
<b>Respirators</b>	If ventilation is insufficient, suitable respiratory protection must be provided. If working operation generates dust or spray mist, use respiratory protection with combination filter (dust filter + gas filter).
<b>Protective gloves</b>	For exposure of 4 to 8 hours use gloves made of: Neoprene.
<b>Eye protection</b>	Wear approved chemical safety goggles where eye exposure is reasonably probable.
<b>Other protection</b>	Use suitable protective clothing as protection against splashing and contamination.
<b>Hygienic work practices</b>	Wash promptly if skin becomes wet or contaminated. Promptly remove any wet or contaminated clothing. Wash at the end of each work shift and before eating, smoking and using the toilet. Isolate contaminated clothing and wash before reuse.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Appearance</b>	Paste		
<b>Colour</b>	Grey.		
<b>Odour</b>	Mild		
<b>Solubility description</b>	Insoluble in water. Soluble in many kinds organic solvents such as alcohol (flux).		
<b>Boiling point (°C, Flux)</b>	>260	<b>Pressure</b>	760mmHg
<b>Melting/freezing point (°C, interval)</b>	217-220		
<b>Density (g/ml)</b>	7.4	<b>Temperature (°C)</b>	20
<b>Vapour density (air=1)</b>	6.0		
<b>Vapour pressure</b>	< 0,01 mmHg	<b>Temperature (°C)</b>	20
<b>Flash point (°C)</b>	> 160	<b>Method</b>	Not recorded.
<b>Auto ignition temp. (°C)</b>	> 300		
<b>Flammability limit (%)</b>	-		

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## 10. STABILITY AND REACTIVITY

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<b>Stability</b>	Normally stable.
<b>Conditions to avoid</b>	Avoid contact with strong oxidizers.
<b>Hazardous decomposition products</b>	In usual temperature (<400°C), dangerous decomposition products are not generated.

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## 11. TOXICOLOGICAL INFORMATION

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<b>Toxic dose - LD 50:</b>	>
<b>Toxic dose - LD 50 (skin):</b>	>
<b>Health warnings</b>	<p>GENERAL HEALTH HAZARDS. The sensitizing properties represent the main hazards in industrial use.</p> <p>INHALATION. Gas or vapour could irritate respiratory system.</p> <p>SKIN CONTACT. Prolonged or repeated exposure could cause severe irritation. Could cause sensitization by skin contact.</p> <p>EYE CONTACT. Irritant of eyes and mucous membranes.</p> <p>INGESTION. Could cause Stomach ache or vomiting.</p>
<b>Route of entry</b>	Inhalation. Ingestion.
<b>Target organs</b>	Skin

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## 12. ECOLOGICAL INFORMATION

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<b>Biotoxicity</b>	Not confirmed.
<b>Bioaccumulative potential</b>	The bioaccumulation (concentrate) is not expected.
<b>Persistence and degradability</b>	The chemical is not readily biodegradable.

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## 13. DISPOSAL CONSIDERATIONS

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<b>Disposal methods</b>	Confirm disposal procedures with environmental engineer and local regulations.
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## 14. TRANSPORT INFORMATION

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<b>General</b>	Not dangerous according to ADR, RID, IMDG and IATA
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## 15. REGULATORY INFORMATION

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**Symbol(s)**



**IRRITANT**

**Contains**

Tin  
Silver  
Copper  
Flux

**Risk phrases**

R-42/43 May cause sensitization by skin contact.  
R-37 Irritation to respiration system.

**Safety phrases**

S-24 Avoid contact with skin.  
S-37 Wear suitable gloves.

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## 16. OTHER INFORMATION

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<b>Explanations of R-phrases in Section 2</b>	R-37 Irritating to respiratory system. R-43 May cause sensitization by skin contact.
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**\* Information revised since previous SDS version**

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