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

1.1. Product identifier
LOCTITE X 39 99C 2C 0.7MM H known as 99C X39 2C 0.7MM 0.5KG RLR

1.2. Relevant identified uses of the substance or mixture and uses advised against
Intended use:
Solder Wire

1.3. Details of the supplier of the safety data sheet
Henkel Ltd
Wood Lane End
HP2 4RQ Hemel Hempstead
Great Britain

Phone: +44 1442 278000
Fax-no.: +44 1442 278071
ua-productsafety.uk@uk.henkel.com

1.4. Emergency telephone number
24 Hours Emergency Tel: +44 (0)1442 278497

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
2.2. Label elements

Label elements (CLP):
The substance or mixture is not hazardous according to Regulation (EC) No 1272/2008 (CLP).

Supplemental information EUH210 Safety data sheet available on request.

2.3. Other hazards
This product contains modified rosin.
Avoid breathing fumes given out during soldering.
Flux fumes may irritate the nose, throat and lungs and may after prolonged/repeated exposure give an allergic reaction (asthma).
After handling solder wash hands with soap and water before eating, drinking or smoking.
Keep out of reach of children.

SECTION 3: Composition/information on ingredients

3.2. Mixtures
Declaratiom of the ingredients according to CLP (EC) No 1272/2008:

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS-No.</th>
<th>EC Number</th>
<th>REACH-Reg No.</th>
<th>content</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin</td>
<td>7440-31-5</td>
<td>231-141-8</td>
<td>01-2119486474-28</td>
<td>80-100%</td>
<td></td>
</tr>
</tbody>
</table>

For full text of the H - statements and other abbreviations see section 16 "Other information". Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Move to fresh air. If symptoms persist, seek medical advice.

Skin contact:
Rinse with running water and soap.
Obtain medical attention if irritation persists.

Eye contact:
Flush eyes with plenty of water for at least 5 minutes. If irritation persists seek medical attention.

Ingestion:
Do not induce vomiting.
Seek medical advice.

4.2. Most important symptoms and effects, both acute and delayed
Flux fumes may irritate the nose, throat and lungs and may after prolonged/repeated exposure give an allergic reaction (asthma).

4.3. Indication of any immediate medical attention and special treatment needed
See section: Description of first aid measures

SECTION 5: Firefighting measures

Combustion behaviour:
The product itself does not burn. Any fire extinguishing action should be appropriate to the surroundings.

5.1. Extinguishing media
Suitable extinguishing media:
Carbon dioxide, foam, powder

Extinguishing media which must not be used for safety reasons:
Do not use water on fires where molten metal is present.

5.2. Special hazards arising from the substance or mixture
In case of fire, keep containers cool with water spray.
High temperatures may produce heavy metal dust, fumes or vapours.
The flux medium will give rise to irritating fumes.

5.3. Advice for firefighters
Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Wear protective equipment.
6.2. Environmental precautions
Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up
Scrape up spilled material and place in a closed container for disposal.

6.4. Reference to other sections
See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Extraction is necessary to remove fumes evolved during reflow.
When using do not eat, drink or smoke.
Wash hands before breaks and immediately after handling the product.
See advice in section 8
Avoid breathing fumes given out during soldering.
Avoid skin and eye contact.

Hygiene measures:
Good industrial hygiene practices should be observed.
Do not eat, drink or smoke while working.
After handling solder wash hands with soap and water before eating, drinking or smoking.

7.2. Conditions for safe storage, including any incompatibilities
Ensure good ventilation/extraction.
Store in a cool, dry place.

7.3. Specific end use(s)
Solder Wire

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits
Valid for
Great Britain

<table>
<thead>
<tr>
<th>Ingredient [Regulated substance]</th>
<th>ppm</th>
<th>mg/m³</th>
<th>Value type</th>
<th>Short term exposure limit category / Remarks</th>
<th>Regulatory list</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin 7440-31-5 [TIN (INORGANIC COMPOUNDS AS SN)]</td>
<td>2</td>
<td></td>
<td>Time Weighted Average (TWA):</td>
<td>Indicative</td>
<td>ECTLV</td>
</tr>
</tbody>
</table>
Derived No-Effect Level (DNEL):

<table>
<thead>
<tr>
<th>Name on list</th>
<th>Application Area</th>
<th>Route of Exposure</th>
<th>Health Effect</th>
<th>Exposure Time</th>
<th>Value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin 7440-31-5</td>
<td>Workers</td>
<td>Dermal</td>
<td>Acute/short term exposure - systemic effects</td>
<td>133.3 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tin 7440-31-5</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Acute/short term exposure - systemic effects</td>
<td>11.75 mg/m3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tin 7440-31-5</td>
<td>Workers</td>
<td>Dermal</td>
<td>Long term exposure - systemic effects</td>
<td>133.3 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tin 7440-31-5</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long term exposure - systemic effects</td>
<td>11.75 mg/m3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tin 7440-31-5</td>
<td>general population</td>
<td>Dermal</td>
<td>Acute/short term exposure - systemic effects</td>
<td>80 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tin 7440-31-5</td>
<td>general population</td>
<td>Inhalation</td>
<td>Acute/short term exposure - systemic effects</td>
<td>3,476 mg/m3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tin 7440-31-5</td>
<td>general population</td>
<td>oral</td>
<td>Acute/short term exposure - systemic effects</td>
<td>80 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tin 7440-31-5</td>
<td>general population</td>
<td>Dermal</td>
<td>Long term exposure - systemic effects</td>
<td>80 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tin 7440-31-5</td>
<td>general population</td>
<td>Inhalation</td>
<td>Long term exposure - systemic effects</td>
<td>3,476 mg/m3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tin 7440-31-5</td>
<td>general population</td>
<td>oral</td>
<td>Long term exposure - systemic effects</td>
<td>80 mg/kg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Biological Exposure Indices:
None

8.2. Exposure controls:

Engineering controls:
Extraction is necessary to remove fumes evolved during reflow.
Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Ensure good ventilation/extraction.

Respiratory protection:
Ensure adequate ventilation.
An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area
In case of aerosol formation, we recommend wearing of appropriate respiratory protection equipment with ABEK P2 filter.
This recommendation should be matched to local conditions.

Hand protection:
Chemical-resistant protective gloves (EN 374).
Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):
- nitrile rubber (NBR; >= 0.4 mm thickness)
Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):
- nitrile rubber (NBR; >= 0.4 mm thickness)
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.
Eye protection:
Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.

Skin protection:
Wear suitable protective clothing.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>solid</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available / Not applicable</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Initial boiling point</td>
<td>No data available / Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>None</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available / Not applicable</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Density</td>
<td>7.3 g/cm³</td>
</tr>
<tr>
<td>(25 °C (77 °F))</td>
<td></td>
</tr>
<tr>
<td>Bulk density</td>
<td>No data available / Not applicable</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available / Not applicable</td>
</tr>
<tr>
<td>Viscosity (kinematic)</td>
<td>No data available / Not applicable</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available / Not applicable</td>
</tr>
<tr>
<td>Solubility (qualitative)</td>
<td>Insoluble</td>
</tr>
<tr>
<td>(Solvent: Water)</td>
<td></td>
</tr>
<tr>
<td>Solidification temperature</td>
<td>No data available / Not applicable</td>
</tr>
<tr>
<td>Melting point</td>
<td>227 °C (440.6 °F)</td>
</tr>
<tr>
<td>Flammability</td>
<td>No data available / Not applicable</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available / Not applicable</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available / Not applicable</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available / Not applicable</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available / Not applicable</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available / Not applicable</td>
</tr>
</tbody>
</table>

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity
Solder alloy will react with concentrated nitric acid to produce toxic fumes of nitrogen oxides.

10.2. Chemical stability
Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions
See section reactivity

10.4. Conditions to avoid
No decomposition if stored and applied as directed.

10.5. Incompatible materials
None if used properly.

10.6. Hazardous decomposition products
Thermal decomposition can lead to release of irritating gases and vapors.
SECTION 11: Toxicological information

11.1. Information on toxicological effects

General toxicological information:
The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Oral toxicity:
This material is considered to have low toxicity if swallowed.

Inhalative toxicity:
Fumes evolved at soldering temperatures will irritate the nose, throat and lungs. Prolonged or repeated exposure to flux fumes may result in sensitisation in sensitive workers.

Dermal toxicity:
This product is considered to have low dermal toxicity.

Skin irritation:
Fumes emitted during soldering may irritate the skin.

Eye irritation:
Fumes emitted during soldering may irritate the eyes.

Acute oral toxicity:

<table>
<thead>
<tr>
<th>Hazardous components CAS-No.</th>
<th>Value type</th>
<th>Value</th>
<th>Route of application</th>
<th>Exposure time</th>
<th>Species</th>
<th>Method</th>
</tr>
</thead>
</table>

Acute inhalative toxicity:

<table>
<thead>
<tr>
<th>Hazardous components CAS-No.</th>
<th>Value type</th>
<th>Value</th>
<th>Route of application</th>
<th>Exposure time</th>
<th>Species</th>
<th>Method</th>
</tr>
</thead>
</table>

Acute dermal toxicity:

<table>
<thead>
<tr>
<th>Hazardous components CAS-No.</th>
<th>Value type</th>
<th>Value</th>
<th>Route of application</th>
<th>Exposure time</th>
<th>Species</th>
<th>Method</th>
</tr>
</thead>
</table>

SECTION 12: Ecological information

General ecological information:
The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.
12.1. Toxicity

Ecotoxicity:
Do not empty into drains / surface water / ground water.

12.2. Persistence and degradability

Persistence and Biodegradability:
The product is not biodegradable.

12.3. Bioaccumulative potential / 12.4. Mobility in soil

Mobility:
The product is insoluble and sinks in water.

Bioaccumulative potential:
Octanol/Water distribution coefficient: Not applicable

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:
Wherever possible unwanted solder alloy should be recycled for recovery of metal. Otherwise dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:
Dispose of as unused product.

Waste code:
06 04 05 - wastes containing other heavy metals
SECTION 14: Transport information

14.1. UN number
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.2. UN proper shipping name
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.3. Transport hazard class(es)
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.4. Packaging group
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.5. Environmental hazards
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.6. Special precautions for user
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
VOC content < 5.0 %
(1999/13/EC)

15.2. Chemical safety assessment
A chemical safety assessment has not been carried out.

National regulations/information (Great Britain):

Remarks
The Health & Safety at Work Act 1974.
The Control of Substances Hazardous to Health Regulations. L5:General Approved Code of Practice to the COSHH Regulations. HS(G)97:A Step by Step Guide to the COSHH Regulations. HS(G)193:COSHH essentials: Easy steps to control chemicals.
IND (G)248L:Solder fume and you. IND(G)249L:Controlling health risks from rosin (colophony) based solder fluxes.
**SECTION 16: Other information**

**Further information:**
This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

**Label elements (DPD):**
The product is not subject to classification according to the calculation methods of the "General Classification Guideline for Preparations of the EC" as issued in the last version.

**Additional labeling:**
Safety data sheet available for professional user on request.

Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.