

Revision Date: 06/25/2008

Issue date: 06/25/2008

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product name:** 97SC C400 3C 0.81MM 0.5KG AM  
**Product type:** Solder Wire  
**Company address:**  
 Henkel Corporation  
 15051 East Don Julian Road  
 Industry, California 91746

**Item No. :** MM01877 / IDH No. 673829  
**Region:** United States  
**Contact Information:**  
 Telephone: 626.968.6511  
 Emergency Telephone: 860.571.5100  
 Internet: www.electronics.henkel.us

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Tin 7440-31-5	60-100	2 mg/m <sup>3</sup> TWA 2 mg/m <sup>3</sup> TWA except Tin hydride	2 mg/m <sup>3</sup> TWA as Sn 2 mg/m <sup>3</sup> TWA	None
Silver 7440-22-4	1-5	0.1 mg/m <sup>3</sup> TWA	0.01 mg/m <sup>3</sup> TWA	None
Modified rosin	0.1-1	None	None	None
Modified Resin Proprietary	0.1-1	None	None	None
Copper 7440-50-8	0.1-1	0.2 mg/m <sup>3</sup> TWA 1 mg/m <sup>3</sup> TWA	0.1 mg/m <sup>3</sup> TWA fume 1 mg/m <sup>3</sup> TWA dusts and mists	None

### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

<u>HMIS:</u>	
<b>Physical state:</b> Paste	<b>HEALTH:</b> 2*
<b>Color:</b> Grey Metallic	<b>FLAMMABILITY:</b> 1
<b>Odor:</b> Sweet	<b>PHYSICAL HAZARD:</b> 0
	<b>Personal Protection:</b> See Section 8

**WARNING:** MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION. FLUX FUMES GIVEN OFF DURING REFLOW WILL IRRITATE THE EYES, NOSE AND RESPIRATORY SYSTEM. CONTACT WITH FLUX RESIDUES MAY CAUSE SKIN OR RESPIRATORY TRACT IRRITATION OR SENSITIZATION. MAY BE HARMFUL IF SWALLOWED.

**Relevant routes of exposure:** Skin, Inhalation, Eyes

#### Potential Health Effects

**Inhalation:** Fumes and/or dust produced by this product may be hazardous in case of ingestion or inhalation. Rosin thermal decomposition product (as formaldehyde) is classified by NIOSH as a potential occupational carcinogen. Fumes may be irritating or cause sensitization to the respiratory system. Excessive inhalation of fumes from many metals can produce an acute reaction known as "metal fume fever". Symptoms consist of chills and fever (very similar to and easily confused with flu symptoms) which come on a few hours after large exposures.

**Skin contact:** Prolonged or repeated skin contact may cause irritation, skin sensitization and argyria (a non-toxic, cosmetic blue-gray discoloration of the skin and mucous membranes that is irreversible).

**Eye contact:** Contact with eyes will cause irritation.

**Ingestion:** Not expected under normal conditions of use. Harmful if swallowed.

**Existing conditions aggravated by exposure:** Not available

**Item No. :** MM01877 / IDH No. 673829

**Product name:** 97SC C400 3C 0.81MM 0.5KG AM

See Section 11 for additional toxicological information.

#### 4. FIRST AID MEASURES

<b>Inhalation:</b>	Remove to fresh air. If symptoms develop and persist, get medical attention.
<b>Skin contact:</b>	Wash with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if symptoms develop and persist.
<b>Eye contact:</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.
<b>Ingestion:</b>	Get medical attention immediately.

#### 5. FIRE-FIGHTING MEASURES

<b>Flash point:</b>	Greater than 93°C (200°F)
<b>Autoignition temperature:</b>	Not applicable
<b>Flammable/Explosive limits-lower %:</b>	Not applicable
<b>Flammable/Explosive limits-upper %:</b>	Not applicable
<b>Extinguishing media:</b>	Foam, dry chemical or carbon dioxide.
<b>Special fire fighting procedures:</b>	Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA). Do not use water on fires where molten metal is present.
<b>Unusual fire or explosion hazards:</b>	None
<b>Hazardous combustion products:</b>	Oxides of carbon. Oxides of Metals in Section 2. Formaldehyde. The flux medium will give rise to irritating fumes.

#### 6. ACCIDENTAL RELEASE MEASURES

<b>Environmental precautions:</b>	Do not allow material to contaminate ground water system.
<b>Clean-up methods:</b>	Scrape up spilled material and place in a closed container for disposal.

#### 7. HANDLING AND STORAGE

<b>Handling:</b>	Avoid contact with molten material. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.
<b>Storage:</b>	Store in original container until ready to use.
<b>Incompatible products:</b>	Strong acids or bases. Oxidizing agents.

For information on product shelf life contact Henkel Customer Service at (626) 968-6511

#### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Engineering controls:</b>	Ensure adequate ventilation, especially in confined areas.
<b>Respiratory protection:</b>	Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
<b>Skin protection:</b>	Use impermeable gloves and protective clothing as necessary to prevent skin contact.
<b>Eye/face protection:</b>	Safety goggles or safety glasses with side shields.

See Section 2 for exposure limits.

Item No. : MM01877 / IDH No. 673829

2 of 5

Product name: 97SC C400 3C 0.81MM 0.5KG AM

21-8265

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Paste
<b>Color:</b>	Grey Metallic
<b>Odor:</b>	Sweet
<b>Vapor pressure:</b>	negligible vapor pressure at ambient temperatures
<b>pH:</b>	Not applicable
<b>Boiling point/range:</b>	Not available
<b>Melting point/range:</b>	217°C (423°F) (solder alloy)
<b>Specific gravity:</b>	7.5
<b>Vapor density:</b>	Not applicable
<b>Evaporation rate:</b>	Not available
<b>Solubility in water:</b>	Insoluble.
<b>Partition coefficient (n-octanol/water):</b>	Not determined
<b>VOC content:</b>	Zero

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable.
<b>Hazardous polymerization:</b>	Will not occur.
<b>Hazardous decomposition products:</b>	Thermal decomposition can lead to release of irritating gases and vapors. Formaldehyde.
<b>Incompatibility:</b>	Acids and bases, Oxidizing agents.
<b>Conditions to avoid:</b>	Avoid contact with acids and oxidizing agents. High temperatures.

## 11. TOXICOLOGICAL INFORMATION

### Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Tin 7440-31-5	No	No	No
Silver 7440-22-4	No	No	No
Modified rosin	No	No	No
Modified Resin Proprietary	No	No	No
Copper 7440-50-8	No	No	No

### Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Tin 7440-31-5	Nervous System, Lung, Liver, Kidney, Irritant, Gastrointestinal
Silver 7440-22-4	Skin, Respiratory, Irritant, Eyes, Allergen
Modified rosin	No data
Modified Resin Proprietary	No Records
Copper 7440-50-8	Skin, Sensory, Mutagen, Liver, Kidney, Irritant, Immune system, Gastrointestinal, Central nervous system, Blood, Allergen, Developmental

## 12. ECOLOGICAL INFORMATION

**Ecological information:**

No specific studies have been conducted by Henkel on the ecotoxicity or environmental fate of this material; however, commonly available data on the material indicate that uncontrolled releases to soil, groundwater, or surface waters could entail acute and/or chronic ecological effects, depending on the quantity and concentration of such releases. Releases of volatile components to the atmosphere are not believed to entail significant ecological consequences provided such releases are within the exposure levels set forth in this document. Accordingly, all appropriate measures should be taken to avoid uncontrolled releases to the environment, and any spills or other uncontrolled releases which may occur should be contained and cleaned up immediately in accordance with Section 6.

**13. DISPOSAL CONSIDERATIONS**

Information provided is for unused product only.

**Recommended method of disposal:** Dispose of in accordance with Federal, State and local regulations. Do not dispose of in an uncontrolled manner.

**EPA hazardous waste number:** D011 Silver

**14. TRANSPORT INFORMATION**

**U.S. Department of Transportation Ground (49 CFR):**

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

**International Air Transportation (ICAO/IATA):**

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

**Water Transportation (IMO/IMDG):**

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

**15. REGULATORY INFORMATION**

**United States Regulatory Information**

**TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.  
**TSCA 12 (b) Export Notification:** None.

**CERCLA/SARA Section 302 EHS:** None above reporting de minimus.  
**CERCLA/SARA Section 311/312:** Immediate Health Hazard, Delayed Health Hazard  
**CERCLA/SARA 313:** Silver (CAS# 7440-22-4).

**California Proposition 65:** No California Proposition 65 listed chemicals are known to be present.

**Canada Regulatory Information**

**CEPA DSL/NDSL Status:** All components are listed on or are exempt from listing on the Domestic Substances List.  
**WHMIS hazard class:** D.2.A, D.2.B

## 16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: First issue.

**Prepared by:**

Lou Fabrizio, Senior Health & Regulatory Affairs Specialist  
For Safety and Regulatory Information contact:  
Product Safety and Regulatory Affairs,  
Rocky Hill, CT.  
860-571-5204

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.