LOCTITE®

Material Safety Data Sheet

Henkel Technologies

Revision Date: 09/05/2006
Issue date: 09/05/2006
Version: 20

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: 96SCLF318AGS88.5V
Item No. : MB0625
Region: Europe
Product type: Solder Paste

Company Name & Address
Henkel Loctite Adhesives Ltd.
Multicore Solders
Technologies House, Wood Lane End
Hemel Hempstead, Herts HP2 4RQ, UK
Tel: +44 (0) 1442 278000
Fax: +44 (0) 1442 278071
Emergency Tel: +44 (0) 1442 278000

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components CAS No.	EINECS-No.	%	Classification
Tin 7440-31-5	231-141-8	80 - 100	
Copper 7440-50-8	231-159-6	0.1 - 1	
Silver 7440-22-4	231-131-3	1 - 5	
Rosin 8050-09-7	232-475-7	1 - 5	Xi;R43
Modified rosin 144413-22-9		1 - 5	R53

Additional Information:
For the explanation of the listed risk phrases refer to Section 16.

3. HAZARDS IDENTIFICATION

May cause sensitization by skin contact.
Flux fumes emitted during reflow will irritate the nose and throat and may cause an asthmatic type reaction.

4. FIRST AID MEASURES

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

Eye contact: Flush eyes with plenty of water for at least 15 minutes. If irritation persists seek medical attention.

Ingestion: Do not induce vomiting. Seek medical attention immediately.

Skin contact: Rinse off with plenty of water. If irritation persists, seek medical advice.

5. FIRE-FIGHTING MEASURES

Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.

Special fire fighting procedures: Fire fighters should wear positive pressure breathing apparatus.

Unusual fire or explosion hazards: None.

Hazardous combustion products: High temperatures may produce heavy metal dust, fumes or vapours. The flux medium will give rise to irritating fumes.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions: Do not let product enter drains.

Clean-up methods: Scrape up spilled material and place in a closed container for disposal.

7. HANDLING AND STORAGE

Handling: Use only in well-ventilated areas. Avoid contact with skin. Do not eat, drink or smoke when handling. Wash hands before breaks and immediately after handling the product.

Storage: Store in original container at 5 to 10°C.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Hazardous components CAS No.	ACGIH TLV	Austria	Belgium	Czech
Tin **7440-31-5**	2 mg/m³ TWA 2 mg/m³ TWA except tin hydride, as Sn	2 mg/m³ MAK 4 mg/m³ STEL 4 mg/m³ STEL	2 mg/m³ VLE 2 mg/m³ VLE	2 mg/m³ TWA
Copper **7440-50-8**	0.2 mg/m³ TWA fume 1 mg/m³ TWA dust and mist, as Cu	0.1 mg/m³ MAK 0.1 mg/m³ MAK 0.4 mg/m³ STEL 1 mg/m³ MAK 4 mg/m³ STEL	0.2 mg/m³ VLE 1 mg/m³ VLE	0.1 mg/m³ TWA 1 mg/m³ TWA
Silver **7440-22-4**	0.1 mg/m³ TWA	0.01 mg/m³ MAK 0.1 mg/m³ STEL	0.1 mg/m³ VLE	0.1 mg/m³ TWA

Hazardous components CAS No.	Estonia	Greece	Finland	France	Hungary
Tin **7440-31-5**		2 mg/m³ TWA	2 mg/m³ TWA 2 mg/m³ TWA		8 mg/m³ STEL 2 mg/m³ TWA
Copper **7440-50-8**	1 mg/m³ TWA 0.2 mg/m³ TWA 0.2 mg/m³ TWA	2 mg/m³ STEL 0.2 mg/m³ TWA 1 mg/m³ TWA	0.1 mg/m³ TWA 1 mg/m³ TWA 1 mg/m³ TWA	0.2 mg/m³ VME 1 mg/m³ VME 2 mg/m³ VLE	4 mg/m³ STEL 0.4 mg/m³ STEL 0.1 mg/m³ TWA 1 mg/m³ TWA 1 mg/m³ TWA
Silver **7440-22-4**	0.1 mg/m³ TWA	0.1 mg/m³ TWA	0.1 mg/m³ TWA	0.1 mg/m³ VME	0.4 mg/m³ STEL 0.1 mg/m³ TWA
Rosin **8050-09-7**				0.1 mg/m³ VME	

Hazardous components CAS No.	Germany	Ireland	Netherlands	Norway	Portugal
Tin **7440-31-5**		2 mg/m³ TWA 4 mg/m³ STEL 4 mg/m³ STEL	2 mg/m³ MAC 2 mg/m³ MAC	2 mg/m³ TWA	2 mg/m³ TWA 2 mg/m³ TWA
Copper **7440-50-8**	0.1 mg/m³ MAK 0.2 mg/m³ Peak	0.2 mg/m³ TWA 1 mg/m³ TWA 2 mg/m³ STEL	0.2 mg/m³ MAC 1 mg/m³ MAC	0.1 mg/m³ TWA 1 mg/m³ TWA	0.2 mg/m³ TWA 1 mg/m³ TWA
Silver **7440-22-4**	0.01 mg/m³ MAK 0.02 mg/m³ Peak 0.1 mg/m³ MAK 0.8 mg/m³ Peak	0.01 mg/m³ TWA 0.1 mg/m³ TWA	0.1 mg/m³ MAC	0.1 mg/m³ TWA	0.1 mg/m³ TWA

Hazardous components CAS No.	Poland	Spain	Sweden	UK EH40
Tin **7440-31-5**	2 mg/m³ NDS	2 mg/m³ VLA-ED 2 mg/m³ VLA-ED	0.1 mg/m³ LLV 0.2 mg/m³ STV	2 mg/m³ TWA 4 mg/m³ STEL
Copper **7440-50-8**		0.2 mg/m³ VLA-ED 1 mg/m³ VLA-ED	0.2 mg/m³ LLV 1 mg/m³ LLV	0.2 mg/m³ TWA 1 mg/m³ TWA 0.6 mg/m³ STEL 2 mg/m³ STEL
Silver **7440-22-4**	0.05 mg/m³ NDS	0.1 mg/m³ VLA-ED	0.1 mg/m³ LLV	0.1 mg/m³ TWA 0.3 mg/m³ STEL
Rosin **8050-09-7**				Rosin flux fume: 0.05 mg/m³ TWA (As total resin acids) 0.15 mg/m³ STEL (As total resin acids)
Modified rosin **144413-22-9**				Rosin flux fume: 0.05 mg/m³ TWA (As total resin acids) 0.15 mg/m³ STEL (As total resin acids)

Engineering controls: Ensure adequate ventilation, especially in confined areas. Extraction is necessary to remove fumes evolved during reflow.

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.

Skin protection: For hand protection, use rubber or plastic gloves.

Eye/face protection: Safety glasses should be worn.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: paste

Colour: grey

Odour:	mild
pH:	not applicable
Vapour pressure:	not determined
Boiling point/range:	256°C (493°F) (solvent)
Melting point/range:	217°C (423°F) (solder alloy)
Specific gravity:	4.29
Vapour density:	heavier than air
Flash point:	117°C (243°F)
Autoignition temperature:	not determined
Flammable limits in air - lower %:	not determined
Flammable limits in air - upper %:	not determined
Solubility in water:	insoluble
Partition coefficient (n-octanol/water):	not determined
VOC content:	1 - 5%

10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage conditions.
Hazardous polymersation:	Will not occur.
Hazardous decomposition products:	Thermal decomposition can lead to release of irritating gases and vapours.
Incompatability:	Incompatible with oxidising agents.
Conditions to avoid:	Solder alloy will react with concentrated nitric acid to produce toxic fumes of nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Inhalation:	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.
Skin:	Prolonged skin contact may cause skin irritation and/or dermatitis. May cause sensitization by skin contact.
Eyes:	Contact with eyes may cause irritation.
Ingestion:	Swallowing may cause irritation of the mouth, throat and digestive tract.

12. ECOLOGICAL INFORMATION

Mobility:	No data available.
Bioaccumulation:	No data available.
Ecotoxicity:	Harmful to aquatic organisms.
Persistence and degradability:	Not inherently biodegradable.
WGK Water Classification (VwVwS):	Class 1

13. DISPOSAL CONSIDERATIONS

Product

Disposal methods: Wherever possible unwanted solder pastes should be recycled for recovery of metal. Otherwise dispose of in accordance with local and national regulations. Incineration under controlled conditions is recommended.

European Waste Catalogue: 16 03 03 - inorganic wastes containing dangerous substances.

Packaging

Disposal Methods: Dispose of as unused product.

14. TRANSPORT INFORMATION

ICAO/IATA (Air):

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

IMO/IMDG (Sea)

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

ADR/RID (Road/Rail)

UN Number	None
Proper shipping name:	Unrestricted
Hazard class or division	None
Packing group	None

15. REGULATORY INFORMATION

Contains: Rosin
Indication of danger: Xi - Irritant.

Risk Phrases: R43 - May cause sensitization by skin contact.
Safety Phrases: S24 - Avoid contact with skin.
S37 - Wear suitable gloves.

Additional Labelling: When heated fumes may cause sensitisation by inhalation.
Warning - this preparation contains a substance not yet tested completely.

UK National regulations: The Health & Safety at Work etc. Act
The Control of Substances Hazardous to Health Regulations 2002
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(G)249L: Controlling health risks from rosin (colophony) based solder fluxes

16. OTHER INFORMATION

Supercedes Sheet Dated: 17/01/2006

Prepared by: Barry Chase
Senior Specialist
Product Safety & Regulatory Affairs - Europe

MSDS data Revised: 09/05/2006

The information in this safety data sheet was obtained from reputable sources and to the best of our knowledge is accurate and current at the mentioned date. Neither Loctite nor its subsidiary companies accept any liability arising out of the use of the information provided here or the use, application or processing of the product(s) described herein. Attention of users is drawn to the possible hazards from improper use of the product(s). This safety data sheet was prepared in accordance with Commission Directive 2004/73/EC adapting to technical progress for the 29th time Council Directive 67/548/EEC, and Commission Directive 1999/45/EC.

Explanation of Section 2 R - Phrases
R43 - May cause sensitization by skin contact.
R53 - May cause long-term adverse effects in the aquatic environment.