



Material Safety Data Sheet



Revision Date: 17/05/2006
Issue date: 18/05/2006
Version: 5

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: 60EN Ecosol 105

Item No. : MB1024

Product type: Solder Wire

Region: Europe

Company Name & Address

Henkel Loctite Adhesives Ltd.

Multicore Solders

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components CAS No.	EINECS-No.	%	Classification
Tin 7440-31-5	231-141-8	50 - 60	
Lead 7439-92-1	231-100-4	30 - 40	

Additional Information:

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

3. HAZARDS IDENTIFICATION

Fumes evolved at soldering temperatures will irritate the nose, throat and lungs.

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: Wash off with soap and plenty of water. Obtain medical attention if irritation persists.

5. FIRE-FIGHTING MEASURES

Extinguishing media:	The product itself does not burn. Use extinguishing measures appropriate to local circumstances and the surrounding environment.
Special fire fighting procedures:	Fire fighters should wear positive pressure breathing apparatus. Do not use water on fires where molten metal is present.
Unusual fire or explosion hazards:	None.
Hazardous combustion products:	High temperatures may produce heavy metal dust, fumes or vapours. The flux will give rise to irritating fumes.

6. ACCIDENTAL RELEASE MEASURES

Clean-up methods: Scrape up.

7. HANDLING AND STORAGE

Handling: Use only in area provided with appropriate exhaust ventilation. Do not eat, drink or smoke when handling. Wash hands before breaks and immediately after handling the product.

Storage: Store in a cool, dry place. Keep out of reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Hazardous components CAS No.	ACGIH TLV	Austria	Belgium	Czech
Tin 7440-31-5	2 mg/m ³ TWA 2 mg/m ³ TWA except tin hydride, as Sn	2 mg/m ³ MAK 4 mg/m ³ STEL 4 mg/m ³ STEL	2 mg/m ³ VLE 2 mg/m ³ VLE	2 mg/m ³ TWA
Lead 7439-92-1	0.05 mg/m ³ TWA as Pb 0.05 mg/m ³ TWA	0.1 mg/m ³ MAK 0.4 mg/m ³ STEL	0.15 mg/m ³ VLE (dust and fumes)	0.05 mg/m ³ TWA

Hazardous components CAS No.	Estonia	Greece	Finland	France	Hungary
Tin 7440-31-5		2 mg/m ³ TWA	2 mg/m ³ TWA 2 mg/m ³ TWA		8 mg/m ³ STEL 2 mg/m ³ TWA
Lead 7439-92-1	0.1 mg/m ³ TWA 0.05 mg/m ³ TWA 0.1 mg/m ³ TWA 0.05 mg/m ³ TWA	0.15 mg/m ³ TWA	0.1 mg/m ³ TWA	0.15 mg/m ³ VME	0.2 mg/m ³ STEL 0.6 mg/m ³ STEL 0.6 mg/m ³ STEL 0.15 mg/m ³ TWA 0.15 mg/m ³ TWA 0.05 mg/m ³ TWA 0.05 mg/m ³ TWA

Hazardous components CAS No.	Germany	Ireland	Netherlands	Norway	Portugal
Tin 7440-31-5		2 mg/m ³ TWA 4 mg/m ³ STEL 4 mg/m ³ STEL	2 mg/m ³ MAC 2 mg/m ³ MAC	2 mg/m ³ TWA	2 mg/m ³ TWA 2 mg/m ³ TWA
Lead 7439-92-1	0.1 mg/m ³ MAK 0.1 mg/m ³ MAK	= 0.1 mg/m ³ OEL (see additional regulations S.I. No. 219 of 1988) = 0.15 mg/m ³ OEL	0.15 mg/m ³ MAC	0.05 mg/m ³ TWA	0.05 mg/m ³ TWA

Hazardous components CAS No.	Poland	Spain	Sweden	UK EH40
Tin 7440-31-5	2 mg/m ³ NDS	2 mg/m ³ VLA-ED 2 mg/m ³ VLA-ED	0.1 mg/m ³ LLV 0.2 mg/m ³ STV	2 mg/m ³ TWA 4 mg/m ³ STEL
Lead 7439-92-1	0.05 mg/m ³ NDS	0.15 mg/m ³ VLA-ED 0.15 mg/m ³ VLA-ED	0.05 mg/m ³ LLV 0.1 mg/m ³ LLV	0.15 mg/m ³ TWA (see Control of Lead at Work Regulations)

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.
Respiratory protection:	In case of insufficient ventilation, wear suitable respiratory equipment.
Skin protection:	No special protective equipment required.
Eye/face protection:	Safety glasses should be worn.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	solid
Colour:	grey
Odour:	none
pH:	not applicable
Vapour pressure:	negligible vapour pressure at ambient temperatures
Boiling point/range:	not determined
Melting point/range:	183 - 188 °C (361 - 370 °F) (solder alloy)
Specific gravity:	8.5
Vapour density:	not applicable
Flash point:	not applicable
Autoignition temperature:	not applicable
Solubility in water:	insoluble
Partition coefficient (n-octanol/water):	not determined

10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage conditions.
Hazardous polymerisation:	Will not occur.
Hazardous decomposition products:	Thermal decomposition can lead to release of irritating gases and vapours.
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.
Skin:	Fumes emitted during soldering may irritate the skin.
Eyes:	Fumes emitted during soldering may irritate the eyes.
Ingestion:	Harmful if swallowed.

Additional Information:

Chronic overexposure to lead may result in damage to the blood forming, nervous, urinary and reproductive systems. Severe lead toxicity will cause sterility, abortion and neonatal mortality and morbidity.

12. ECOLOGICAL INFORMATION

Mobility: No data available.

Bioaccumulation: No data available.

Ecotoxicity: No information available.

Persistence and degradability: Not inherently biodegradable.

WGK Water Classification (VwVwS): Class 1

13. DISPOSAL CONSIDERATIONS

Product

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

European Waste Catalogue: 06 04 05 - wastes containing other heavy metals.

Packaging

Disposal Methods: Dispose of in accordance with local and national regulations.

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

Indication of danger: None.

Risk Phrases: None.
Safety Phrases: None

Additional Labelling: Contains lead which may harm your health. Lead can cause birth defects and other reproductive harm. Regulations forbid the use of lead solder in any private or public drinking water supply system. Avoid breathing fumes given out during soldering. Flux fumes may irritate the nose, throat and lungs. After handling solder wash hands with soap and water before eating, drinking or smoking. Keep out of reach of children.

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
The Control of Lead at Work Regulations 2002
L132: Control of Lead at Work: Approved Code of Practice and Guidance

Employees should be under medical surveillance if the risk assessment made under the Control of Lead at Work Regulations indicates they are likely to be exposed to significant concentrations of lead, or if an Employment Medical Advisor or appointed doctor so certifies.

A woman employed on work which exposes her to lead should notify her employer as soon as possible if she becomes pregnant. The Employment Medical Advisor / Appointed Doctor should be informed of the pregnancy.

Under the Management of Health and Safety at Work Regulations, employers are required to assess the particular risks to health at work of pregnant workers and workers who have recently given birth or who are breast feeding.

16. OTHER INFORMATION

Supersedes Sheet Dated: 30/01/2006

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MSDS data Revised: 17/05/2006

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Explanation of Section 2 R - Phrases

Not applicable.