



Material Safety Data Sheet



Revision Date: 07/07/2006
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Version: 8

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: X33S-07i

Item No. : MB2049

Product type: Liquid flux

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
Propan-2-ol 67-63-0	200-661-7	80 - 100	F;R11 R67 Xi;R36
Adipic acid 124-04-9	204-673-3	1 - 5	Xi;R36

Additional Information:

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

3. HAZARDS IDENTIFICATION

Highly flammable. Irritating to eyes. Vapours may cause drowsiness and dizziness.

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:	Vapours may form explosive mixtures with air.
Hazardous combustion products:	Thermal decomposition can lead to release of irritating gases and vapours.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Clean-up methods:	Evacuate personnel to safe areas. Remove all sources of ignition. Wear suitable protective clothing, gloves and eye/face protection. Soak up with inert absorbent. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling:	Use only in well-ventilated areas. Keep away from sources of ignition - No smoking. Avoid contact with eyes, skin and clothing.
Storage:	Keep containers tightly closed in a cool, well-ventilated place. Store away from sources of heat or ignition. Take measures to prevent the build up of electrostatic charge.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Hazardous components CAS No.	ACGIH TLV	Austria	Belgium	Czech
Propan-2-ol 67-63-0	200 ppm TWA 400 ppm STEL	200 ppm MAK 2000 mg/m ³ STEL 500 mg/m ³ MAK 800 ppm STEL	1248 mg/m ³ VLE 400 ppm VLE 500 ppm VLE 997 mg/m ³ VLE	500 mg/m ³ TWA
Adipic acid 124-04-9	5 mg/m ³ TWA		5 mg/m ³ VLE	

Hazardous components CAS No.	Estonia	Greece	Finland	France	Hungary
Propan-2-ol 67-63-0	600 mg/m ³ STEL 250 ppm STEL 350 mg/m ³ TWA 150 ppm TWA	500 ppm STEL 1225 mg/m ³ STEL 980 mg/m ³ TWA 400 ppm TWA	200 ppm TWA 250 ppm STEL 500 mg/m ³ TWA 620 mg/m ³ STEL	400 ppm VLE 980 mg/m ³ VLE	2000 mg/m ³ STEL 500 mg/m ³ TWA

Hazardous components CAS No.	Germany	Ireland	Netherlands	Norway	Portugal
Propan-2-ol 67-63-0	1000 mg/m ³ Peak 200 ppm MAK 400 ppm Peak 500 mg/m ³ MAK	1225 mg/m ³ STEL 400 ppm TWA 500 ppm STEL 980 mg/m ³ TWA	250 ppm MAC 650 mg/m ³ MAC	100 ppm TWA 245 mg/m ³ TWA	400 ppm TWA
Adipic acid 124-04-9		5 mg/m ³ TWA	5 mg/m ³ MAC		5 mg/m ³ TWA

Hazardous components CAS No.	Poland	Spain	Sweden	UK EH40
Propan-2-ol 67-63-0	1200 mg/m ³ NDSCh 900 mg/m ³ NDS	1250 mg/m ³ VLA-EC 400 ppm VLA-ED 500 ppm VLA-EC 998 mg/m ³ VLA-ED	150 ppm LLV 250 ppm STV 350 mg/m ³ LLV 600 mg/m ³ STV	400 ppm TWA 999 mg/m ³ TWA 500 ppm STEL 1250 mg/m ³ STEL
Adipic acid 124-04-9	10 mg/m ³ NDSCh 5 mg/m ³ NDS	5 mg/m ³ VLA-ED		

Engineering controls:	Ensure adequate ventilation, especially in confined areas. 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:	For hand protection, use rubber or plastic gloves.
Eye/face protection:	Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	liquid
Colour:	colourless
Odour:	alcoholic
pH:	not determined
Vapour pressure:	6.6 kPa at 25°C (77°F)
Boiling point/range:	82°C (178°F)
Melting point/range:	not determined
Specific gravity:	0.794
Vapour density:	heavier than air
Flash point:	14°C (57°F)
Autoignition temperature:	398°C (750°F)
Flammable limits in air - lower %:	2.0
Flammable limits in air - upper %:	12.0
Evaporation rate:	not determined
Solubility in water:	soluble
Partition coefficient (n-octanol/water):	not determined
VOC content:	95 - 100%

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.
Incompatibility:	Incompatible with oxidising agents. Dissolves aluminium and zinc slowly with formation of hydrogen.
Conditions to avoid:	Keep away from open flames, hot surfaces and sources of ignition.

11. TOXICOLOGICAL INFORMATION

Hazardous components CAS No.	LD50s & LC50s
Propan-2-ol 67-63-0	Dermal LD50 (Rabbit) = 12800 mg/kg Dermal LD50 (Rat) = 12800 mg/kg Oral LD50 (Rat) = 4396 mg/kg Inhalation LC50 (Rat) = 72.6 mg/L

Inhalation:	Inhalation of vapours in high concentration may cause irritation of respiratory system. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Skin:	Prolonged skin contact may cause skin irritation and/or dermatitis.
Eyes:	Contact with eyes will cause irritation.
Ingestion:	May cause irritation to the digestive tract. May cause nausea, vomiting and abdominal pain. Ingestion of large quantities may cause liver or kidney damage.

12. ECOLOGICAL INFORMATION

Mobility:	No data available.
Bioaccumulation:	No data available.
Ecotoxicity:	Biodegradable product of low ecotoxicity. Isopropyl alcohol: LC50/96h/Fathead minnows = 1000 mg/l EC50/24h/Daphnia = 9714 mg/l
Persistence and degradability:	Isopropyl alcohol: BOD5 = 28% (fresh water), 13% (salt water) BOD20 = 78% (fresh water), 72% (salt water)
WGK Water Classification (VwVwS):	Class 1

13. DISPOSAL CONSIDERATIONS

Product	
Disposal methods:	Dispose of this material and its container as a hazardous or special waste. Incineration under controlled conditions is recommended.
European Waste Catalogue:	14 06 03 - other solvents and solvent mixtures.
Packaging	
Disposal Methods:	Dispose of as unused product. Do not incinerate closed containers.

14. TRANSPORT INFORMATION

ICAO/IATA (Air):

Identification number:	UN1219
Proper shipping name:	Isopropanol solution
Hazard class or division:	3
Packing group:	II

IMO/IMDG (Sea)

Identification number:	UN1219
Proper shipping name:	Isopropanol solution
Hazard class or division:	3
Packing group:	II
EmS:	F-E, S-D

ADR/RID (Road/Rail)

UN Number	UN1219
Proper shipping name:	Isopropanol solution
Hazard class or division	3
Packing group	II

15. REGULATORY INFORMATION

Indication of danger:

Xi - Irritant.
F - Highly flammable.



Risk Phrases:

R11 - Highly flammable.
R36 - Irritating to eyes.
R67 - Vapours may cause drowsiness and dizziness.

Safety Phrases:

S16 - Keep away from sources of ignition - No smoking.
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S51 - Use only in well ventilated areas.

Additional Labelling:

None

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 (G)51: The Storage of Highly Flammable Liquids in Containers(G)140: The Safe Use and Handling of Highly Flammable Liquids:
The Spraying of Highly Flammable Liquids

16. OTHER INFORMATION

Supersedes Sheet Dated:

09/06/2004

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Explanation of Section 2 R - Phrases

R11 - Highly flammable.
R36 - Irritating to eyes.
R67 - Vapours may cause drowsiness and dizziness.