

MATERIAL SAFETY DATA SHEET

LEAD FREE FLUX REMOVER

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME LEAD FREE FLUX REMOVER
PRODUCT NO. LFFR
ELFFR400DB
ZE
APPLICATION Manufacture of electrical equipment
SUPPLIER H K WENTWORTH PTY
LIMITED
P.O. BOX 339
BROOKVALE, NSW 2100
AUSTRALIA
TEL: 02 9938 1566
FAX: 02 9938 1467
GENERAL MANAGER
EMERGENCY TELEPHONE Tel: 029938 1566 between 8.30am and 5.00pm EST
PROPER SHIPPING NAME AEROSOLS (CYCLOHEXANE)

2 HAZARDS IDENTIFICATION

RISK PHRASES

R11 Highly flammable.
R38 Irritating to skin.
R43 May cause sensitisation by skin contact.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R67 Vapours may cause drowsiness and dizziness.

SAFETY PHRASES

S9 Keep container in a well-ventilated place.
S16 Keep away from sources of ignition - No smoking.
S24 Avoid contact with skin.
S37 Wear suitable gloves.
S51 Use only in well-ventilated areas.
S57 Use appropriate containment to avoid environmental contamination.
S61 Avoid release to the environment. Refer to special instructions/safety data sheets.

The above phrases are the risks associated with the product

ENVIRONMENT

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point. Use appropriate containment to avoid environmental contamination. Avoid release to the environment. Refer to special instructions/safety data sheets. Dispose of waste and residues in accordance with local authority requirements.

PHYSICAL AND CHEMICAL HAZARDS

Aerosol containers can explode when heated, due to excessive pressure build-up. When sprayed on a naked flame or any incandescent material the aerosol vapours can be ignited.

STATEMENT OF HAZARDOUS NATURE

HAZARDOUS SUBSTANCE (According to criteria of NOHSC). DANGEROUS GOODS (According to ADG Code).

DG CLASS

Class 2: Gases

PACKING GROUP N/A

UN NO. 1950

3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content %	Classification (67/548)
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LEAD FREE FLUX REMOVER

CYCLOHEXANE	203-806-2	110-82-7	10-30%	F;R11 Xn;R65 Xi;R38 R67 N;R50/53
PROPAN-2-OL	200-661-7	67-63-0	10-30%	F;R11 Xi;R36 R67
1-METHOXY-2-PROPANOL	203-539-1	107-98-2	10-30%	R10 R67
1,1,1,2-TETRAFLUOROETHANE R134A	212-377-0	811-97-2	10-30%	-
BUTYL ACETATE -norm	204-658-1	123-86-4	1-5%	R10 R66 R67
HEXANE MIXTURE OF ISOMERS (MAX 5% n-HEXANE (203-777-6))	-	-	1-5%	F;R11 Xn;R65 Xi;R38 R67 N;R51/53
HEPTANE	205-563-8	142-82-5	1-5%	F;R11 Xn;R65 Xi;R38 R67 N;R50/53
d-LIMONENE	227-813-5	5989-27-5	1-5%	R10 R43 Xi;R38 N;R50/53
DIMETHYL ETHER	204-065-8	115-10-6	1-5%	F+;R12
HEXANE-norm	203-777-6	110-54-3	< 1%	F;R11 Repr. Cat. 3;R62 Xn;R48/20,R65 Xi;R38 R67 N;R51/53

The Full Text for all R-Phrases is Displayed in Section 16

COMPOSITION COMMENTS

Ingredients not listed are classified as non-hazardous or at a concentration below reportable levels Ingredients are registered on AICS

4 FIRST-AID MEASURES

NOTES TO THE PHYSICIAN

Treat symptomatically

INHALATION

Move the exposed person to fresh air at once. Keep the affected person warm and at rest. Get prompt medical attention. Get medical attention.

INGESTION

Not relevant.

SKIN CONTACT

Wash the skin immediately with soap and water. Get medical attention if any discomfort continues.

EYE CONTACT

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Use: Powder. Dry chemicals, sand, dolomite etc. Water spray, fog or mist.

SPECIAL FIRE FIGHTING PROCEDURES

Move container from fire area if it can be done without risk.

UNUSUAL FIRE & EXPLOSION HAZARDS

Aerosol cans may explode in a fire.

6 ACCIDENTAL RELEASE MEASURES

SPILL CLEAN UP METHODS

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Absorb in vermiculite, dry sand or earth and place into containers.

7 HANDLING AND STORAGE

USAGE PRECAUTIONS

Avoid spilling, skin and eye contact. Provide good ventilation.

STORAGE PRECAUTIONS

Store at moderate temperatures in dry, well ventilated area.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

LEAD FREE FLUX REMOVER

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
1,1,1,2-TETRAFLUOROETHANE R134A	ES-TWA	1000 ppm	4240 mg/m3			
1-METHOXY-2-PROPANOL	ES-TWA	100 ppm	369 mg/m3	150 ppm	553 mg/m3	
BUTYL ACETATE -norm	ES-TWA	150 ppm	713 mg/m3	200 ppm	950 mg/m3	
CYCLOHEXANE		300 ppm	1030 mg/m3			
DIMETHYL ETHER	ES-TWA				mg/m3	
HEPTANE		400 ppm	1640 mg/m3	500 ppm	2050 mg/m3	
PROPAN-2-OL	ES-TWA	400 ppm	983 mg/m3	500 ppm	1230 mg/m3	

PROTECTIVE EQUIPMENT



EYE PROTECTION

Wear approved, tight fitting safety glasses where splashing is probable.

OTHER PROTECTION

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

HYGIENE MEASURES

Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke. **DO NOT SMOKE IN WORK AREA!**

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Aerosol Liquid
COLOUR	Colourless
ODOUR	Characteristic Lemon
VOLATILITY DESCRIPTION	Volatile.
SOLUBILITY	Insoluble in water
BOILING POINT (°C)	>80 (176 F)
MELTING POINT (°C)	<-29 (-20.2 F)
RELATIVE DENSITY	0.780 @ 20 °C (68 F)
VAPOUR PRESSURE	11.52 kPa @ 20 °C (68 F)
FLASH POINT (°C)	0 (32 F) CC (Closed cup).
AUTO IGNITION TEMPERATURE (°C)	> 200 (392 F)
FLAMMABILITY LIMIT - LOWER(%)	0.6
FLAMMABILITY LIMIT - UPPER(%)	8.3

10 STABILITY AND REACTIVITY

STABILITY

Stable under normal temperature conditions.

CONDITIONS TO AVOID

Avoid heat, flames and other sources of ignition. Avoid contact with acids and alkalis.

11 TOXICOLOGICAL INFORMATION

INHALATION

Vapours may cause headache, fatigue, dizziness and nausea. High concentrations of vapours may irritate respiratory system and lead to headache, fatigue, nausea and vomiting.

LEAD FREE FLUX REMOVER

SKIN CONTACT

May cause sensitisation by skin contact. Prolonged or repeated exposure may cause severe irritation. Product has a defatting effect on skin. Prolonged contact may cause dryness of the skin.

EYE CONTACT

Irritating to eyes.

OTHER HEALTH EFFECTS

This substance has no evidence of carcinogenic properties.

ROUTE OF ENTRY

Skin and/or eye contact. Inhalation:

Name	HEPTANE
Toxic Dose 1 - LD 50	222 mg/kg (ivn-mouse)
Toxic Conc. - LC 50	103 ppm/4h (inh-rat)
Name	HEXANE-norm
Toxic Dose 1 - LD 50	28700 mg/kg (oral rat)
Toxic Conc. - LC 50	48000 ppm/4h (inh-rat)
Name	PROPAN-2-OL
Toxic Dose 1 - LD 50	5045 mg/kg (oral rat)
Toxic Dose 2 - LD 50	3600 mg/kg (oral-mouse)
Toxic Conc. - LC 50	47-73 mg/l/4h (inh-rat)
Name	1-METHOXY-2-PROPANOL
Toxic Dose 1 - LD 50	5200 mg/kg (oral rat)
Toxic Dose 2 - LD 50	11700 mg/kg (oral-mouse)
Name	BUTYL ACETATE -norm
Toxic Dose 1 - LD 50	14,100 mg/kg (oral rat)
Name	d-LIMONENE
Toxic Dose 1 - LD 50	>5000 mg/kg (oral rat)

12 ECOLOGICAL INFORMATION

ECOTOXICITY

Dangerous for the environment if discharged into watercourses.

Name	HEPTANE
LC 50, 96 Hrs, Fish mg/l	4.924
Name	HEXANE-norm
	PROPAN-2-OL
LC 50, 96 Hrs, Fish mg/l	9600
EC 50, 48 Hrs, Daphnia, mg/l	10000
Name	1-METHOXY-2-PROPANOL
LC 50, 96 Hrs, Fish mg/l	20800
EC 50, 48 Hrs, Daphnia, mg/l	23300
Name	BUTYL ACETATE -norm
LC 50, 96 Hrs, Fish mg/l	>96
EC 50, 48 Hrs, Daphnia, mg/l	72.8
IC 50, 72 Hrs, Algae, mg/l	674
Name	d-LIMONENE
EC 50, 48 Hrs, Daphnia, mg/l	12.3

Mobility

The product has poor water-solubility.

13 DISPOSAL CONSIDERATIONS

DISPOSAL METHODS

Dispose of waste and residues in accordance with local authority requirements. Empty containers must not be burned because of explosion hazard.

14 TRANSPORT INFORMATION

LEAD FREE FLUX REMOVER



PROPER SHIPPING NAME	AEROSOLS (CYCLOHEXANE)
ADG CLASS	Class 2.1: Flammable gases
UN NO.	1950
ADG CLASS NO.	2
DG CLASS	Class 2: Gases
PACKING GROUP	N/A
TUNNEL RESTRICTION CODE	(D)
ADG LABEL NO.	2.1
UN NO. SEA	1950
IMDG CLASS	2.1
IMDG PACK GR.	N/A
EMS	F-D, S-U
UN NO. AIR	1950
AIR CLASS	2.1
AIR PACK GR.	N/A

15 REGULATORY INFORMATION

LABELLING



Irritant



Highly Flammable



Dangerous for the environment

CONTAINS d-LIMONENE

RISK PHRASES

R11	Highly flammable.
R38	Irritating to skin.
R43	May cause sensitisation by skin contact.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R67	Vapours may cause drowsiness and dizziness.

SAFETY PHRASES

S9	Keep container in a well-ventilated place.
S16	Keep away from sources of ignition - No smoking.
S24	Avoid contact with skin.
S37	Wear suitable gloves.
S51	Use only in well-ventilated areas.
S57	Use appropriate containment to avoid environmental contamination.
S61	Avoid release to the environment. Refer to special instructions/safety data sheets.

EU DIRECTIVES

System of specific information relating to Dangerous Preparations. 2001/58/EEC.

Dangerous Substance Directive 67/548/EEC.

Dangerous Preparations Directive 1999/45/EC.

Commission Directive 2000/39/EC of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

LEAD FREE FLUX REMOVER

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

POISONS SCHEDULE NUMBER NONE

NATIONAL REGULATIONS AND REFERENCES

National Model Regulations for the Control of Workplace Hazardous Substances.

National Code of Practice for the Control of Workplace Hazardous Substances.

National Code of Practice for the Labelling of Workplace Substances.

National Code of Practice for the Preparation of Material Safety Data Sheets.

Approved Criteria for Classifying Hazardous Substances.

Exposure Standards for Atmospheric Contaminants in the Occupational Environment.

Australian Dangerous Goods Code. The Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

16 OTHER INFORMATION

ISSUED BY

Helen O'Reilly

REVISION DATE NOVEMBER 2010

REV. NO./REPL. SDS 3

GENERATED

SDS NO. 11998

RISK PHRASES IN FULL

R12	Extremely flammable.
R10	Flammable.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R65	Harmful: may cause lung damage if swallowed.
R11	Highly flammable.
R36	Irritating to eyes.
R38	Irritating to skin.
R43	May cause sensitisation by skin contact.
R62	Possible risk of impaired fertility.
R66	Repeated exposure may cause skin dryness or cracking.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R67	Vapours may cause drowsiness and dizziness.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

DISCLAIMER

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.