ES897BE FLUX-OFF® LEAD-FREE

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	ES897BE Flux-Off® Lead-Free
Product Code	-
Other Names	-
Product Use	Flux remover for soldering fluxes used in lead free soldering
Company Name	Element 14 Pty Ltd
Address	72 Ferndell Street Chester Hill NSW 2162
Telephone Number	02 9644 7722
Emergency Telephone	13 11 26

2. HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Flammable

Health hazard

Exclamation Mark

Environment

H225 - Highly flammable liquid and vapour	Flammable Liquids - Danger - Hazard Category 2
H319 - Causes serious eye irritation	Serious Eye Damage/Irritation - Warning - Hazard Category 2A
H315 - Causes skin irritation.	Skin Corrosion/Irritation - Warning - Hazard Category 2
H304 - May be fatal if swallowed and enters airways	Aspiration Hazard - Danger - Hazard Category 1
H336 - May cause drowsiness and dizziness	STOT (Single Exposure) - Warning - Hazard Category 3
H411 - Toxic to aquatic life with long lasting effects.	Environmental Hazards – Chronic Aquatic Toxicity Category 2

GHS Label Elements Including Precautionary Statements

Prevention:
Keep away from heat, sparks, open flames and hot surfaces. – No smoking.
Keep container tightly closed.
Ground container and receiving equipment
- if electrostatically sensitive material is for reloading.
- if product is volatile so *as to generate hazardous atmosphere.*
Use explosion-proof ventilating and lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves, eye protection and face protection
Wash hands thoroughly after handling.
Avoid breathing vapours or spray.

Use only outdoors or in a well-ventilated area.

Response:
IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.
In case of fire: Use water fog, dry chemical powder, foam or carbon dioxide for extinction.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical attention.
If skin irritation occurs: Get medical attention.
Take off contaminated clothing and wash before reuse.
IF SWALLOWED: Immediately call a POISON CENTER or physician.
Do NOT induce vomiting.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER or physician if you feel unwell.

Storage:
Store in a well-ventilated place. Keep cool.
Keep container tightly closed. - *if product is volatile so as to generate hazardous atmosphere.*
Store locked up.

Disposal:
Dispose of container in accordance with local, regional or national regulations.

Other hazards which do not result in classification	Repeated exposure may cause skin dryness and cracking.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredient	CAS Number	Proportion
2-Propanone	67-64-1	20-50%
Pentane, 2-methyl-	107-83-5	15-35%
Pentane, 3-methyl-	96-14-0	5-25%
Butane, 2,3-dimethyl-	79-29-8	5-25%
Carbon dioxide	124-38-9	5-10%
Butane, 2,2-dimethyl-	75-83-2	1-10%
Methanol	67-56-1	0-2%
Hexane	110-54-3	0-1%

4. FIRST AID MEASURES

Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if symptoms occur.
Ingestion	If swallowed, do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Do not give anything by mouth to an unconscious person. Seek immediate medical attention.
Skin	In case of skin contact, immediately remove contaminated clothing and wash affected areas with water and soap. Seek medical attention if symptoms occur.
Eyes	In case of eye contact, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention if symptoms occur.

5. FIRE FIGHTING MEASURES

	For major fires call the Fire Brigade. Ensure that an escape path is available from any fire.
Suitable Extinguishing Media	Foam, water fog, dry chemical powder and carbon dioxide.
Hazardous Combustion Products	Oxides of carbon.
Special Protective Actions for Firefighters	Wear Safe Work Australia approved self-contained breathing apparatus and full protective clothing.
Unusual Fire or Explosion Hazards	Flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.
Hazchem Code	2YE

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures	Wear Safe Work Australia approved self-contained breathing apparatus and full protective clothing. Evacuate all non-essential personnel from affected area. Ensure adequate ventilation. Avoid breathing vapours and/or mists. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area.
Environmental Precautions	In the event of a major spill, prevent spillage from entering drains or water courses.
Methods and Materials for Containment and Cleaning Up	Stop leak if safe to do so and contain spill. Move containers from spill area. Absorb using an inert absorbent such as sand, clay, earth or vermiculite and transfer to proper containers for disposal. Use spark-proof tools and explosion proof equipment.

7. HANDLING AND STORAGE

Precautions for Safe Handling	Use of safe work practices are recommended to avoid eye or skin contact and inhalation of vapours and/or mists. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Provide adequate ventilation. Food, beverages and tobacco products should not be stored or consumed where this material is in use. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.
Conditions for Safe Storage	Store in a tightly closed original container in a cool, dry, and well ventilated area. Pressurised containers - protect from sunlight and do not expose to temperature exceeding 50°C. Store locked up. Ground container and receiving equipment. Take precautionary measures against static discharge. Keep away from heat, sparks, open flames and hot surfaces. – No smoking. Use non-sparking tools. Empty containers retain product residue and can be hazardous.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters - Exposure Standards (Safe Work Australia)	**2-Propanone:** TWA: 500 ppm / 1185 mg/m^3 STEL: 1000 ppm / 2375 mg/m^3 **Pentane, 2-methyl-, Pentane, 3-methyl-, Butane, 2,3-dimethyl-, Butane, 2,2-dimethyl-:** TWA: 500 ppm / 1760 mg/m^3 STEL: 1000 ppm / 3500 mg/m^3 **Methanol:** TWA: 200 ppm / 262 mg/m^3 STEL: 250 ppm / 328 mg/m^3 **Hexane:** TWA: 20 ppm / 72 mg/m^3 STEL: - ppm / - mg/m^3
Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapour below occupational exposure standards. Use explosion-proof ventilating equipment.
Personal Protective Equipment (PPE)	
Respiratory Protection	Wear a Safe Work Australia approved air-purifying or air-fed respirator if ventilation is inadequate to keep solvent inhalation vapours below the occupational exposure standards or if working in confined areas. See Australian Standards AS/NZS 1715 and 1716 for more information.
Eye/Face Protection	Safety glasses with top and side shields or goggles. See Australian Standards AS 1336 and AS/NZS 1337 for more information.
Skin Protection	Chemical resistant, impervious gloves and protective clothing. See Australian Standards AS 2161 and 2919 and AS/NZS 2210 for more information.
Thermal Hazards	No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colourless liquid - aerosol
Odour	Slight hydrocarbon odour
Odour Threshold	No information available
pH	No information available
Melting Point	May start to solidify at -94.2°C (acetone)
Initial Boiling Point / Range	49°C
Flash Point (TCC)	< -7°C
Flammability	Highly flammable
Lower Flammability or Explosive Limit	No information available
Upper Flammability or Explosive Limit	No information available
Vapour Pressure	12.9 kPa (97 mm Hg) @ 20°C (methanol)
Vapour Density	>1
Relative Density (Specific Gravity)	0.71
Evaporation Rate (butyl acetate=1)	<1
Auto-ignition Temperature	277.85°C (lowest known value - Pentane, 3-methyl-)
Percent Volatiles by Volume	No information available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable at ambient temperature and under normal conditions of use
Hazardous Polymerization	Will not occur.
Conditions to Avoid	Heat, sparks, open flames and hot surfaces.
Incompatible Materials	No information available
Hazardous Decomposition Products	Oxides of carbon.

11. TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation	Causes skin irritation.
Serious Eye Damage/Irritation	Causes serious eye irritation
Respiratory or Skin Sensitisation	Not expected to be a sensitiser.
Germ Cell Mutagenicity	Not expected to be a hazard.
Carcinogenicity	This product does NOT contain any IARC listed chemicals.
Reproductive Toxicity	Not expected to be a developmental toxicant. Not expected to impair fertility.
Specific Target Organ Toxicity (STOT) - Single Exposure	May cause drowsiness and dizziness.
Specific Target Organ Toxicity (STOT) - Repeated Exposure	May cause damage to gastrointestinal tract, cardiovascular system, upper respiratory tract, skin, central nervous system (CNS) through prolonged or repeated exposure.
Aspiration Hazard	May be fatal if swallowed and enters airways.
Existing Conditions Aggravated by Exposure	Persons with pre-existing skin disorders, eye problems and impaired respiratory function may be more susceptible to the effects of this product.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Toxic to aquatic life with long lasting effects. May cause long-term adverse effects in the aquatic environment.
Bioaccumulation, Persistence and Degradibility	No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods and containers	Dispose according to applicable local and state government regulations.
Special precautions for landfill or incineration	Please consult your state Land Waste Management Authority for more information.

14. TRANSPORT INFORMATION

Classified as a dangerous good according to the Australian Code for the Transport of Dangerous goods by road or rail.

UN Number	1950
Proper Shipping Name	AEROSOLS
Dangerous Goods Class	2
Subsidiary Risk	Not applicable
Hazchem Code	2YE
Packing Group	Not applicable
Special Provisions	63, 190, 277, 327
Limited Quantities	See SP 277
Packagings & IBCs - Packing Instruction	P003, LP02
Packagings & IBCs - Special Packing Provisions	PP17, PP87, L2
Portable Tanks & Bulk Containers – Instructions	Not applicable
Portable Tanks & Bulk Containers – Spe Provisions	Not applicable

15. REGULATORY INFORMATION

2-Propanone, pentane, 2-methyl-, pentane, 3-methyl-, butane, 2,3-dimethyl-, carbon dioxide, butane, 2,2-dimethyl-, methanol and hexane are listed in the Australian Inventory of Chemical Substances (AICS).

Poisons Schedule: 5

2-Propanone, hexane and methanol are listed on the National Pollutant Inventory (NPI) List.

16. OTHER INFORMATION

Last Revision of MSDS	Rev 1.0 (11/09/2012)
Prepared by	MSDS.COM.AU Pty Ltd www.msds.com.au
Abbreviations Used	GHS: Globally Harmonised System of Classification and Labeling of Chemicals IARC: International Agency for Research on Cancer STEL: Short term exposure limit TWA: Time weighted average

Emergency Contacts

Element 14 Pty Ltd	**02 9644 7722**
Element 14 Pty Ltd - Emergency Number	**131126**
Police and Fire Brigade	**000**
Poisons Information Centre	**131126**

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This MSDS is prepared in accord with the Safe Work Australia document “Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals - December 2011”