

SAFETY DATA SHEET
LEAD FREE FLUX REMOVER

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

1. Identification**Product identifier****Product name** LEAD FREE FLUX REMOVER**Product number** LFFR, ELFFR400DB, ZE**Recommended use of the chemical and restrictions on use****Application** Cleaning agent.**Uses advised against** No specific uses advised against are identified.**Details of the supplier of the safety data sheet****Supplier** HK WENTWORTH-AMERICA
HK WENTWORTH-AMERICA
PO BOX 271347
FLOWER MOUND
TEXAS 75027
USA
info@hkw.co.uk**Emergency telephone number****Emergency telephone** +1 202 464 2554 (USA only)
+44 1235 239670**2. Hazard(s) identification****Classification of the substance or mixture**

EC No 1272/2008

Physical hazards Flam. Aerosol 1 - H222 Press. Gas, Compressed - H280**Health hazards** Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 Skin Sens. 1 - H317 Repr. 2 - H361f STOT SE 3 - H336 Asp. Tox. 1 - H304**Environmental hazards** Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410**Label elements****Pictogram****Signal word**

Danger

LEAD FREE FLUX REMOVER

Hazard statements

H222 Extremely flammable aerosol.
H280 Contains gas under pressure; may explode if heated.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H361f Suspected of damaging fertility.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Pressurized container: Do not pierce or burn, even after use
P261 Avoid breathing spray.
P264 Wash contaminated skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301+P310 If swallowed: Immediately call a poison center/ doctor.
P302+P352 If on skin: Wash with plenty of water.
P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 If exposed or concerned: Get medical advice/ attention.
P312 Call a poison center/ doctor if you feel unwell.
P321 Specific treatment (see medical advice on this label).
P331 Do NOT induce vomiting.
P332+P313 If skin irritation occurs: Get medical advice/ attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337+P313 If eye irritation persists: Get medical advice/ attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P410+P403 Protect from sunlight. Store in a well-ventilated place.
P412 Do not expose to temperatures exceeding 50°C/122°F.
P501 Dispose of contents/ container in accordance with national regulations.

Contains

CYCLOHEXANE, PROPAN-2-OL, 1-METHOXY-2-PROPANOL, BUTYL ACETATE -norm,
HEXANE MIXTURE OF ISOMERS (MAX 5% n-HEXANE (203-777-6)), Orange Terpenes,
HEPTANE, HEXANE-norm

Other hazards

This product does not contain any substances classified as PBT or vPvB.

3. Composition/Information on Ingredients

Mixtures

LEAD FREE FLUX REMOVER

CYCLOHEXANE 30-60% CAS number: 110-82-7 M factor (Acute) = 1 M factor (Chronic) = 1
Classification Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 STOT SE 3 - H336 Asp. Tox. 1 - H304 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410
PROPAN-2-OL 10-30% CAS number: 67-63-0
Classification Flam. Liq. 2 - H225 Eye Irrit. 2A - H319 STOT SE 3 - H336
1-METHOXY-2-PROPANOL 10-30% CAS number: 107-98-2
Classification Flam. Liq. 3 - H226 STOT SE 3 - H336
BUTYL ACETATE -norm 1-5% CAS number: 123-86-4
Classification Flam. Liq. 3 - H226 STOT SE 3 - H336
HEXANE MIXTURE OF ISOMERS (MAX 5% n-HEXANE (203-777-6)) 1-5% CAS number: 110-54-3
Classification Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 STOT SE 3 - H336 Asp. Tox. 1 - H304

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Orange Terpenes 1-5% CAS number: 8028-48-6 M factor (Acute) = 1 M factor (Chronic) = 1
Classification Flam. Liq. 3 - H226 Skin Irrit. 2 - H315 Skin Sens. 1 - H317 Asp. Tox. 1 - H304 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410
HEPTANE 1-5% CAS number: 142-82-5
Classification Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 STOT SE 3 - H336 Asp. Tox. 1 - H304
CARBON DIOXIDE 1-5% CAS number: 124-38-9
Classification Not Classified
HEXANE-norm <1% CAS number: 110-54-3 M factor (Acute) = 1
Classification Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 Repr. 2 - H361f STOT SE 3 - H336 STOT RE 2 - H373 Asp. Tox. 1 - H304 Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411

The Full Text for all Hazard Statements are Displayed in Section 16.

4. First-aid measures

Description of first aid measures

General information

Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.

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Inhalation	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place.
Ingestion	Rinse mouth thoroughly with water. Remove any dentures. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.
Skin Contact	It is important to remove the substance from the skin immediately. In the event of any sensitization symptoms developing, ensure further exposure is avoided. Remove contamination with soap and water or recognized skin cleansing agent. Get medical attention if symptoms are severe or persist after washing.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

Most important symptoms and effects, both acute and delayed

General information	See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Headache. Nausea, vomiting. Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo. Narcotic effect.
Ingestion	May cause sensitization or allergic reactions in sensitive individuals. Due to the physical nature of this product, it is unlikely that ingestion will occur. Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
Skin contact	May cause skin sensitization or allergic reactions in sensitive individuals. Redness. Irritating to skin.
Eye contact	Irritating to eyes.

Indication of immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically. May cause sensitization or allergic reactions in sensitive individuals.
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5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	The product is flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

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Specific hazards	Containers can burst violently or explode when heated, due to excessive pressure build-up. If aerosol cans are ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.
<u>Advice for firefighters</u>	
Protective actions during firefighting	Avoid breathing fire gases or vapors. Evacuate area. Keep upwind to avoid inhalation of gases, vapors, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Evacuate area. Risk of explosion. Provide adequate ventilation. No smoking, sparks, flames or other sources of ignition near spillage. Promptly remove any clothing that becomes contaminated. Avoid inhalation of dust and vapors. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes.
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Environmental precautions

Environmental precautions	Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).
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Methods and material for containment and cleaning up

Methods for cleaning up	Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Eliminate all ignition sources if safe to do so. No smoking, sparks, flames or other sources of ignition near spillage. Do not allow material to enter confined spaces, due to the risk of explosion. Approach the spillage from upwind. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.
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Reference to other sections	For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.
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7. Handling and storage

Precautions for safe handling

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Usage precautions

Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Avoid exposing aerosol containers to high temperatures or direct sunlight. The product is flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Suspected of damaging fertility. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Spray will evaporate and cool rapidly and may cause frostbite or cold burns if in contact with skin. Avoid contact with eyes. Avoid inhalation of vapors and spray/mists.

Advice on general occupational hygiene

Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

Conditions for safe storage, including any incompatibilities

Storage precautions

Store in accordance with local regulations. Keep away from oxidizing materials, heat and flames. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Protect from sunlight. Do not store near heat sources or expose to high temperatures. Do not expose to temperatures exceeding 50°C/122°F. Bund storage facilities to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.

Storage class

Miscellaneous hazardous material storage.

Specific end uses(s)

Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

CYCLOHEXANE

Long-term exposure limit (8-hour TWA): ACGIH 100 ppm 344 mg/m³

Long-term exposure limit (8-hour TWA): OSHA 300 ppm 1050 mg/m³

PROPAN-2-OL

Long-term exposure limit (8-hour TWA): OSHA 400 ppm 980 mg/m³

Long-term exposure limit (8-hour TWA): ACGIH 200 ppm 492 mg/m³

Short-term exposure limit (15-minute): ACGIH 400 ppm 984 mg/m³

A4

1-METHOXY-2-PROPANOL

Long-term exposure limit (8-hour TWA): ACGIH 50 ppm 184 mg/m³

Short-term exposure limit (15-minute): ACGIH 100 ppm 369 mg/m³

A4

BUTYL ACETATE -norm

Long-term exposure limit (8-hour TWA): ACGIH 150 ppm

Short-term exposure limit (15-minute): ACGIH 200 ppm

HEXANE MIXTURE OF ISOMERS (MAX 5% n-HEXANE (203-777-6))

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Long-term exposure limit (8-hour TWA): ACGIH 50 ppm 176 mg/m³

Sk

Long-term exposure limit (8-hour TWA): OSHA 500 ppm 1800 mg/m³

HEPTANE

Long-term exposure limit (8-hour TWA): ACGIH 400 ppm 1640 mg/m³

Short-term exposure limit (15-minute): ACGIH 500 ppm 2050 mg/m³

Long-term exposure limit (8-hour TWA): OSHA 500 ppm 2000 mg/m³

CARBON DIOXIDE

Long-term exposure limit (8-hour TWA): ACGIH 5000 ppm

Short-term exposure limit (15-minute): ACGIH 30 ppm

HEXANE-norm

Long-term exposure limit (8-hour TWA): ACGIH 50 ppm 176 mg/m³

Sk

Long-term exposure limit (8-hour TWA): OSHA 500 ppm 1800 mg/m³

ACGIH = American Conference of Governmental Industrial Hygienists.

OSHA = Occupational Safety and Health Administration.

Sk = Danger of cutaneous absorption.

A4 = Not Classifiable as a Human Carcinogen.

PROPAN-2-OL (CAS: 67-63-0)

DNEL

Industry - Dermal; : 888 mg/kg/day Industry - Inhalation; : 500 mg/m³ Consumer - Dermal; : 319 mg/kg/day Consumer - Inhalation; : 89 mg/m³ Consumer - Oral; : 26 mg/kg/day

PNEC

- Fresh water; 140.9 mg/l - Marine water; 140.9 mg/l - Sediment; 552 mg/kg - Soil; 28 mg/kg

BUTYL ACETATE -norm (CAS: 123-86-4)

DNEL

Industry - Inhalation; Long term systemic effects: 480 mg/m³ Industry - Inhalation; Short term systemic effects: 960 mg/m³ Consumer - Inhalation; Short term systemic effects: 859.7 mg/m³ Consumer - Inhalation; Long term systemic effects: 102.34 mg/m³ Consumer - Inhalation; Long term local effects: 102.34 mg/m³ Industry - Inhalation; Long term local effects: 480 mg/m³ Consumer - Inhalation; Short term local effects: 859.7 mg/m³ Industry - Inhalation; Short term local effects: 960 mg/m³

PNEC

- Fresh water; 0.18 mg/l - Marine water; 0.018 mg/l - Intermittent release; 0.36 mg/l - STP; 35.6 mg/l - Sediment (Freshwater); 0.981 mg/kg - Sediment (Marinewater); 0.0981 mg/kg - Soil; 0.0903 mg/kg

Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimize worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimize exposure.

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Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with OSHA 1910.133. Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacture, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.
Other skin and body protection	Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.
Hygiene measures	Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.
Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.
Environmental exposure controls	Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Liquid. Aerosol.
Color	Colorless.
Odor	Characteristic. Citrus.
Odor threshold	Not available.
pH	Not available.
Melting point	-29°C/-20.2°F
Initial boiling point and range	> 80°C/176°F @
Flash point	0°C/32°F CC (Closed cup).
Evaporation rate	Not available.
Evaporation factor	Not available.
Flammability (solid, gas)	Not available.

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Upper/lower flammability or explosive limits	: 0.6
Other flammability	Not available.
Vapor pressure	11.52 kPa @ 20°C/68°F
Vapor density	Not available.
Relative density	0.780 @ 20°C/68°F
Bulk density	Not available.
Solubility(ies)	Insoluble in water.
Partition coefficient	Not available.
Auto-ignition temperature	> 200°C/392°F
Decomposition Temperature	Not available.
Viscosity	Not available.
Explosive properties	Not considered to be explosive.
Oxidizing properties	Does not meet the criteria for classification as oxidizing.

10. Stability and reactivity

Reactivity	There are no known reactivity hazards associated with this product.
Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
Possibility of hazardous reactions	The following materials may react strongly with the product: Oxidizing agents.
Conditions to avoid	Avoid exposing aerosol containers to high temperatures or direct sunlight. Pressurised container: may burst if heated
Materials to avoid	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
Hazardous decomposition products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

11. Toxicological information

Information on toxicological effects

Other health effects	There is no evidence that the product can cause cancer.
<u>Acute toxicity - oral</u>	
Notes (oral LD₅₀)	Based on available data the classification criteria are not met.
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	Based on available data the classification criteria are not met.
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	Based on available data the classification criteria are not met.
<u>Skin corrosion/irritation</u>	

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Animal data	Irritating.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Causes serious eye irritation.
<u>Respiratory sensitization</u>	
Respiratory sensitization	Based on available data the classification criteria are not met.
<u>Skin sensitization</u>	
Skin sensitization	May cause skin sensitization or allergic reactions in sensitive individuals.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Suspected of damaging fertility.
Reproductive toxicity - development	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	STOT SE 3 - H336 May cause drowsiness or dizziness.
Target organs	Central nervous system
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.
<u>Aspiration hazard</u>	
Aspiration hazard	Asp. Tox. 1 - H304 May be fatal if swallowed and enters airways. Pneumonia may be the result if vomited material containing solvents reaches the lungs.
<u>General information</u>	
General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<u>Inhalation</u>	
Inhalation	A single exposure may cause the following adverse effects: Headache. Nausea, vomiting. Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo. Narcotic effect.
<u>Ingestion</u>	
Ingestion	May cause sensitization or allergic reactions in sensitive individuals. Due to the physical nature of this product, it is unlikely that ingestion will occur. Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
<u>Skin Contact</u>	
Skin Contact	May cause skin sensitization or allergic reactions in sensitive individuals. Redness. Irritating to skin.
<u>Eye contact</u>	
Eye contact	Irritating to eyes.
<u>Route of entry</u>	
Route of entry	Ingestion Inhalation Skin and/or eye contact
<u>Target Organs</u>	
Target Organs	Central nervous system
<u>Medical considerations</u>	
Medical considerations	Skin disorders and allergies.
<u>Toxicological Information on Ingredients.</u>	

LEAD FREE FLUX REMOVER**PROPAN-2-OL****Acute toxicity - oral**

Acute toxicity oral (LD₅₀ mg/kg) 4,700.0

Species Rat

ATE oral (mg/kg) 4,700.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 12,800.0

Species Rabbit

Acute toxicity - inhalation

Acute toxicity Inhalation (LC₅₀ vapours mg/l) 46.5

Species Rat

ATE inhalation (vapours mg/l) 46.5

Carcinogenicity

IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Inhalation Vapors may cause headache, fatigue, dizziness and nausea.

Eye contact Irritating to eyes.

Acute and chronic health hazards Irritation of eyes and mucous membranes. Narcotic effect. Central nervous system depression.

Route of entry Skin and/or eye contact Skin absorption Ingestion

Target Organs Central nervous system Eyes Skin Respiratory system, lungs

Medical Symptoms Irritation of eyes and mucous membranes. Dilated pupils. Rhinitis (inflammation of the nasal mucous membranes). General respiratory distress, unproductive cough. Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo.

1-METHOXY-2-PROPANOL**Acute toxicity - oral**

Acute toxicity oral (LD₅₀ mg/kg) 4,016.0

Species Rat

ATE oral (mg/kg) 4,016.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 3,000.0

Species Rabbit

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ATE dermal (mg/kg) 3,000.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 54.6

Species Rat

ATE inhalation (vapours mg/l) 54.6

BUTYL ACETATE -normAcute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 10,760.0

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 14,112.0

Species Rabbit

Orange TerpenesAcute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,000.0

Species Rat

ATE oral (mg/kg) 5,000.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 5,000.0

Species Rabbit

ATE dermal (mg/kg) 5,000.0

12. Ecological Information

Ecotoxicity Dangerous for the environment if discharged into watercourses.

Toxicity

Toxicity Aquatic Acute 1 - H400 Very toxic to aquatic life. Aquatic Chronic 1 - H410 Very toxic to aquatic life with long lasting effects.

Ecological information on ingredients.**PROPAN-2-OL**

Acute toxicity - fish LC50, 96 hours: 9640 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 13299 mg/l, Daphnia magna

LEAD FREE FLUX REMOVER**Acute toxicity - aquatic plants**EC₅₀, 72 hours: > 1.000 mg/l, Scenedesmus subspicatus**Acute toxicity - microorganisms**EC₅₀, >: > 1.000 mg/l, Activated sludge**1-METHOXY-2-PROPANOL****Acute toxicity - fish**LC₅₀, 96 hours: 20800 mg/l, Fish**Acute toxicity - aquatic invertebrates**EC₅₀, 48 hours: 23300 mg/l, Daphnia magna**BUTYL ACETATE -norm****Acute toxicity - fish**LC₅₀, 96 hours: 18 mg/l, Pimephales promelas (Fat-head Minnow)
LC₅₀, 96 hours: mg/l, Fish**Acute toxicity - aquatic invertebrates**EC₅₀, 48 hours: 44 mg/l, Daphnia magna
EC₅₀, 48 hours: mg/l, Daphnia magna**Acute toxicity - aquatic plants**EC₅₀, 72 hours: 647.7 mg/l, Scenedesmus subspicatus
NOEC, : 200 mg/l, Scenedesmus subspicatus
IC₅₀, 72 hours: mg/l, Algae**Orange Terpenes****Acute aquatic toxicity****LE(C)₅₀**0.1 < L(E)C₅₀ ≤ 1**M factor (Acute)**

1

Acute toxicity - fishLC₅₀, 96 hours: 0.71 mg/l, Pimephales promelas (Fat-head Minnow)**Acute toxicity - aquatic invertebrates**EC₅₀, : 0.4 mg/l, Daphnia magna
EC₅₀, 48 hours: mg/l, Daphnia magna**Acute toxicity - aquatic plants**IC₅₀, : 4 mg/l, Selenastrum capricornutum**Chronic aquatic toxicity****M factor (Chronic)**

1

HEPTANE**Acute aquatic toxicity****LE(C)₅₀**0.1 < L(E)C₅₀ ≤ 1**Acute toxicity - fish**LC₅₀, 96 hours: 4.924 mg/l, Fish**Chronic aquatic toxicity****NOEC**

0.01 < NOEC ≤ 0.1

Persistence and degradability**Persistence and degradability** The degradability of the product is not known.**Ecological information on ingredients.**

LEAD FREE FLUX REMOVER**PROPAN-2-OL****Persistence and
degradability**

The product is readily biodegradable.

BUTYL ACETATE -norm**Persistence and
degradability**

The product is readily biodegradable.

Bioaccumulative potential**Bio-Accumulative Potential** No data available on bioaccumulation.**Partition coefficient** Not available.**Ecological information on ingredients.****PROPAN-2-OL****Bio-Accumulative Potential** The product does not contain any substances expected to be bioaccumulating.**BUTYL ACETATE -norm****Bio-Accumulative Potential** No data available on bioaccumulation.**Mobility in soil****Mobility**

The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.

Results of PBT and vPvB assessment**Ecological information on ingredients.****PROPAN-2-OL****Results of PBT and vPvB
assessment** This product does not contain any substances classified as PBT or vPvB.**BUTYL ACETATE -norm****Results of PBT and vPvB
assessment** This product does not contain any substances classified as PBT or vPvB.**Other adverse effects****Other adverse effects** None known.**13. Disposal considerations****Waste treatment methods****General information**

The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

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Disposal methods

Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

14. Transport Information

General

For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

UN Number

UN No. (TDG)	1950
UN No. (IMDG)	1950
UN No. (ICAO)	1950
UN No. (DOT)	ID8000

UN proper shipping name

Proper shipping name (TDG)	AEROSOLS
Proper shipping name (IMDG)	AEROSOLS (CONTAINS CYCLOHEXANE, Orange Terpenes)
Proper shipping name (ICAO)	AEROSOLS
Proper shipping name (DOT)	CONSUMER COMMODITY

Transport hazard class(es)

DOT hazard class	9
DOT hazard label	9
TDG class	2.1
TDG label(s)	2.1
IMDG Class	2.1
ICAO class/division	2.1

Transport labels



DOT transport labels



Packing group

TDG Packing Group	None
IMDG packing group	None
ICAO packing group	None

Environmental hazards

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Environmentally Hazardous Substance



Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

EmS

F-D, S-U

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

The following ingredients are listed or exempt:

CYCLOHEXANE

Final CERCLA RQ: 1000(454) pounds (Kilograms)

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

None of the ingredients are listed or exempt.

SARA 313 Emission Reporting

The following ingredients are listed or exempt:

CYCLOHEXANE

1.0 %

CAA Accidental Release Prevention

None of the ingredients are listed or exempt.

FDA - Essential Chemical

None of the ingredients are listed or exempt.

FDA - Precursor Chemical

None of the ingredients are listed or exempt.

SARA (311/312) Hazard Categories

None of the ingredients are listed or exempt.

OSHA Highly Hazardous Chemicals

None of the ingredients are listed or exempt.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-I)

The following ingredients are listed or exempt:

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CYCLOHEXANE

Present.

California Air Toxics "Hot Spots" (A-II)

None of the ingredients are listed or exempt.

California Directors List of Hazardous Substances

The following ingredients are listed or exempt:

CYCLOHEXANE

Present.

Massachusetts "Right To Know" List

The following ingredients are listed or exempt:

CYCLOHEXANE

Present.

Rhode Island "Right To Know" List

The following ingredients are listed or exempt:

CYCLOHEXANE

Present.

Minnesota "Right To Know" List

The following ingredients are listed or exempt:

CYCLOHEXANE

Present.

New Jersey "Right To Know" List

The following ingredients are listed or exempt:

CYCLOHEXANE

Present.

Pennsylvania "Right To Know" List

The following ingredients are listed or exempt:

CYCLOHEXANE

Present.

Inventories

US - TSCA

The following ingredients are listed or exempt:

CYCLOHEXANE

Present.

US - TSCA 12(b) Export Notification

None of the ingredients are listed or exempt.

16. Other Information

Training advice

Read and follow manufacturer's recommendations. Only trained personnel should use this material.

Issued by

Bethan Massey

Revision date

10/2/2016

Revision

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SDS No.	11998
Hazard statements in full	H222 Extremely flammable aerosol. H225 Highly flammable liquid and vapor. H226 Flammable liquid and vapor. H280 Contains gas under pressure; may explode if heated. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H361f Suspected of damaging fertility. H373 May cause damage to organs through prolonged or repeated exposure. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H411 Toxic to aquatic life with long lasting effects.
NFPA - health hazard	Temporary incapacitation, injury. (2)
NFPA - flammability hazard	Extremely flammable. (4)
NFPA - instability hazard	Unstable if heated. (1)
ACA HMIS Health rating.	Moderate hazard. (2)
ACA HMIS Flammability rating.	Extremely flammable. (4)
ACA HMIS Physical hazard rating.	Unstable if heated. (1)
ACA HMIS Personal protection rating.	B

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.