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SAFETY DATA SHEET
Hexane Free Flux Remover
According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

1. Identification

Product identifier

Product name Hexane Free Flux Remover

Product number HFFR-a, EHFFR400DB, 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

Electrolube North America
5670 Guhn Road
Houston
Texas
77040
+1 800-474-1472
info@electrolube.com

Emergency telephone number

Emergency telephone

IN CASE OF EMERGENCY CALL:
+1 202 464 2554 (USA only) (24hr, Provided by Carechem 24)
+44 1235 239670 (24hr, Provided by Carechem 24)

2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards Flam. Aerosol 1 - H222 Press. Gas, Compressed - H280

Health hazards Eye Irrit. 2A - H319 Skin Sens. 1 - H317 STOT SE 3 - H336 Asp. Tox. 1 - H304

Environmental hazards Aquatic Chronic 2 - H411

Label elements

Hazard symbols

Signal word Danger

Hazard statements

H222 Extremely flammable aerosol.
H280 Contains gas under pressure; may explode if heated.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.
H304 May be fatal if swallowed and enters airways.

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Precautionary statements

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.
P312 Call a poison center/ doctor if you feel unwell.
P331 Do NOT induce vomiting.
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.
P501 Dispose of contents/ container in accordance with national regulations.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C /122°F.

Contains

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics , Propan-2-ol, 1-Methoxy-2-propanol, Orange Terpenes

Other hazards

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

3. Composition/information on ingredients

Mixtures

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics **30-60%**

CAS number: 68920-06-9

Classification
Flam. Liq. 2 - H225
STOT SE 3 - H336
Asp. Tox. 1 - H304
Aquatic Chronic 2 - H411

Propan-2-ol **10-30%**

CAS number: 67-63-0

Classification
Flam. Liq. 2 - H225
Eye Irrit. 2A - H319
STOT SE 3 - H336

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1-Methoxy-2-propanol	10-30%
CAS number: 107-98-2	

Classification
Flam. Liq. 3 - H226
STOT SE 3 - H336

Orange Terpenes	1-5%
CAS number: 8028-48-6	

Classification
Flam. Liq. 3 - H226
Skin Irrit. 2 - H315
Skin Sens. 1 - H317
Asp. Tox. 1 - H304
Aquatic Chronic 2 - H411

Carbon Dioxide	1-5%
CAS number: 124-38-9	

Classification
Press. Gas, Compressed - H280

The full text for all hazard statements is 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.

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.

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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. Repeated exposure may cause skin dryness or cracking.

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.

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

Specific hazards Containers can burst violently or explode when heated, due to excessive pressure build-up. Bursting aerosol containers may be propelled from a fire at high speed. If aerosol cans are ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. Vapors may form explosive mixtures with air.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

Advice for firefighters

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 contact with skin and eyes.

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).

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. Approach the spillage from upwind. Under normal conditions of handling and storage, spillages from aerosol containers are unlikely. If aerosol cans are ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. Small Spillages: Wipe up with an absorbent cloth and dispose of waste safely. Large Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. 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.

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.

7. Handling and storage

Precautions for safe handling

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. 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 away from incompatible materials (see Section 10). 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. Utilize retaining walls 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.

8. Exposure controls/Personal protection

Control parameters

Occupational exposure limits

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

Carbon Dioxide

Long-term exposure limit (8-hour TWA): OSHA 5000 ppm 9000 mg/m³
Long-term exposure limit (8-hour TWA): ACGIH 5000 ppm 9000 mg/m³
Short-term exposure limit (15-minute): ACGIH 30000 ppm 54000 mg/m³

OSHA = Occupational Safety and Health Administration.
ACGIH = American Conference of Governmental Industrial Hygienists.
A4 = Not Classifiable as a Human Carcinogen.

Propan-2-ol (CAS: 67-63-0)

Immediate danger to life and health 2000 ppm

Carbon Dioxide (CAS: 124-38-9)

Immediate danger to life and health 40,000 ppm

Exposure controls

Protective equipment

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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.
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/manufacturer, 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	Aerosol.
Color	Colorless.
Odor	Fruity.
Odor threshold	Not available.
pH	Not available.
Melting point	Not available.
Initial boiling point and range	Not available.

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Flash point	7°C
Evaporation rate	11 (diethyl ether = 1)
Evaporation factor	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Not available.
Other flammability	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Bulk density	0.78 kg/l
Solubility(ies)	Immiscible with water.
Partition coefficient	Not available.
Auto-ignition temperature	Not available.
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	See the other subsections of this section for further details.
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

Acute toxicity - oral

Notes (oral LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD_{50})	Based on available data the classification criteria are not met.

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Acute toxicity - inhalation

Notes (inhalation LC_{50}) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Respiratory sensitization

Respiratory sensitization Based on available data the classification criteria are not met.

Skin sensitization

Skin sensitization May cause skin sensitization or allergic reactions in sensitive individuals.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

IARC carcinogenicity Contains a substance which may be potentially carcinogenic. IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure STOT SE 3 - H336 May cause drowsiness or dizziness.

Target organs Central nervous system

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

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.

General information 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. Repeated exposure may cause skin dryness or cracking.

Eye contact Irritating to eyes.

Route of exposure Ingestion Inhalation Skin and/or eye contact

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Target Organs	Central nervous system
Medical considerations	Skin disorders and allergies.

Toxicological information on ingredients.

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Acute toxicity - oral	
Notes (oral LD_{50})	Based on available data the classification criteria are not met.
Acute toxicity - dermal	
Notes (dermal LD_{50})	Based on available data the classification criteria are not met.
Acute toxicity - inhalation	
Notes (inhalation LC_{50})	Based on available data the classification criteria are not met.
Skin corrosion/irritation	
Animal data	Repeated exposure may cause skin dryness or cracking.
Serious eye damage/irritation	
Serious eye damage/irritation	Based on available data the classification criteria are not met.
Respiratory sensitization	
Respiratory sensitization	Based on available data the classification criteria are not met.
Skin sensitization	
Skin sensitization	Based on available data the classification criteria are not met.
Germ cell mutagenicity	
Genotoxicity - in vitro	May cause genetic defects.
Carcinogenicity	
Carcinogenicity	May cause cancer.
IARC carcinogenicity	None of the ingredients are listed or exempt.
Reproductive toxicity	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.
Specific target organ toxicity - single exposure	
STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.
Specific target organ toxicity - repeated exposure	
STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.
Target organs	Central nervous system
Aspiration hazard	
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.

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General information	May cause cancer after repeated exposure. Risk of cancer depends on duration and level of exposure. May cause genetic defects. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	No specific symptoms known.
Ingestion	Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
Skin Contact	Repeated exposure may cause skin dryness or cracking.
Eye contact	No specific symptoms known.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target Organs	No specific target organs known.

Propan-2-ol

Acute toxicity - oral

Notes (oral LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC_{50})	Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data	Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation	Causes serious eye irritation.

Respiratory sensitization

Respiratory sensitization	Based on available data the classification criteria are not met.

Skin sensitization

Skin sensitization	Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro	Based on available data the classification criteria are not met.
Genotoxicity - in vivo	Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.

Reproductive toxicity

Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.

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Specific target organ toxicity - single exposure

STOT - single exposure	STOT SE 3 - H336 May cause drowsiness or dizziness.
Target organs	Central nervous system

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard	Based on available data the classification criteria are not met.

General information	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	No specific symptoms known.
Skin Contact	No specific symptoms known.
Eye contact	Irritating to eyes.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target Organs	Central nervous system

1-Methoxy-2-propanol

Acute toxicity - oral

Notes (oral LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC_{50})	Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data	Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation	Based on available data the classification criteria are not met.

Respiratory sensitization

Respiratory sensitization	Based on available data the classification criteria are not met.

Skin sensitization

Skin sensitization	Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro	Based on available data the classification criteria are not met.
Genotoxicity - in vivo	Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.

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Carcinogenicity

Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.

Reproductive toxicity

Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure	STOT SE 3 - H336 May cause drowsiness or dizziness.
Target organs	Central nervous system

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard	Based on available data the classification criteria are not met.

General information	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	No specific symptoms known.
Skin Contact	No specific symptoms known.
Eye contact	No specific symptoms known.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target Organs	Central nervous system

Orange Terpenes

Acute toxicity - oral

Notes (oral LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC_{50})	Based on available data the classification criteria are not met.

Skin corrosion/irritation

Skin corrosion/irritation	Causes skin irritation.
Animal data	Irritating.

Serious eye damage/irritation

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Serious eye damage/irritation	Based on available data the classification criteria are not met.
Respiratory sensitization	
Respiratory sensitization	Based on available data the classification criteria are not met.
Skin sensitization	
Skin sensitization	May cause skin sensitization or allergic reactions in sensitive individuals.
Germ cell mutagenicity	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
Genotoxicity - in vivo	Not applicable.
Carcinogenicity	
Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.
Reproductive toxicity	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.
Specific target organ toxicity - single exposure	
STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.
Specific target organ toxicity - repeated exposure	
STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.
Aspiration hazard	
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.
General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	No specific symptoms known.
Ingestion	May cause sensitization or allergic reactions in sensitive individuals. May cause irritation. 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	No specific symptoms known.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target Organs	No specific target organs known.
Medical considerations	Skin disorders and allergies.

Carbon Dioxide

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Acute toxicity - oral

Notes (oral LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC_{50})	Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data	Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation	Based on available data the classification criteria are not met.

Respiratory sensitization

Respiratory sensitization	Based on available data the classification criteria are not met.

Skin sensitization

Skin sensitization	Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro	Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.

Reproductive toxicity

Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard	Not relevant. Gas.

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	No specific symptoms known.
Ingestion	Due to the physical nature of this product, it is unlikely that ingestion will occur.
Skin Contact	No specific symptoms known.
Eye contact	No specific symptoms known.

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Route of exposure	Inhalation Skin and/or eye contact
Target Organs	No specific target organs known.

12. Ecological information

Ecological information on ingredients.

Propan-2-ol

Ecotoxicity	Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

1-Methoxy-2-propanol

Ecotoxicity	Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

Carbon Dioxide

Ecotoxicity	Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

Toxicity Aquatic Chronic 2 - H411 Toxic to aquatic life with long lasting effects.

Ecological information on ingredients.

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Toxicity	Aquatic Chronic 2 - H411 Toxic to aquatic life with long lasting effects.
Acute aquatic toxicity	
Acute toxicity - fish	LC_{50}, 96 hours: 3 - 10 mg/l, Freshwater fish
Acute toxicity - aquatic invertebrates	EC_{80}, 96 hours: 4.6 - 10.0 mg/l, Daphnia magna
Acute toxicity - aquatic plants	IC_{80}, 72 hours: 10 - 30 mg/l, Algae
Chronic aquatic toxicity	
Chronic toxicity - fish early life stage	, 28 days: 0.57 mg/l, Oncorhynchus mykiss (Rainbow trout)
Chronic toxicity - aquatic invertebrates	, 21 days: 1 mg/l, Daphnia magna

Propan-2-ol

Toxicity	Based on available data the classification criteria are not met.
Acute aquatic toxicity	
Acute toxicity - fish	LC_{50}, 96 hours: 10000 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	LC_{50}, 24 hours: >10000 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 7 days: 1800 mg/l, Scenedesmus quadricauda

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1-Methoxy-2-propanol

Toxicity	Based on available data the classification criteria are not met.

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: 20800 mg/l, Pimephales promelas (Fat-head Minnow) REACH dossier information.
Acute toxicity - aquatic invertebrates	LC_{50}, 48 hours: 21100 mg/l, Daphnia magna REACH dossier information.
Acute toxicity - aquatic plants	EC_{50}, 7 days: >1000 mg/l, Selenastrum capricornutum REACH dossier information.

Orange Terpenes

Toxicity	Aquatic Chronic 2 - H411 Toxic to aquatic life with long lasting effects.

Carbon Dioxide

Toxicity	Based on available data the classification criteria are not met.

Persistence and degradability

Persistence and degradability The degradability of the product is not known.

Ecological information on ingredients.

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Persistence and degradability	The degradability of the product is not known.

Propan-2-ol

Persistence and degradability	The degradability of the product is not known.
Biodegradation	Water - Degradation 53%: 5 days
Biological oxygen demand	1.19-1.72 g O_2/g substance
Chemical oxygen demand	2.23 g O_2/g substance

1-Methoxy-2-propanol

Persistence and degradability	The degradability of the product is not known.
Phototransformation	Water - DT_{50} : 3.1 hours REACH dossier information.
Biodegradation	Water - Degradation 96%: 28 days REACH dossier information.

Orange Terpenes

Persistence and degradability	The degradability of the product is not known.

Hexane Free Flux Remover

Carbon Dioxide

Persistence and degradability The degradability of the product is not known.

Bioaccumulative potential

Bio-Accumulative Potential No data available on bioaccumulation.

Partition coefficient Not available.

Ecological information on ingredients.

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Bio-Accumulative Potential No data available on bioaccumulation.

Propan-2-ol

Bio-Accumulative Potential No data available on bioaccumulation.

1-Methoxy-2-propanol

Bio-Accumulative Potential No data available on bioaccumulation.

Partition coefficient log Pow: <1 REACH dossier information.

Orange Terpenes

Bio-Accumulative Potential No data available on bioaccumulation.

Carbon Dioxide

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.

Ecological information on ingredients.

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Mobility No data available.

Propan-2-ol

Mobility No data available.

1-Methoxy-2-propanol

Mobility No data available.

Surface tension 70.7 mN/m @ 20°C

Orange Terpenes

Mobility No data available.

Hexane Free Flux Remover

Carbon Dioxide

Mobility Not relevant.

Other adverse effects

Other adverse effects None known.

Ecological information on ingredients.

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Other adverse effects None known.

Propan-2-ol

Other adverse effects None known.

1-Methoxy-2-propanol

Other adverse effects None known.

Orange Terpenes

Other adverse effects None known.

Carbon Dioxide

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.

Disposal methods Do not empty into drains. Empty containers must not be punctured or incinerated because of the risk of an explosion. 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.

14. Transport information

UN Number

UN No. (TDG) 1950

UN No. (IMDG) 1950

UN No. (ICAO) 1950

UN No. (DOT) ID8000

UN proper shipping name

Hexane Free Flux Remover

Proper shipping name (TDG)	AEROSOLS
Proper shipping name (IMDG)	AEROSOLS (CONTAINS Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics , 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

Environmentally Hazardous Substance

Special precautions for user

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.

Hexane Free Flux Remover

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
None of the ingredients are listed or exempt.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
None of the ingredients are listed or exempt.

SARA 313 Emission Reporting
None of the ingredients are listed or exempt.

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:

1-Methoxy-2-propanol

Propan-2-ol

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:

1-Methoxy-2-propanol

Propan-2-ol

Carbon Dioxide

Massachusetts "Right To Know" List
The following ingredients are listed or exempt:

1-Methoxy-2-propanol

Propan-2-ol

Carbon Dioxide

Rhode Island "Right To Know" List
The following ingredients are listed or exempt:

1-Methoxy-2-propanol

Propan-2-ol

Carbon Dioxide

Hexane Free Flux Remover

Minnesota "Right To Know" List
The following ingredients are listed or exempt:

1-Methoxy-2-propanol

Propan-2-ol

Carbon Dioxide

New Jersey "Right To Know" List
The following ingredients are listed or exempt:

1-Methoxy-2-propanol

Propan-2-ol

Carbon Dioxide

Pennsylvania "Right To Know" List
The following ingredients are listed or exempt:

1-Methoxy-2-propanol

Propan-2-ol

Carbon Dioxide

Inventories

US - TSCA
The following ingredients are listed:

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

1-Methoxy-2-propanol

Propan-2-ol

Carbon Dioxide

US - TSCA 12(b) Export Notification
None of the ingredients are listed or exempt.

16. Other information

Abbreviations and acronyms used in the safety data sheet

TDG: The transport of dangerous goods act

IATA: International air transport association.
ICAO: Technical instructions for the safe transport of dangerous goods by air.
IMDG: International maritime dangerous goods.
CAS: Chemical abstracts service.
ATE: Acute toxicity estimate.
LC_{50}: Lethal concentration to 50 % of a test population.
LD_{50}: Lethal dose to 50% of a test population (median lethal dose).
EC_{50}: 50% of maximal effective concentration.
PBT: Persistent, bioaccumulative and toxic substance.
vPvB: Very persistent and very bioaccumulative.

Classification abbreviations and acronyms

Aerosol = Aerosol
Eye Irrit. = Eye irritation
Skin Sens. = Skin sensitisation
STOT SE = Specific target organ toxicity-single exposure
Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Hexane Free Flux Remover

Training advice	Read and follow manufacturer's recommendations. Only trained personnel should use this material.
Issued by	Damian Robertson
Revision date	9/23/2021
Revision	2.3
SDS No.	1646
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. H411 Toxic to aquatic life with long lasting effects.