# Safety Data Sheet

Date of Issue: 27.04.2021 Date of Expiry: 27.04.2026

## 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name : **ECP Limited**
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Emergency phone number : 0800 243 622 (24 hours)

| | |
|---|---|
| **Product Name** | **XIAMETET AFE-0100 FG** |
| **Product Code** | AFE0100 |
| **CAS no.** | 556- 67- 2 |

**Recommended use** : Additives, process regulators, cosmetics.

## 2: Hazard identification

**GHS classification of the Substance/mixture**
Classified as Hazardous according to the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001, New Zealand.
Not classified as Dangerous Goods for transport according to the New Zealand Standard NZS 5433:2012 Transport of Dangerous Goodson Land.
6.8B Substance that is suspected to be a human reproductive or developmental toxicant

**Signal Word (s) : WARNING**

**Hazard Statement (s)**
H361 : Suspected of damaging fertility or the unborn child.

**Pictogram (s)**
Health hazard

**Precautionary statement – Prevention**
P103 Read label before use.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P281 Use personal protective equipment as required.

**Precautionary statement – Response**
P308+P313 IF exposed or concerned: Get medical advice/attention.

**Precautionary statement – Storage**
P405 Store locked up.

**Precautionary statement – Disposal**
P501 In the case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or

more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances (Disposal) Regulations 2001. This may also include any method of disposal that must be avoided. See Section 13for disposal details.

## 3: Composition/information on ingredients

**Composition, information on ingredients**
Chemical nature: silicon emulsion

Other names: Dow Corning Silicone Antifoam Emulsion AFE
Octamethylcyclotetrasiloxane

**Ingredients**

| NAME | CAS | PROPORTION |
|---|---|---|
| Octamethylcyclotetrasiloxane | 556 - 67 - 2 | < 10 % |
| Ingredients determined not to be hazardous | | Balance |

## 4: First aid measures

**Inhalation**
If inhaled, remove affected person from contaminated area. Keep at rest until recovered. If symptoms develop and/or persist seek medical attention.

**Ingestion**
Do not induce vomiting. Wash out mouth thoroughly with water. Seek medical attention.

**Skin**
Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.

**Eye contact**
If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and/or persist seek medical attention.

**First Aid Facilities**
Eyewash and normal washroom facilities.

**Advice to Doctor**
Treat symptomatically.

**Other Information**
For advice in an emergency, contact a Poisons Information Centre or a doctor at once. (0800 764 766)

## 5: Firefighting measures

**Suitable Extinguishing Media**
Water spray, alcohol-resistant foam, or carbon dioxide.

**Hazards from Combustion Products**
Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases including silicon oxides, formaldehyde, carbon monoxide, carbon dioxide and oxides of nitrogen.

**Specific Hazards arising from the Chemical**
This product will burn if exposed to fire.

**Decomposition Temperature**
Not available

**Precautions in connection with Fire**
Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) operated in positive pressure mode and full protective clothing to prevent exposure to Vapours or fumes. Water spray may be used to cool down heat-exposed containers. Fight fire from safe location. This product should be prevented from entering drains and watercourses.

## 6: Accidental release measures

**Emergency Procedures**
Wear appropriate personal protective equipment and clothing to prevent exposure. Extinguish or remove all sources of ignition and stop leak if safe to do so. Increase ventilation. Evacuate all unprotected personnel. If possible, contain the spill. Place inert absorbent, non-combustible material onto spillage. Use clean non-sparking tools to collect the material and place into suitable labelled containers for subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

## 7: Handling and storage

**Precautions for Safe Handling**
Avoid inhalation of vapours and mists, and skin or eye contact. Use only in a well-ventilated area. Keep containers sealed when not in use. Prevent the buildup of mists or vapours in the work atmosphere. Do not use near ignition sources. Do not pressurize, cut, heat or weld containers as they may contain hazardous residues. Maintain high standards of personal hygiene i.e., washing hands prior to eating, drinking, smoking, or using toilet facilities. Avoid exposure. Do not handle until all safety precautions have been read and understood. It is recommended that pregnant or breastfeeding women should not handle this product unless adequate exposure protection can be assured at all times. Female personnel planning pregnancy should be made aware of the potential risks.

**Conditions for safe storage, including any incompatibilities**
Store in a cool, dry, well-ventilated area away from sources of ignition, oxidizing agents, strong acids, foodstuffs, and clothing. Keep containers closed when not in use, securely sealed and protected against physical damage. Inspect regularly for deficiencies such as damage or leaks. Have appropriate fire extinguishers available in and near the storage area. Take precautions against static electricity discharges. Use proper grounding procedures. Ensure that storage conditions comply with applicable local and national regulations.
For information on the design of the storeroom, reference should be made to Australian Standard AS1940 - The storage and handling of flammable and combustible liquids. Reference should also be made to all applicable local and national regulations.

## 8: Exposure controls/personal protection

**Occupational exposure limit values**
No Exposure Limit Established

**Biological Limit Values**
No biological limits allocated.

**Appropriate Engineering Controls**
This substance is hazardous and should be used with a local exhaust ventilation system, drawing vapours away from workers' breathing zone. A flame-proof exhaust ventilation system is required. If the engineering controls are not sufficient to maintain concentrations of vapours/mists below the exposure standards, suitable respiratory protection must be worn. Refer to relevant regulations for further information concerning ventilation requirements. Refer to AS 1940 - The storage and handling of flammable and combustible liquids and AS/NZS 60079.10.1:2009 Explosive atmospheres -Classification of areas - Explosive gas atmospheres, for further information concerning ventilation requirements.

**Respiratory Protection**
If engineering controls are not effective in controlling airborne exposure, then an approved respirator with a replaceable vapor/mist filters should be used. Refer to relevant regulations for further information concerning respiratory protective requirements.
Organic vapour type.
Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

**Eye Protection**
Safety glasses with full face shield should be used. Eye protection devices should conform to relevant regulations. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 – Eye protectors for industrial Applications.

**Hand Protection**
Wear gloves of impervious material. Chemical resistant gloves. Final choice of appropriate gloves will vary according to individual circumstances. i.e., methods of handling or according to risk assessments undertaken. Occupational protective gloves should conform to relevant regulations.
Reference should be made to AS/NZS 2161.1: Occupational protective gloves – Selection, use and maintenance.

**Body Protection**
Suitable protective wear, e.g., cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

## 9: Physical and chemical properties

| | |
|---|---|
| **Form** | Liquid |
| **Appearance** | Off white liquid |
| **Colour** | Off white |
| **Odour** | Not available |
| **Decomposition Temperature** | Not available |
| **Melting Point** | Not available |
| **Boiling Point** | >100°C |
| **Solubility in Water** | Not available |
| **Specific Gravity** | 1.0 |
| **pH** | Not available |
| **Vapour Pressure** | Not available |
| **Vapour Density (Air=1)** | Not available |
| **Evaporation Rate** | Not available |
| **Odour Threshold** | Not available |
| **Viscosity** | Refer to Section 9: Kinematic Viscosity and Dynamic Viscosity |
| **Volatile Component** | Not available |
| **Partition Coefficient: n-octanol/water** | Not available |
| **Flash Point** | >100°C (Closed Cup) |

| | |
|---|---|
| **Flammability** | Not flammable |
| **Auto-Ignition Temperature** | Not available |
| **Flammable Limits – Lower** | Not available |
| **Flammable Limits Upper** | Not available |
| **Explosion Properties** | Product is not explosive |
| **Oxidizing Properties** | Not oxidizing |
| **Kinematic Viscosity** | >50000 cSt |
| **Dynamic Viscosity** | Not available |

## 10: Stability and reactivity

**Reactivity**
Refer to Section 10: Possibility of hazardous reactions

**Chemical Stability**
Stable under normal conditions of storage and handling.

**Conditions to Avoid**
Heat, open flames, and other sources of ignition.

**Incompatible materials**
Strong oxidizing agents.

**Hazardous Decomposition Products**
Thermal decomposition may result in the release of toxic and/or irritating fumes including silicon oxides, formaldehyde, carbon dioxide and carbon monoxide.

**Possibility of hazardous reactions**
Reacts with incompatible materials.
Use at elevated temperatures may form highly hazardous compounds. Can react with strong oxidizing agents. Hazardous decomposition products will be formed at elevated temperatures.

**Hazardous Polymerization**
Not available

## 11: Toxicological information

**Toxicology Information**
Available toxicity data is given below.

**Acute Toxicity – Oral**
LD50 (rat): >5000 mg/kg
Assessment: the substance or mixture has no acute oral toxicity
Remarks: based on test data

**Acute Toxicity – Inhalation**
Octamethylcyclotetrasiloxane
LC50 (rat): 2975 ppm/4h
Test atmosphere: vapour
Assessment: the substance or mixture has no acute inhalation toxicity
Remarks: based on test data

**Acute Toxicity – Dermal**
Octamethylcyclotetrasiloxane
LD50 (rabbit): >2.5 ml/kg
Assessment: the substance or mixture has no acute dermal toxicity
Remarks: based on test data

**Ingestion**
Ingestion of this product may irritate the gastric tract causing nausea and vomiting.

**Inhalation**
Inhalation of product vapours may cause irritation of the nose, throat, and respiratory system.

**Skin**
May be irritating to skin. The symptoms may include redness, itching and swelling.
Species: Rabbit
Result: no skin irritation
Remarks: Based on test data

**Eye**
May be irritating to eyes. The symptoms may include redness, itching and tearing.
Species: Rabbit
Result: no eye irritation
Remarks: Based on test data

**Respiratory sensitization**
Not expected to be a respiratory sensitizer.

**Skin Sensitisation**
Not expected to be a skin sensitizer.
Octamethylcyclotetrasiloxane:
Assessment: does not cause skin sensitization
Test Type: Maximization Test
Species: guinea pig
Remarks: Based on test data

**Germ cell mutagenicity**
Not considered to be a mutagenic hazard.
Genotoxicity in vitro:
Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Remarks: based on test data

**Carcinogenicity**
Not considered to be a carcinogenic hazard.

**Reproductive Toxicity**
Suspected of damaging fertility or the unborn child. Classified as a suspected human reproductive or developmental toxicant.
Octamethylcyclotetrasiloxane
Effects on fertility:
Test Type: Two-generation reproduction toxicity study
Species: rat, male and female
Application Route: inhalation (vapour)
Symptoms: Effects on fertility
Remarks: Based on test data
Effects on foetal development:
Test Type: Prenatal development toxicity study (teratogenicity)
Species: rabbit
Application Route: inhalation (vapour)
Symptoms: No effects on foetal development
Remarks: Based on test data

Reproductive toxicity - Assessment:
Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

**STOT-single exposure**
Not expected to cause toxicity to a specific target organ.

**STOT-repeated exposure**
Not expected to cause toxicity to a specific target organ.
Octamethylcyclotetrasiloxane
Exposure routes: Ingestion
Assessment: No significant health effects observed in animals at concentration of 100 mg/kg bw or less.
Exposure routes: inhalation (Vapour)
Assessment: No significant health effects observed in animals at concentrations of 1 mg/l/6h/d or less.
Exposure routes: Skin contact
Assessment: No significant health effects observed in animals at concentrations of 200 mg/kg bw or less.

**Aspiration Hazard**
Not expected to be an aspiration hazard.

**Other Information**
Repeated dose toxicity
Octamethylcyclotetrasiloxane
Species: rat
Application Route: ingestion
Remarks: based on test data
Species: rat
Application Route: inhalation (vapour)
Remarks: based on test data
Species: rabbit
Application Route: skin contact
Remarks: based on test data
Octamethylcyclotetrasiloxane:
Remarks: Results from a 2-year repeated vapour inhalation exposure study to rats of oc-tamethylcyclotetrasiloxane (D4) indicate effects(benign uterine adenomas) in the uterus of fe-male animals. This finding occurred at the highest exposure dose (700 ppm) only. Studies to date have not demonstrated if these effects occur through pathways that are relevant to humans. Repeated exposure in rats to D4 resulted in protoporphyrin accumulation in the liver. Without knowledge of the specific mechanism leading to the protoporphyrin accumulation the relevance of this finding to humans is unknown.

## 12: Ecological information

**Ecotoxicity**
The available ecological data is given below.

**Persistence and degradability**
Octamethylcyclotetrasiloxane
Biodegradability:
Result: not readily biodegradable
Biodegradation: 3.7%
Exposure time: 28 d
Method: OECD Test Guideline 310
Stability in water:
Degradation half-life: 69.3-144 h (24.6 °C) pH: 7

Method: OECD Test Guideline 111

**Mobility**
Not available

**Bioaccumulative Potential**
Octamethylcyclotetrasiloxane
Partition coefficient: n-octanol/water:
log Pow: 6.48 (25.1 °C)

**Other Adverse Effects**
Not available

**Environmental Protection**
Prevent this material entering waterways, drains and sewers.

**Acute Toxicity -Fish**
Octamethylcyclotetrasiloxane
LC50 (Oncorhynchus mykiss (rainbow trout)): >0.022 mg/l/96h
Remarks: no toxicity at the limit of solubility

**Acute Toxicity – Daphnia**
Octamethylcyclotetrasiloxane
EC50 (Daphnia sp.): >0.015 mg/l/48h
Remarks: no toxicity at the limit of solubility

**Other Information**
Octamethylcyclotetrasiloxane
Toxicity to fish (Chronic toxicity)
NOEC (Oncorhynchus mykiss (rainbow trout)): >=0.0044 mg/l
Remarks: no toxicity at the limit of solubility
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)
NOEC (Daphnia magna (Water flea)): >0.0079 mg/l/21d
Remarks: No toxicity at the limit of solubility

## 13: Disposal considerations

**Disposal considerations**
The disposal of the spilled or waste material must be done in accordance with applicable local and national regulations.

**Product Disposal:**
Product wastes are controlled wastes and should be disposed of in accordance with all applicable local and national regulations. This product can be disposed through a licensed commercial waste collection service. In this specific case the product is a combustible substance and therefore can be sent to an approved high temperature incineration plant for disposal. Personal protective clothing and equipment as specified in Section 8 of this SDS must be worn during handling and disposal of this product. The ventilation requirements as specified in the same section must also be followed, and the precautions given in Section 7 of this SDS regarding handling must also be followed. Do not dispose into the sewerage system. Do not discharge into drains or watercourses or dispose where ground or surface waters may be affected. In New Zealand, the disposal agency or contractor must comply with the New Zealand Hazardous Substances (Disposal) Regulations 2001. Further details regarding disposal can be obtained on the EPA New Zealand website under specific group standards.

**Container Disposal:**
The container or packaging must be cleaned and rendered incapable of holding any substance. It can then be disposed of in a manner consistent with that of the substance it contained. In this instance the packaging can be disposed through a commercial waste collection service. Alternatively, the container or packaging can be recycled if the hazardous residues have been thoroughly cleaned or rendered non-hazardous. In New Zealand, the packaging (that may or may not hold any residual substance) that is lawfully disposed of by householders or other consumers through a public or commercial waste collection service is a means of compliance with regulations.

## 14: Transport Information Table

| | | ADR/RID – European packaging certification | IMDG International Maritime Dangerous Goods Code | IATA – DGR International Air Travel Association – Dangerous Goods Regulations |
|---|---|---|---|---|
| **14.1** | **UN Number** | None allocated | None allocated | None allocate |
| **14.2** | **UN Proper Shipping name** | None Allocated | Not dangerous for conveyance under IMO/IMDG code | Not dangerous for conveyance under IATA code |
| **14.3** | **Transport Hazard Class** | None allocated | None allocated | None allocated |
| **14.4** | **Packaging group** | None allocated | None allocated | None allocated |
| **14.5** | **Environmental Hazards** | No | No | No |
| **14.6** | **Special precautions for user** | Not available. | | |

## 15: Regulatory information

**Regulatory information**
Classified as Hazardous according to the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001, New Zealand.
Group Standard: Additives, Process Chemicals and Raw Materials (Subsidiary Hazard) Group Standard 2006.

**HSNO Approval Number**
HSR002503

**References**
Workplace Exposure Standards and Biological Exposure Indices.
Transport of Dangerous goods on land NZS 5433.
Preparation of Safety Data Sheets - Approved Code of Practice Under the HSNO Act 1996 (HSNO CoP 8-1 09-06).
Assigning a hazardous substance to a group standard.
Adopted biological exposure determinants, American Conference of Industrial Hygienists (ACGIH).

## 16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied,

with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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