



SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH)

SECTION 1: Identification of the substance/mixture and of the company / undertaking

1.1 Product Identifier:

Mixtures

Trade name / Designation

**BIO-X® KLEANZE VOC FREE
AEROSOL**

Active ingredient

Alpha Terpineol

Other Means of identification

Not applicable

Hazard components for labeling

Not applicable

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses

For Household Use

Uses advised against

Uses other than recommended use

1.3 Details of the supplier of the safety data sheet

Supplier:

Name

Address

Okada Ecotech Pte Ltd

24 Pioneer Crescent,
#04-08, West Park Bizcentral,
Singapore 628557

+65-6872 3515

info@okada-ecotech.com

Information contact

E-mail

Importer / Only Representative:

Name

Address

Information contact

E-Mail

1.4 Emergency Telephone Number

Okada Ecotech Pte Ltd

+65-6872 3515

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

Classification of the mixture

Acute toxicity

Oral

Not classified



Dermal	Not classified
Inhalation (Dust)	Not classified
Skin corrosion/irritation	Not classified
Skin contact	Non-irritating (Rabbit)
Eye contact	Slight (Rabbit)
Skin sensitization	Not a sensitizer (Guinea Pig)
Carcinogenicity	Not likely to be carcinogenic to humans
Reproductive Toxicity	Not Classified
Aquatic hazard	
Acute Category	No data available
Chronic Category	No data available

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]

Hazard pictograms	Not applicable
Signal word	Not applicable
Hazard statements	WHO HAZARD CLASSIFICATION - Unlikely to Present Acute Hazard in Normal Use
Precautionary statements	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251	Pressurized container: Do not pierce or burn, even after use.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
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.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501	Dispose empty container according to local rules



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Supplemental Hazard information:	Not applicable
Special rules for supplemental label elements for certain mixtures:	Not applicable
Additional labelling:	Not applicable

2.3 Other hazards

Adverse physicochemical effects:	Not applicable
Adverse human health effects and symptoms:	Not applicable
Adverse environmental effects:	Not applicable
Other adverse hazards:	Not applicable

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances	Not applicable
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3.2 Mixtures

Substance name	CAS No.	INDEX No.	EC No.	Concentration	Classification according Regulation (EC) No. 1272 [CLP]	SCL and/or M-factor
Alpha Terpineol	98-55-5	N.A.	232-26 8-1	0.125 %	Skin Irrit.2; H315 Eye Irrit.2; H319	No data available
Inert Ingredients & Surfactants	N.A.	N.A.	N.A.	59.875 %	N.A.	N.A.
HFC-134a	811-97-2	N.A.	212-37 7-0	40.00 %	Press. Gas (Liq.); H280	No data available

Description of the mixture	Milky white aqueous emulsion
Hazardous ingredients	Not applicable

Additional information:

This mixture does not contain further substances fulfilling the criteria of hazard class "acute toxicity" according to CLP regulation.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General Information	
Following inhalation	Remove victims from area of exposure and move to fresh air
Following skin contact	Immediately wash with soap & water
Following eye contact	Flush eye immediately with steady running water for at least 15 mins



Following ingestion	Drink plenty of water. Do not induce vomiting
Self-protection of the first aider	Not applicable
4.2 Most important symptoms and effects, both acute and delayed	
Symptoms	No data available
Effects	No data available
4.3 Indication of any immediate medical attention and special treatment needed	
Notes for the doctor	Treat symptomatically
Special treatment	No data available

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media	
Suitable extinguishing media	Dry chemical powder, carbon dioxide
Unsuitable extinguishing media	None known
5.2 Special hazards arising from the substance or mixture	
Hazardous combustion products	None identified
5.3 Advice for fire-fighters	
Firefighting Instructions	At elevated temperature > 54 °C containers exposed to direct flame or heat contact should be cooled with water to prevent weakening of container structure. Do not spray near open flame or while smoking.
Firefighting Equipment	Use equipment or shielding as required, to protect personnel from bursting, rupturing or venting containers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures	
<u>For non-emergency personnel</u>	
Protective equipment	Not applicable



Emergency procedures	Keep unnecessary and unprotected personnel away. Wear appropriate personal protective equipment as specified in Section 8. Stop leak if possible, without personal risk.
<u>For emergency responders</u>	
Personal protective equipment	Use personal protection recommended in Section 8.
6.2 Environmental precautions	Not applicable
6.3 Methods and material for containment and cleaning up	
For containment	Prevent further leakage or spillage if safe to do so.
For cleaning up	Hose off road surfaces to prevent accident or slippery surface
6.4 Reference to other sections	See Section 12

SECTION 7: HANDLING & STORAGE

7.1 Precautions for safe handling	
Protective measures	
Advice on safe handling	Not applicable
Fire preventions	Keep product away from any fire source
Aerosol and dust generation prevention	See Section 7.3
Environmental precautions	Not applicable
Advice on general occupational hygiene	Not applicable
7.2 Conditions for safe storage, including any incompatibilities	
Storage conditions	Store in a cool, dry place, away from direct sunlight and high temperature.
Packaging materials	Aluminum Can
7.3 Specific end uses	
Recommendations	Keep out of reach of children. Keep container closed when not in use.



SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limits	No data available
Biological limit values	No data available
Exposure limits at intended use	No data available

DNEL/PNEC-values

Substance name	HFC-134a
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DNEL Worker

DNEL type	value	remark
Long-term – inhalation, systemic effects	13,936 mg/m ³	Repeated dose toxicity

DNEL Consumer

DNEL type	value	remark
Long-term – inhalation, systemic effects	2,476 mg/m ³	Repeated dose toxicity

PNEC

PNEC type	value	remark
PNEC aquatic, freshwater	100 µg/L	
PNEC aquatic, marine water	10 µg/L	
PNEC aquatic, intermittent release	1 mg/L	Freshwater
PNEC sediment, freshwater	750 µg/kg	Sediment dw
PNEC sediment, marine water	-	
PNEC soil	-	No exposure of soil expected
PNEC sewage treatment plant	73 mg/L	
PNEC air	-	
PNEC secondary poisoning	-	No potential for bioaccumulation

Risk management measures according to used control banding approach	No data available
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8.2 Exposure controls

Appropriate engineering controls	General ventilation is adequate
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Personal protective equipment	
Eye / Face protection	None normally required
Skin protection	None normally required
Respiratory protection	None normally required
Thermal hazards	See Section 5



8.2.3 Environmental exposure controls

Consumer exposure control	Not applicable
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SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Aqueous emulsion
Physical state	Liquid
Color	Milky white
Odor	Pleasant pine
Odor threshold	Not applicable
pH at 25 deg C	6.0 ± 1.0
Melting point (°C)	Not applicable
Freezing point (°C)	0°C
Initial boiling point & boiling range (°C)	Not applicable
Flash point	> 170 °C
Evaporation rate	Not applicable
Flammability (solid, gas)	Not applicable
Upper explosive limits	Not applicable
Lower explosive limits	Not applicable
Vapor pressure	Not applicable
Vapor density	Not applicable
Relative density	1.0 ± 0.10
Solubility	Completely soluble in water
Partition coefficient: n-octanol/water	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable
Viscosity (BF/LVT/#1/100rpm/30°C)	5 ± 2 cps
Explosive properties	Not explosive
Oxidizing properties	Not oxidizing

SECTION 10: STABILITY & REACTIVITY

10.1 Reactivity	Not applicable
10.2 Chemical stability	Stable
10.3 Possibility of hazardous reactions	No hazardous reaction when handled and stored according to provisions.
10.4 Conditions to avoid	Excessive heat & prolong sunshine
10.5 Incompatible materials	Acids
10.6 Hazardous decomposition products	Oxides of carbon. Decomposition is very unlikely.



SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Mixtures

Acute toxicity

Oral	LD ₅₀ > 2,000 mg/kg (OECD 420 Guideline)
Inhalation	LC ₅₀ > 2.11 mg/L air
Dermal Absorption	LD ₅₀ > 2,000 mg/kg (OECD 434 Guideline)

Chronic Toxicity

Carcinogenicity	No carcinogenicity
Reproductive toxicity	No reproductive effect
Mutagenicity	No mutagenicity

SECTION 12: ECOLOGICAL INFORMATION

The following classification and toxicological data are carried out according to the substance criteria (excluding biodegradation and bioaccumulation).

Mixtures

12.1 Toxicity:

1) Effect on Honey Bees	Harmless
2) Effect on Earthworm	LC ₅₀ > 1000 mg/kg (safe)
3) Effect on predators	Harmless
4) Hazard to soil microflora	Non hazardous
5) Acute Daphnia Immobilization	EC ₅₀ > 1000 mg/L (safe) NOEL = 197.5 mg/L
6) Acute toxicity to fish (Rainbow Trout)	LC ₅₀ = 440 mg/L (24 hrs) LC ₅₀ = 150 mg/L (96 hrs) NOEC = 50 mg/L
7) Algal Inhibition Test	Non inhibitory/Non stimulant NOEC = 22 mg/L



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12.2 Persistence and degradability

- | | |
|--|---|
| 1) Metabolism in soil | Rapid decomposition in soil |
| 2) Degradability in water | Readily biodegradable in water (For non aerosol propellant) |
| 3) Biodegradability of propellant (HFC-134a) | |
| Biodegradation | Not readily biodegradable |
| Parameter | 28d |
| Degradation rate | 3% |

12.3 Bioaccumulative potential No data available

12.4 Mobility in soil No data available

12.5 Results of PBT and vPvB assessment No data available

12.6 Other adverse effects:

Substance: HFC-134a	
Log Pow	1.06
Half-life direct photolysis	9.6 – 16.7y (in atmosphere)
GWP	0.3 (Halocarbon GWP)
ODP	0

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Directive 2008/98/EC (Waste Framework Directive)
Waste must be disposed of in accordance with federal, state, local, national and international regulations.

Additional information Empty the container completely before disposal

SECTION 14: TRANSPORT INFORMATION

	Air transport (ICAO-TI / IATA-DGR)
14.1 UN No.	1950
14.2 UN Proper shipping name	AEROSOL, Non-flammable, Non-toxic gases
14.3 Transport hazard class(es)	N.A.
Hazard label(s)	N.A.
14.4 Packing group	N.A.
14.5 Environmental hazards	N.A.

Shipping Information

IATA Class 2.2



14.6 Special precautions for user

Make sure that the containers have no puncture or leakage. Avoid rough handling and dropping. Prevent collapse of cargo piles.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Additional information	Not applicable
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SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Authorizations and/or restrictions on use See Section 1

Other EU regulations

Not applicable

National regulations

None

15.2 Chemical safety Assessment

For this substance & mixture, a chemical safety assessment is not required.

SECTION 16: OTHER INFORMATION

16.1 Indication of changes: Any changes to the SDS compared to previous versions are highlighted with background color on the concerned content.

16.2 Abbreviations and acronyms:

CAS	Chemical Abstract Service
DNEL	Derivative No Effect Level
EC	European Community
EINECS	European Inventory of Existing Chemical Substances
OECD	The Organization for Economic Cooperation and Development
MSHA	Mine Safety Health Administration
NIOSH	National Institute of Occupational Safety & Health
OEL	Occupational Exposure Limit
PBT	Persistent, Bioaccumulative, Toxic
NOEC	No Observed Effect Concentration
NOEL	No Observed Effect Level



NOAEL	No Observed Adverse Effect Level
PNEC	Predicted No Effect Concentration
SCOEL	Scientific Committee on Occupational Exposure Limits
TLV	Threshold Limit Value
TWA	Time Weighted Average
vPvB	Very Persistent, Very Bioaccumulative Weight Percent

16.3 Key literature references and sources for data

Hazard phrase(s) referenced in section 2:

H350	May cause cancer.
H351	Suspected of causing cancer.
H225	Highly flammable liquid and vapour
H301+H311+H331	Toxic if swallowed, in contact with skin or if inhaled
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H311	Toxic in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H331	Toxic if inhaled
H332	Harmful if inhaled
H336	May cause drowsiness or dizziness
H360D	May damage the unborn child.
H362	May cause harm to breast-fed children
H372	Causes damage to organs through prolonged or repeated exposure
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

Precautionary Statements referenced in section 2:

Prevention:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves/protective clothing/eye protection/face protection.



Response:

P302+P352	If on skin: Wash with plenty of water.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P391	Collect spillage.

Storage:

P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.

Disposal:

P501	Dispose of contents/container to a suitable disposal site in accordance with local/national/international regulations.
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- 16.4 Classification for mixtures and used evaluation method according to regulation (EC) 1207/2008 [CLP]

See SECTION 2.1 (classification).

- 16.5 Relevant R-, H- and EUH-phrases (number and full text)

Not applicable

- 16.6 Training advice

Not applicable

- 16.7 Further information

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