

SAFETY DATA SHEET

Klens Tek

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

1.1. Product identifier

Product name Klens Tek

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

Identified uses Cleaning agent.

1.3. Details of the supplier of the safety data sheet

Supplier Fraser Technologies Ltd
 24 Grange Road
 Houstoun Ind Est
 Livingston
 EH54 5DE
 T+44 (0) 1506 443 058
 F+44 (0) 1506 443 161
 sales@frasertech.co.uk

1.4. Emergency telephone number

Emergency telephone +44 (0)7836 351 369

SECTION 2: Hazards identification

Physical hazards Aerosol 3 - H229

Health hazards Acute Tox. 4 - H332

Environmental hazards Aquatic Chronic 3 - H412

Classification (67/548/EEC or 1999/45/EC) Xi;R38. F+;R12. N;R51/53. R67.

Human health Gas or vapour is harmful on prolonged exposure or in high concentrations. In high concentrations, vapours and aerosol mists have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Deliberately concentrating and inhaling the contents of this container is dangerous and can be fatal.

Environmental The product contains a substance which is harmful to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

Physicochemical Aerosol containers can explode when heated, due to excessive pressure build-up. The product is not flammable.

2.2. Label elements

Pictogram

2.1. Classification of the substance or mixture Classification



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Signal word	Warning
Hazard statements	H229 Pressurised container: may burst if heated H332 Harmful if inhaled. H412 Harmful to aquatic life with long lasting effects.
Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P251 Do not pierce or burn, even after use. P271 Use only outdoors or in a well-ventilated area. P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. P102 Keep out of reach of children. P501 Dispose of contents/container in accordance with local regulations. P260 Do not breathe vapour/spray.
Supplemental label information	EUH018 In use may form flammable/explosive vapour-air mixture. EUH209 Can become highly flammable in use. RCH002b For professional users only.
Detergent labelling	≥ 30% halogenated hydrocarbons

2.3. Other hazards

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

SECTION 3: Composition/information on ingredients

3.2. Mixtures

trans-DICHLOROETHYLENE	60-100%
CAS number: 156-60-5	EC number: 205-860-2
Classification Flam. Liq. 2 - H225 Acute Tox. 4 - H302 Acute Tox. 4 - H332 Aquatic Chronic 3 - H412	Classification (67/548/EEC or 1999/45/EC) F;R11 Xn;R20 R52/53
Methoxytridecafluoroheptene isomers	10-30%
CAS number: —	REACH registration number: 012119943760-37-XXXX
Classification Aquatic Chronic 4 - H413	
Carbon Dioxide	1-5%
CAS number: 124-38-9	EC number: 204-696-9

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Classification	Classification (67/548/EEC or 1999/45/EC)
Not Classified	-

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Move affected person to fresh air at once.
Inhalation	If spray/mist has been inhaled, proceed as follows. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. Keep affected person warm and at rest. Get medical attention immediately.
Ingestion	Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes.

4.2. Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Arrhythmia (deviation from normal heartbeat) Central nervous system depression including narcotic effects such as drowsiness, narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo. Drowsiness, dizziness, disorientation, vertigo. Vapours in high concentrations are anaesthetic.
Ingestion	High concentrations of vapours may irritate respiratory system and lead to headache, fatigue, nausea and vomiting.
Skin contact	Prolonged or repeated contact with skin may cause irritation, redness and dermatitis. Mild dermatitis, allergic skin rash.
Eye contact	Irritating to eyes. Pain. Redness. May cause discomfort.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.
Specific treatments	Do not give adrenaline or similar drugs.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with foam, carbon dioxide, dry powder or water fog.

5.2. Special hazards arising from the substance or mixture

Specific hazards	Containers can burst violently or explode when heated, due to excessive pressure build-up. The product is not flammable. In use may form flammable/explosive vapour-air mixture.
Hazardous combustion products	Hydrogen fluoride (HF). Hydrogen chloride (HCl). Oxides of carbon. Fluorinated hydrocarbons, Carbonyl fluoride.

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5.3. Advice for firefighters

Protective actions during firefighting Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Use water to keep fire exposed containers cool and disperse vapours.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Provide adequate ventilation. Use suitable respiratory protection if ventilation is inadequate. Avoid inhalation of vapours.

6.2. Environmental precautions

Environmental precautions Avoid the spillage or runoff entering drains, sewers or watercourses. Contain spillage with sand, earth or other suitable non-combustible material.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Leave small quantities to evaporate, if safe to do so. Absorb spillage with non-combustible, absorbent material.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Keep away from heat, sparks and open flame. Do not spray on a naked flame or any incandescent material. Eliminate all sources of ignition.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep away from heat, sparks and open flame. Store at moderate temperatures in dry, well ventilated area. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters Occupational exposure limits

trans-DICHLOROETHYLENE

Long-term exposure limit (8-hour TWA): WEL 200 ppm 806 mg/m³

Short-term exposure limit (15-minute): WEL 250 ppm 1010 mg/m³

Methoxytridecafluoroheptene isomers

Long-term exposure limit (8-hour TWA): 500 ppm

Carbon Dioxide

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Long-term exposure limit (8-hour TWA): WEL 5000 ppm 9150 mg/m³

Short-term exposure limit (15-minute): WEL 15000 ppm 27400 mg/m³

WEL = Workplace Exposure Limit

Ingredient comments WEL = Workplace Exposure
Limits

8.2. Exposure controls

Protective equipment



Appropriate engineering controls	Provide adequate ventilation. Avoid inhalation of vapours and spray/mists. Observe any occupational exposure limits for the product or ingredients.
Personal protection	Do not eat, drink or smoke when using this product.
Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles.
Hand protection	Due to the packaging form, aerosol, risk of skin contact is small. 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.
Hygiene measures	Wash hands after handling. Wash promptly if skin becomes contaminated. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Use appropriate skin cream to prevent drying of skin.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Aerosol.
Colour	Colourless.
Odour	Characteristic. Slight.
Initial boiling point and range	48°C @
Flash point	Does not flash.
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 7% Upper flammable/explosive limit: 14%
Relative density	1.26 @ 25°C
Comments	Information given is applicable to the major ingredient.

9.2. Other information

Other information	Not available.
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Volatile organic compound This product contains a maximum VOC content of 986 g/litre.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Stable at normal ambient temperatures and when used as recommended.

10.2. Chemical stability

Stability Avoid the following conditions: Heat, sparks, flames.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Does not decompose when used and stored as recommended. In use may form flammable/explosive vapour-air mixture.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition. Avoid exposing aerosol containers to high temperatures or direct sunlight. The product is not flammable in air under ambient conditions of temperature and pressure. Keep away from heat, sparks and open flame.

10.5. Incompatible materials

Materials to avoid Keep away from oxidising materials, heat and flames. Alkali metals. Alkaline earth metals. Powdered metal. Bases.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended. Thermal decomposition or products combustion products may include the following substances: Toxic and corrosive gases or vapours. Oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects Acute toxicity - inhalation

Species	Rat
ATE inhalation (dusts/mists mg/l)	1.5

Aspiration hazard

Aspiration hazard Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

General information

Deliberately concentrating and inhaling the contents of this container is dangerous and can be fatal.

Inhalation

In high concentrations, vapours and aerosol mists have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Unconsciousness, possibly death.

Skin contact

Skin irritation should not occur when used as recommended. Repeated exposure may cause skin dryness or cracking.

Eye contact

Irritating to eyes. Vapour or spray in the eyes may cause irritation and smarting. Repeated exposure may cause chronic eye irritation.

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Acute and chronic health hazards	Arrhythmia (deviation from normal heart beat). In high concentrations, vapours and aerosol mists have a narcotic effect and may cause headache, fatigue, dizziness and nausea.
Route of entry	Inhalation Skin absorption
Target organs	Central nervous system Respiratory system, lungs
Medical symptoms	Arrhythmia (deviation from normal heart beat). Narcotic effect. Vapours may cause drowsiness and dizziness.
Acute toxicity inhalation (LC ₅₀ dust/mist mg/l)	140.0

Toxicological information on ingredients.

trans-DICHLOROETHYLENE

Acute toxicity - oral

Acute toxicity oral (LD ₅₀ mg/kg)	770.0
Species	Rat

Acute toxicity - dermal

Acute toxicity dermal (LD ₅₀ mg/kg)	5,000.0
Species	Rat
ATE dermal (mg/kg)	5,000.0
<u>Acute toxicity - inhalation</u>	
Acute toxicity inhalation	24,100.0

(LC₅₀ gases ppmV)

Species	Rat
Acute toxicity inhalation	104.3

(LC₅₀ dust/mist mg/l)

Species	Rat
ATE inhalation (gases ppm)	4,500.0
ATE inhalation	1.5

(dusts/mists mg/l)

Methoxytridecafluoroheptene isomers

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Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ 5,000.0

mg/kg)

Species	Rat
ATE dermal (mg/kg)	5,000.0

Acute toxicity - inhalation

Acute toxicity inhalation 222.15

(LC₅₀ dust/mist mg/l)

Species	Rat
ATE inhalation	222.15

(dusts/mists mg/l)

Germ cell mutagenicity

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

Reproductive toxicity

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

fertility

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEL 1000 mg/kg, Oral, Rat

SECTION 12: Ecological Information

Ecotoxicity The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

12.1. Toxicity

Toxicity Not available.

Ecological information on ingredients.

trans-DICHLOROETHYLENE

Acute toxicity - fish	LC ₅₀ , 96 hours: 74 mg/l, Lepomis macrochirus (Bluegill)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 79 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 96 hours: 798 mg/l, Pseudokirchneriella subcapitata

Methoxytridecafluoroheptene isomers

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Acute toxicity - fish	LC ₅₀ , 96 hours: >0.096 mg/l, <i>Oryzias latipes</i> (Red killifish)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: >0.157 mg/l, <i>Daphnia magna</i> NOEC, 21 days: 0.107 mg/l, <i>Daphnia magna</i>
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: >0.000477 mg/l, <i>Pseudokirchneriella subcapitata</i>
Acute toxicity microorganisms	EC ₅₀ , : >1000 ppm,

12.2. Persistence and degradability

Persistence and degradability Not available.

Ecological information on ingredients. trans-DICHLOROETHYLENE

Biodegradation - Degradation 8%: 28 days

Methoxytridecafluoroheptene isomers

Biodegradation - Degradation 39.5%: 28 days

12.3. Bioaccumulative potential

Bioaccumulative potential Not available.

Ecological information on ingredients.

Methoxytridecafluoroheptene isomers

Bioaccumulative potential BCF: 1990, *Cyprinus carpio* (Common carp)

12.4. Mobility in soil

Mobility Not known.

Ecological information on ingredients.

trans-DICHLOROETHYLENE

Adsorption/desorption Soil - : 2.09 @ °C coefficient

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment Not available.

12.6. Other adverse effects

Other adverse effects Not available.

Ecological information on ingredients.

trans-DICHLOROETHYLENE

Other adverse effects The product contains a substance or substances that will contribute to global warming (greenhouse effect).

SECTION 13: Disposal considerations

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13.1. Waste treatment

methods

General information	Do not puncture or incinerate, even when empty.
Disposal methods	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Containers should be thoroughly emptied before disposal because of the risk of an explosion. Empty containers must not be punctured or incinerated because of the risk of an explosion.

SECTION 14: Transport information

General	This product is packed in accordance with the Limited Quantity Provisions of CDGCPL2, ADR and IMDG. These provisions allow transport of aerosols of less than 1 litre packed in cartons of less than 30kg gross weight to be exempt from control providing that they are labelled in accordance with the requirements of these regulations to show that they are being transported as Limited Quantities. Aerosols not so packed and labelled must show the following.
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14.1. UN number

UN No. (ADR/RID)	1950
UN No. (IMDG)	1950
UN No. (ICAO)	1950
UN No. (ADN)	1950

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	AEROSOLS
Proper shipping name (IMDG)	AEROSOLS
Proper shipping name (ICAO)	AEROSOLS
Proper shipping name (ADN)	AEROSOLS

14.3. Transport hazard class(es)

ADR/RID class	2.2
ADR/RID classification code	5A,5O
ADR/RID label	2.2
IMDG class	2.2
ICAO class/division	2.2
ADN class	2.2

Transport labels



14.4. Packing group

Not applicable.

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14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS F-D, S-U

ADR transport category 3

Tunnel restriction code (E)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk according to No information

required. Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

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

National regulations The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended).

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).

Control of Substances Hazardous to Health Regulations 2002 (as amended).

The Aerosol Dispensers Regulations 2009 (SI 2009 No. 2824).

EU legislation

Commission Regulation (EU) No 453/2010 of 20 May 2010.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Guidance

Workplace Exposure Limits EH40.

CHIP for everyone HSG228.

Safety Data Sheets for Substances and Preparations.

Approved Classification and Labelling Guide (Sixth edition) L131.

British Aerosol Manufacturers Code of Practice 7th. Edition 1999

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision Supplemental information
comments added.

Revision 07/03/2016
date

Revision 2

SDS 20971
number

SDS status Approved.

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Risk	R11 Highly flammable.
phrases in	R12 Extremely flammable.
full	R36 Irritating to eyes. R38 Irritating to skin. R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R62 Possible risk of impaired fertility. R65 Harmful: may cause lung damage if swallowed. R67 Vapours may cause drowsiness and dizziness.
Hazard	H225 Highly flammable liquid and vapour.
statements	H225 Highly flammable liquid and vapour. H229 Pressurised container: may burst if heated H332 Harmful if inhaled.
in full	H412 Harmful to aquatic life with long lasting effects. H413 May cause long lasting harmful effects to aquatic life.

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.