

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 25.03.2020

Version number 8

Revision: 25.03.2020

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

- **1.1 Product identifier**
- **Trade name:** 02111 Tape-Ex -300 ml-
- **Article number:** P7000022, 75 0664
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture:** Instrument cleaner
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Key Surgical GmbH
Zum Windpark 1
23738 Lensahn
Tel: +49.4363.90590.0
Fax: +49.4363.90590.590
Mail: info@keysurgical.de
Website: www.keysurgical.de
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:** During normal opening times: +49 4363 905900

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.



GHS09 environment

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



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
 Skin Sens. 1 H317 May cause an allergic skin reaction.
 STOT SE 3 H336 May cause drowsiness or dizziness.
 Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02



GHS07



GHS09

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 25.03.2020

Version number 8

Revision: 25.03.2020

Trade name: 02111 Tape-Ex -300 ml-

(Contd. of page 1)

· **Signal word** Danger· **Hazard-determining components of labelling:**

pentane
(R)-p-mentha-1,8-diene
Hydrocarbons, C6, isoalkanes, <5% n-hexane

· **Hazard statements**

H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P102 Keep out of reach of children.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

P261 Avoid breathing mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:**

Buildup of explosive mixtures possible without sufficient ventilation.

· **2.3 Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**· **Description:** Mixture of substances listed below with nonhazardous additions.· **Dangerous components:**

CAS: 109-66-0 EINECS: 203-692-4 Index number: 601-006-00-1 Reg.nr.: 01-2119459286-30	pentane ⚠ Flam. Liq. 1, H224; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ STOT SE 3, H336	30-50%
EC number: 931-254-9 Index number: 649-328-00-1 Reg.nr.: 01-2119484651-34-xxxx	Hydrocarbons, C6, isoalkanes, <5% n-hexane ⚠ Flam. Liq. 2, H225; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; STOT SE 3, H336	30-50%
CAS: 106-97-8 EINECS: 203-448-7 Index number: 601-004-00-0 Reg.nr.: 01-2119474691-32-xxxx	butane, pure ⚠ Flam. Gas 1, H220	10-20%
CAS: 5989-27-5 EINECS: 227-813-5 Index number: 601-029-00-7 Reg.nr.: 01-2119529223-47-xxxx	(R)-p-mentha-1,8-diene ⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Acute 1, H400; ⚠ Aquatic Chronic 1, H410; ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317	1-10%

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 25.03.2020

Version number 8

Revision: 25.03.2020

Trade name: 02111 Tape-Ex -300 ml-

(Contd. of page 2)

CAS: 74-98-6 EINECS: 200-827-9 Index number: 601-003-00-5 Reg.nr.: 01-2119486944-21-xxxx	propane Flam. Gas 1, H220	1-10%
CAS: 75-28-5 EINECS: 200-857-2 Index number: 601-004-00-0 Reg.nr.: 01-2119485395-27-xxxx	isobutane Flam. Gas 1, H220; Press. Gas (Comp.), H280	1-10%

· **Regulation (EC) No 648/2004 on detergents / Labelling for contents**

aliphatic hydrocarbons	≥30%
perfumes (d-Limonene)	

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 25.03.2020

Version number 8

Revision: 25.03.2020

Trade name: 02111 Tape-Ex -300 ml-

(Contd. of page 3)

- **Information about fire - and explosion protection:**
Do not spray onto a naked flame or any incandescent material.
Keep ignition sources away - Do not smoke.
Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.
- **Storage class:** 2 B
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

109-66-0 pentane

IOELV	Long-term value: 3000 mg/m ³ , 1000 ppm
-------	--

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the skin.
Avoid contact with the eyes and skin.

- **Respiratory protection:**

Filter AX

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Not necessary if room is well-ventilated.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.5 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 25.03.2020

Version number 8

Revision: 25.03.2020

Trade name: 02111 Tape-Ex -300 ml-

(Contd. of page 4)

- **Penetration time of glove material**
Value for the permeation: Level ≤ 6
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Not required.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

· Form:	Aerosol
· Colour:	Colourless
· Odour:	Oranges
· Odour threshold:	Not determined.

· **pH-value:** Not determined.

· Change in condition

· Melting point/freezing point:	Undetermined.
· Initial boiling point and boiling range:	Not applicable, as aerosol.

· **Flash point:** -60 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 255 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

· Lower:	0.7 Vol %
· Upper:	10.9 Vol %

· **Vapour pressure at 20 °C:** 1,800 hPa

· **Density at 20 °C:** 0.63 g/cm³

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not applicable.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· **Partition coefficient: n-octanol/water:** Not determined.

· Viscosity:

· Dynamic:	Not determined.
· Kinematic:	Not determined.

· Solvent content:

· Organic solvents:	100.0 %
· VOC (EC)	100.00 %

· **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 25.03.2020

Version number 8

Revision: 25.03.2020

Trade name: 02111 Tape-Ex -300 ml-

(Contd. of page 5)

- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

- **LD/LC50 values relevant for classification:**

109-66-0 pentane

Oral	LD50	>5,000 mg/kg (rat)
Inhalative	LC50/4 h	>20 mg/l (rat)

Inhalative	LC50/4 h	>20 mg/l (rat)
------------	----------	----------------

5989-27-5 (R)-p-mentha-1,8-diene

Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	5,000 mg/kg (rabbit)

Dermal	LD50	5,000 mg/kg (rabbit)
--------	------	----------------------

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause drowsiness or dizziness.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard**
May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

5989-27-5 (R)-p-mentha-1,8-diene

EC50/48h	0.36 mg/l (Daphnia magna (Großer Wasserfloh))
LC50/96h	0.72 mg/l (Pimephales promelas)

LC50/96h	0.72 mg/l (Pimephales promelas)
----------	---------------------------------

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 25.03.2020

Version number 8

Revision: 25.03.2020

Trade name: 02111 Tape-Ex -300 ml-

(Contd. of page 6)

- 12.5 Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

- 13.1 Waste treatment methods
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

15 01 10*	packaging containing residues of or contaminated by hazardous substances
15 01 04	metallic packaging

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- 14.1 UN-Number
- **ADR, IMDG, IATA** UN1950
- 14.2 UN proper shipping name
- **ADR** 1950 AEROSOLS, ENVIRONMENTALLY HAZARDOUS
- **IMDG** AEROSOLS (Naphtha (petroleum), hydrotreated light, PENTANES), MARINE POLLUTANT
- **IATA** AEROSOLS, flammable
- 14.3 Transport hazard class(es)
- **ADR**
-
- **Class** 2.5F Gases.
- **Label** 2.1
- **IMDG**
-
- **Class** 2.1
- **Label** 2.1
- **IATA**
-
- **Class** 2.1
- **Label** 2.1

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 25.03.2020

Version number 8

Revision: 25.03.2020

Trade name: 02111 Tape-Ex -300 ml-

(Contd. of page 7)

· 14.4 Packing group · ADR, IMDG, IATA	Void
· 14.5 Environmental hazards: · Marine pollutant:	Product contains environmentally hazardous substances: (R)-p-mentha-1,8-diene, pentane Yes
· Special marking (ADR):	Symbol (fish and tree) Symbol (fish and tree)
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Code	Warning: Gases. - F-D,S-U SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.
· Segregation Code	SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	IL Code: E0 Not permitted as Excepted Quantity
· Transport category · Tunnel restriction code	2 D
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	IL Code: E0 Not permitted as Excepted Quantity
· UN "Model Regulation":	UN 1950 AEROSOLS, 2.1, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**
P3a FLAMMABLE AEROSOLS
E2 Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 150 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

EU

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 25.03.2020

Version number 8

Revision: 25.03.2020

Trade name: 02111 Tape-Ex -300 ml-

(Contd. of page 8)

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

- H220 Extremely flammable gas.
- H224 Extremely flammable liquid and vapour.
- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- 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.
- H336 May cause drowsiness or dizziness.
- 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.

· **Department issuing SDS:** Product safety department

· **Abbreviations and acronyms:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Gas 1: Flammable gases – Category 1
- Aerosol 1: Aerosols – Category 1
- Press. Gas (Comp.): Gases under pressure – Compressed gas
- Flam. Liq. 1: Flammable liquids – Category 1
- Flam. Liq. 2: Flammable liquids – Category 2
- Flam. Liq. 3: Flammable liquids – Category 3
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Skin Sens. 1: Skin sensitisation – Category 1
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- Asp. Tox. 1: Aspiration hazard – Category 1
- Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
- Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

· *** Data compared to the previous version altered.**