

Material Safety Data Sheet

Type 1003

According to Regulation (EU) No. 453/2010; 1907/2006/EC,
Article 31

Cleaning Spray Type 1003

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product number 1003
Synonyms None

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

Use of the Substance/Preparation Special cleaner specially formulated for highly insulating parts such as plug connectors and electronic components

1.3. Details of the supplier of the safety data sheet

Company/Undertaking	Kistler Instrumente AG	Kistler Instrumente GmbH
Identification	Eulachstrasse 22 8408 Winterthur Switzerland Tel: +41 52 224 11 11 Fax: +41 52 224 14 14 e-mail: info@kistler.com	Umberto-Nobile-Strasse 14 71063 Sindelfingen Germany Tel. +49 7031 309-00

Kistler Instruments Ltd.	Kistler Instrument Corp
13 Murrell Green Business Park	75 John Glenn Drive
London Road RG27 9GR Hook,	14228-2171 Amherst, NY
Hampshire, UK	USA
Tel. +44 125 6744 676	Tel. Nr. +1 716 691 5100

1.4. Emergency telephone number +41 44 251 51 51 Tox Center (24/7)
+41 79 776 89 35 ASTAG AG

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2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 (GHS/CLP)	Skin corrosion/irritation, Cat. 2, H315 Specific target organ toxicity (single exposure, narcotic effects), Cat. 3, H336 Aerosols, Cat.1, H222 Pressurized container: May burst if heated, H229 Hazardous to the aquatic environment, chronic, Cat. 2, H411
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Additional information For the full text of the phrases mentioned in this Section, see Section 16.

1003_000-577e-06.17

2.2. Label elements



Signal word

Danger

Hazard Statements

H222: Extremely flammable aerosol.
H229: Pressurised container: May burst when heated.
H315: Causes skin irritation.
H336: May cause drowsiness or dizziness.
H411 : Toxic to aquatic life with long lasting effects.

Precautionary statements

P210b: 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.
P241: Use explosion-proof electrical/ventilating/lighting/equipment.
P251: Do not pierce or burn, even after use.
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P271: Use only outdoors or in well-ventilated areas.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P332+P313: If skin irritation occurs: Get medical advice/attention.
P410/412: Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

Additional advice

None

GHS product identifier

pentane, CAS-No. 109-66-0, EC-No. 203-692-4
cyclohexane, CAS-No. 110-82-7, EC-No. 203-806-2

3. Composition/information on ingredients

Chemical characterization

Solution of active ingredients

Components		CLP Classification	Product identifier
pentane	50 – 75 %	Asp. Tox. 1 H304, STOT SE 3 H336, Aquatic Chronic 2 H411, Flam. Liq. 2 H225, EUH066	CAS-Nr.: 109-66-0 EG-Nr.: 203-692-4 INDEX-Nr.: 601-006-00-1
propane	10 – 20 %	Flam. Gas 1 H220, Press. Gas H280	CAS-Nr.: 74-98-6 EG-Nr.: 200-827-9 INDEX-Nr.: 601-003-00-5
cyclohexane	10 – 20 %	Asp. Tox. 1 H304, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Chronic 1 H410, Flam. Liq. 2 H225	CAS-Nr.: 110-82-7 EG-Nr.: 203-806-2 INDEX-Nr.: 601-017-00-1
isobutane	5 – 10 %	Flam. Gas 1 H220, Press. Gas H280	CAS-Nr.: 75-28-5 EG-Nr.: 200-857-2 INDEX-Nr.: 601-004-00-0

For the full text of the phrases mentioned in this Section, see Section 16.

Hazardous impurities

None known.

4. First aid measures

4.1. Description of first aid measures

Inhalation

In the case of inhalation of aerosol/mist consult a physician if necessary.

Skin contact

No special measures required.

Eye contact

Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.

Ingestion

Clean mouth with water and drink afterwards plenty of water.

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

None known.

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

None known.

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use dry chemical, CO₂, water spray or alcohol foam.

Extinguishing media which must not be used for safety reasons

None.

5.2. Special hazards arising from the substance or mixture

Solvents may produce excessive pressure under fire-conditions.
Sealed containers may rupture and ignite.

5.3. Advice for firefighters

Special protective equipment for firefighters

Standard procedure for chemical fires. In the event of fire, wear self-contained breathing apparatus.

Specific methods

Water mist may be used to cool closed containers. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Page 3/10

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel Ensure adequate ventilation. Remove all sources of ignition. Pay attention to flashback.

Advice for emergency responders Evacuate personnel to safe areas. Remove all sources of ignition. Pay attention to flashback.

6.2. Environmental precautions No special environmental precautions required.

6.3. Methods and material for containment and cleaning up

Small quantities: Wipe up with adsorbent material (e.g. cloth, fleece).

Large quantities: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

7. Handling and storage

7.1. Precautions for safe handling

Use only in well-ventilated areas. Do not breathe vapours or spray mist. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).

7.2. Conditions for safe storage, including any incompatibilities

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50 °C.

7.3. Specific end use(s)

No information available.

1003_000-577e-06.17

8. Exposure controls/personal protection

8.1. Control parameters

Exposure limit(s) No data is available on the product itself.

Pentane (CAS 109-66-0)	
EU - Occupational Exposure (2006/15/EC) - Second List of Indicative Occupational Exposure Limit Values - TWAs	1000 ppm TWA 3000 mg/m ³ TWA
United Kingdom - Workplace Exposure Limits (WELs) - STELs	1800 ppm STEL (calculated) 5400 mg/m ³ STEL (calculated)
United Kingdom - Workplace Exposure Limits (WELs) - TWAs	600 ppm TWA 1800 mg/m ³ TWA

Cyclohexane (CAS 110-82-7)	
EU - Occupational Exposure (2006/15/EC) - Second List of Indicative Occupational Exposure Limit Values - TWAs	200 ppm TWA 700 mg/m ³ TWA
United Kingdom - Workplace Exposure Limits (WELs) - STELs	300 ppm STEL 1050 mg/m ³ STEL (calculated)
United Kingdom - Workplace Exposure Limits (WELs) - TWAs	100 ppm TWA 350 mg/m ³ TWA

8.2. Exposure controls

Occupational exposure controls Ensure adequate ventilation, especially in confined areas.

Personal protection equipment

Respiratory protection In case of good ventilation no personal respiratory protective equipment required.
Hand protection No special measures required.
Eye protection Avoid contact with eyes.
Skin and body protection No special measures required.

Thermal hazards Container may rupture on heating. Heating can release vapours which can be ignited.

Environmental exposure controls No special measures required.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	Liquid under pressure → aerosol, after expansion.
Color	Opaque.
Odor	Solvent.
Odor threshold	No information available.
pH	not applicable.
Melting point/range	No information available.
Boiling point/range	–44 °C
Flash point	extremely flammable.
Evaporation rate	No information available.
Flammability	No information available.
Explosion limits	1,2 ... 9,5 %
Vapour pressure	No information available.
Vapour density	No information available.
Relative density	No information available.
Water solubility	No information available.
Partition coefficient (n-octanol/water)	No information available.
Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity	No information available.
Combustion/explosion hazards	Extremely flammable liquid and vapour.
Oxidizing properties	None.

9.2. Other information

General Product Characteristics	No information available.
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10. Stability and reactivity

10.1. Reactivity	No information available.
10.2. Chemical stability	No decomposition if used as directed.
10.3. Possibility of hazardous reactions	Fire or intense heat may cause violent rupture of packages.
10.4. Conditions to avoid	Heat, flames and sparks. Strong sunlight for prolonged periods.
10.5. Incompatible materials	Incompatible with oxidizing agents.
10.6. Hazardous decomposition products	None reasonably foreseeable.

1003_000-577e-06.17

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity	Pentane (CAS 109-66-0) Oral LD50 Mouse = 5000 mg/kg (NZ_CCID) Dermal LD50 Rabbit = 3000 mg/kg (IUCLID) Inhalation LC50 Rat = 364 g/m ³ 4 h (IUCLID) Propane (CAS 74-98-6) Inhalation LC50 Rat = 658 mg/L 4 h (IUCLID) Cyclohexane (CAS 110-82-7) Dermal LD50 Rabbit >2000 mg/kg (IUCLID) Inhalation LC50 Rat = 13.9 mg/L 4 h (IUCLID) Oral LD50 Rat > 5000 mg/kg (IUCLID) Isobutane (CAS 75-28-5) Inhalation LC50 Rat = 658 mg/L 4 h (IUCLID)
Skin corrosion/irritation	No data available.
Serious eye damage/eye irritation	Contact with eyes may cause irritation.
Respiratory/skin sensitisation	No data available.
Carcinogenicity	Contains no ingredient listed as a carcinogen.
Germ cell mutagenicity	Contains no ingredient listed as a mutagen.
Reproductive toxicity	Contains no ingredient listed as toxic to reproduction.
Specific target organ toxicity (single exposure)	No data available.
Specific target organ toxicity (repeated exposure)	No data available.
Aspiration hazard	No data available.
Human experience	No data available.

12. Ecological information

12.1. Toxicity	No data available.
Pentane (CAS 109-66-0)	
Ecotoxicity - Freshwater Fish - Acute Toxicity Data	96 h LC50 Oncorhynchus mykiss: 9.87 mg/L 96 h LC50 Pimephales promelas: 11:59 mg/L 96 h LC50 L.macrochirus: 9.99 mg/L
Ecotoxicity - Water Flea - Acute Toxicity Data	48 h EC50 Daphnia magna: 9.74 mg/L
Cyclohexane (CAS 110-82-7)	
Ecotoxicity - Freshwater Fish - Acute Toxicity Data	96 h LC50 Pimephales promelas: 3.96 ... 5.18 mg/L [flow-through] 96 h LC50 Pimephales promelas: 23:03 ... 42.07 mg/L [static] 96 h LC50 L.macrochirus: 24.99 ... 44.69 mg/L [static] 96 h LC50 Poecilia reticulata: 48.87 ... 68.76 mg/L [static]
Ecotoxicity - Freshwater Algae - Acute Toxicity Data	72 h EC50 Desmodesmus subspicatus: >500 mg/L

1003_000-577e-06.17

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| 12.2. Persistence and degradability | No data available. |
| 12.3. Bioaccumulative potential | No data available. |
| 12.4. Mobility in soil | No data available. |
| 12.5. Results of PBT and vPvB assessment | This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). |
| 12.6. Other adverse effects | No information available. |

13. Disposal considerations

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| 13.1. Waste treatment methods
Waste from residues/unused products | Dispose of as hazardous waste in compliance with local and national regulations. |
| Contaminated packaging | Also after use, do not open with force or burn. Offer empty spray cans to an established disposal company. |

14. Transport information

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|---------|--|
| ADR/RID | Proper shipping name AEROSOLS, flammable
UN No 1950.
Class 2.
ADR/RID-Labels 2.1+ENV.
Environmentally hazardous: Yes
Classification code 5F.
Risk No. 23.
Limited quantity 1 L.
Tunnel code D |
| IMDG | Proper shipping name Aerosols, flammable
UN No 1950.
Class 2.
Packing group -.
IMDG-Labels 2.1+ENV.
Limited quantity see SV277.
EmS F-D, S-U.
Marine Pollutant yes |
| IATA | Proper shipping name Aerosols, flammable
UN No 1950.
Class 2.1.
IATA label 2.1+ENV.
Packing instruction (passenger aircraft): 203 (75 kg).
Packing instruction (LQ): Y203 (30 kg G).
Packing instruction (cargo aircraft): 203 (150 kg). |

1003_000-577e-06.17

15. Regulatory information

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

Regulatory information Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50 °C.
The product is classified and labelled according to Regulation (EC) No. 1272/2008 (GHS/CLP).

Pentane (CAS 109-66-0)

EU - REACH (1907/2006) -
List of Registered Substances Present

Propane (CAS 74-98-6)
EU - REACH (1907/2006) -
List of Registered Substances Present

UN (United Nations) - Selected
Volatile Substances Prone to
Abuse Present

Cyclohexane (CAS 110-82-7)

EU - REACH (1907/2006) - Annex
XVII - Restrictions on Certain
Dangerous Substances Use restricted. See item 57. (Conditions of restrictions 27 June 2010)

EU - REACH (1907/2006) -
List of Registered Substances Present

Isobutane (CAS 75-28-5)

EU - REACH (1907/2006) - Annex
XVII - Restrictions on Certain
Dangerous Substances Use restricted. See item 28.

EU - REACH (1907/2006) -
List of Registered Substances Use restricted. See item 29.
Present

UN (United Nations) - Selected
Volatile Substances Prone to
Abuse Present

15.2. Chemical safety assessment Not required.

1003_000-577e-06.17

16. Other information

Key or legend to abbreviations and acronyms	CLP: Classification according to Regulation (EC) No. 1272/2008 (GHS/CLP)
Classification procedure	Calculation method.
Full text of phrases referred to under sections 2 and 3	<p>EUH066: Repeated exposure may cause skin dryness or cracking. H220: Extremely flammable gas. H222: Extremely flammable aerosol. H224: Extremely flammable liquid and vapour. H225: Highly flammable liquid and vapour. H229: Pressurised container: May burst when heated. H280: Contains gas under pressure; may explode if heated. H304: May be fatal if swallowed and enters airways. H315: Causes skin irritation. 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.</p>
Further information	Take notice of the directions of use on the label.
Instructions for use	Restricted to professional users.
Disclaimer	The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

1003_000-577e-06.17