

Creation Date 31-Mar-2009

Revision Date 11-Oct-2023

Revision Number 9

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Description:	2-Methylbutane
Cat No. :	427730000; 427730010; 427730025
Synonyms	Isopentane; 2-Methylbutane; Butane, 2-methyl; 1,1-Dimethylpropane; Dimethylethylmethane; 1,1,2-Trimethylethane
Index No	601-085-00-2
CAS No	78-78-4
EC No	201-142-8
Molecular Formula	C5 H12
REACH registration number	-

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

Recommended Use	Laboratory chemicals.
Sector of use	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
Product category	PC21 - Laboratory chemicals
Process categories	PROC15 - Use as a laboratory reagent
Environmental release category	ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)
Uses advised against	No Information available

1.3. Details of the supplier of the safety data sheet

Company

EU entity/business name
Thermo Fisher Scientific
Janssen Pharmaceuticaaan 3a, 2440 Geel, Belgium

UK entity/business name
Fisher Scientific UK
Bishop Meadow Road,
Loughborough, Leicestershire LE11 5RG, United Kingdom

Swiss distributor - Fisher Scientific AG
Neuhofstrasse 11, CH 4153 Reinach
Tel: +41 (0) 56 618 41 11
e-mail - infoch@thermofisher.com

E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTREC Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

customers in Switzerland:
Tox Info Suisse Emergency Number: **145 (24hr)**
Tox Info Suisse: +41-44 251 51 51 (Emergency number from abroad)
Chemtrec (24h) Toll-Free: 0800 564 402
Chemtrec Local: +41-43 508 20 11 (Zurich)

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SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards

Flammable liquids

Category 1 (H224)

Health hazards

Aspiration Toxicity

Category 1 (H304)

Specific target organ toxicity - (single exposure)

Category 3 (H336)

Environmental hazards

Chronic aquatic toxicity

Category 2 (H411)

Full text of Hazard Statements: see section 16

2.2. Label elements



Signal Word

Danger

Hazard Statements

H224 - Extremely flammable liquid and vapor

H336 - May cause drowsiness or dizziness

H411 - Toxic to aquatic life with long lasting effects

H304 - May be fatal if swallowed and enters airways

EUH066 - Repeated exposure may cause skin dryness or cracking

Precautionary Statements

P243 - Take action to prevent static discharges

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

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

P331 - Do NOT induce vomiting

P273 - Avoid release to the environment

2.3. Other hazards

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Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)

This product does not contain any known or suspected endocrine disruptors

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Component	CAS No	EC No	Weight %	CLP Classification - Regulation (EC) No 1272/2008
Isopentane	78-78-4	EEC No. 201-142-8	>95	Flam. Liq. 1 (H224) Asp. Tox. 1 (H304) STOT SE 3 (H336) Aquatic Chronic 2 (H411) EUH066

REACH registration number

-

Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately. If vomiting occurs naturally, have victim lean forward.
Inhalation	Remove to fresh air. Get medical attention immediately if symptoms occur. Risk of serious damage to the lungs (by aspiration). If not breathing, give artificial respiration.
Self-Protection of the First Aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

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

Difficulty in breathing. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

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

Notes to Physician Treat symptomatically. Symptoms may be delayed.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.

Extinguishing media which must not be used for safety reasons

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Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Extremely flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO₂).

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Ensure adequate ventilation. Use personal protective equipment as required. Take precautionary measures against static discharges.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Refrigerator/flammables. Flammables area.

**Technical Rules for Hazardous Substances (TRGS) 510
Storage Class (LGK) (Germany)**

Class 3

Switzerland - Storage of hazardous substances

Storage class - SC 3

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<https://www.kvu.ch/de/themen/stoffe-und-produkte>
<https://www.kvu.ch/fr/themes/substances-et-produits>
<https://www.kvu.ch/it/temi/sostanze-e-prodotti>

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

List source(s): **EU** - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC **UK** - EH40/2005 Work Exposure Limits, Forth edition. Published 2020. **IRE** - 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority. **CH** - The Government of Switzerland has set a directive on limit values for working materials (Grenzwerte am Arbeitsplatz) which is based on the Swiss Federal Regulation "Verordnung über die Verhütung von Unfällen und Berufskrankheiten". This directive is administered, periodically revised and enforced by SUVA (Swiss National Accident Insurance Fund).

Component	European Union	The United Kingdom	France	Belgium	Spain
Isopentane	TWA: 1000 ppm (8hr) TWA: 3000 mg/m ³ (8hr)	STEL: 1800 ppm 15 min STEL: 5400 mg/m ³ 15 min TWA: 600 ppm 8 hr TWA: 1800 mg/m ³ 8 hr	TWA / VME: 1000 ppm (8 heures). indicative limit TWA / VME: 3000 mg/m ³ (8 heures). indicative limit	TWA: 600 ppm 8 uren TWA: 1800 mg/m ³ 8 uren STEL: 750 ppm 15 minuten STEL: 2250 mg/m ³ 15 minuten	TWA / VLA-ED: 1000 ppm (8 horas) TWA / VLA-ED: 3000 mg/m ³ (8 horas)

Component	Italy	Germany	Portugal	The Netherlands	Finland
Isopentane	TWA: 667 ppm 8 ore. Time Weighted Average TWA: 2000 mg/m ³ 8 ore. Time Weighted Average	TWA: 1000 ppm (8 Stunden). AGW - exposure factor 2 TWA: 3000 mg/m ³ (8 Stunden). AGW - exposure factor 2 TWA: 1000 ppm (8 Stunden). MAK TWA: 3000 mg/m ³ (8 Stunden). MAK Höhepunkt: 2000 ppm Höhepunkt: 6000 mg/m ³	TWA: 1000 ppm 8 horas TWA: 3000 mg/m ³ 8 horas	TWA: 1800 mg/m ³ 8 uren	TWA: 500 ppm 8 tunteina TWA: 1500 mg/m ³ 8 tunteina STEL: 630 ppm 15 minuutteina STEL: 1900 mg/m ³ 15 minuutteina

Component	Austria	Denmark	Switzerland	Poland	Norway
Isopentane	MAK-KZGW: 1200 ppm 15 Minuten MAK-KZGW: 3600 mg/m ³ 15 Minuten MAK-TMW: 600 ppm 8 Stunden MAK-TMW: 1800 mg/m ³ 8 Stunden	TWA: 500 ppm 8 timer TWA: 1500 mg/m ³ 8 timer STEL: 1000 ppm 15 minutter STEL: 3000 mg/m ³ 15 minutter	STEL: 1200 ppm 15 Minuten STEL: 3600 mg/m ³ 15 Minuten TWA: 600 ppm 8 Stunden TWA: 1800 mg/m ³ 8 Stunden	TWA: 3000 mg/m ³ 8 godzinach	TWA: 250 ppm 8 timer TWA: 750 mg/m ³ 8 timer TWA: 40 ppm 8 timer TWA: 275 mg/m ³ 8 timer STEL: 312.5 ppm 15 minutter. value calculated STEL: 937.5 mg/m ³ 15 minutter. value calculated

Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
Isopentane	TWA: 1000 ppm TWA: 3000.0 mg/m ³	TWA-GVI: 1000 ppm 8 satima. TWA-GVI: 3000 mg/m ³ 8 satima.	TWA: 1000 ppm 8 hr. STEL: 3000 ppm 15 min	TWA: 1000 ppm TWA: 3000 mg/m ³	TWA: 3000 mg/m ³ 8 hodinách. Ceiling: 4500 mg/m ³

Component	Estonia	Gibraltar	Greece	Hungary	Iceland
Isopentane	TWA: 1000 ppm 8 tundides.	TWA: 1000 ppm 8 hr TWA: 3000 mg/m ³ 8 hr	TWA: 1000 ppm TWA: 2950 mg/m ³	TWA: 3000 mg/m ³ 8 óraban. AK	TWA: 500 ppm 8 klukkustundum.

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	TWA: 3000 mg/m ³ 8 tundides.				TWA: 1500 mg/m ³ 8 klukkustundum. Ceiling: 1000 ppm Ceiling: 3000 mg/m ³
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Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Isopentane	TWA: 1000 ppm TWA: 3000 mg/m ³	TWA: 1000 ppm IPRD TWA: 3000 mg/m ³ IPRD	TWA: 1000 ppm 8 Stunden TWA: 3000 mg/m ³ 8 Stunden	TWA: 1000 ppm TWA: 3000 mg/m ³	TWA: 1000 ppm 8 ore TWA: 3000 mg/m ³ 8 ore

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Isopentane		TWA: 1000 ppm TWA: 3000 mg/m ³	TWA: 1000 ppm 8 urah TWA: 3000 mg/m ³ 8 urah STEL: 6000 mg/m ³ 15 minutah STEL: 2000 ppm 15 minutah	Indicative STEL: 750 ppm 15 minuter Indicative STEL: 2000 mg/m ³ 15 minuter TLV: 600 ppm 8 timmar. NGV TLV: 1800 mg/m ³ 8 timmar. NGV	TWA: 1000 ppm 8 saat TWA: 3000 mg/m ³ 8 saat

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS70 General methods for sampling airborne gases and vapours

MDHS 88 Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas chromatography

MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography

Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

Component	Acute effects local (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)
Isopentane 78-78-4 (>95)				DNEL = 432mg/kg bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Isopentane 78-78-4 (>95)				DNEL = 3000mg/m ³

Predicted No Effect Concentration (PNEC)

No information available.

8.2. Exposure controls

Engineering Measures

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Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection

Wear safety glasses with side shields (or goggles) (European standard - EN 166)

Hand Protection

Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Nitrile rubber	> 480 minutes	0.38 mm	Level 6	As tested under EN374-3 Determination of
Viton (R)	> 480 minutes	0.3 mm	EN 374	Resistance to Permeation by Chemicals
Neoprene gloves	< 85 minutes	0.45 mm		

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

Respiratory Protection

No protective equipment is needed under normal use conditions.

Large scale/emergency use

Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

Recommended Filter type: low boiling organic solvent Type AX Brown conforming to EN371

Small scale/Laboratory use

Maintain adequate ventilation Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141

Environmental exposure controls

Prevent product from entering drains. Do not allow material to contaminate ground water system.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State

Liquid

Appearance

Colorless

Odor

Petroleum distillates

Odor Threshold

No data available

Melting Point/Range

-160 °C / -256 °F

Softening Point

No data available

Boiling Point/Range

30 °C / 86 °F

Flammability (liquid)

Extremely flammable

Flammability (solid,gas)

Not applicable

Explosion Limits

Lower 1.4 vol%

Upper 7.6 vol%

Flash Point

-51 °C / -59.8 °F

Autoignition Temperature

420 °C / 788 °F

Decomposition Temperature

No data available

@ 760 mmHg

On basis of test data

Liquid

Method - No information available

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pH	Not applicable	
Viscosity	No data available	
Water Solubility	Insoluble	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Component	log Pow	
Isopentane	4	
Vapor Pressure	990 mbar @ 20 °C	
Density / Specific Gravity	0.620	
Bulk Density	Not applicable	Liquid
Vapor Density	2.48 (Air = 1.0)	(Air = 1.0)
Particle characteristics	Not applicable (liquid)	

9.2. Other information

Molecular Formula	C5 H12
Molecular Weight	72.15
Explosive Properties	Vapors may form explosive mixtures with air
Evaporation Rate	No information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

None known, based on information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

10.4. Conditions to avoid

Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO₂).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Product Information

(a) acute toxicity;

Oral

Based on available data, the classification criteria are not met

Dermal

Based on available data, the classification criteria are not met

Inhalation

Based on available data, the classification criteria are not met

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(b) skin corrosion/irritation; Based on available data, the classification criteria are not met

(c) serious eye damage/irritation; Based on available data, the classification criteria are not met

(d) respiratory or skin sensitization;

Respiratory

Based on available data, the classification criteria are not met

Skin

Based on available data, the classification criteria are not met

(e) germ cell mutagenicity;

Based on available data, the classification criteria are not met

(f) carcinogenicity;

Based on available data, the classification criteria are not met

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity;

Based on available data, the classification criteria are not met

(h) STOT-single exposure;

Category 3

Results / Target organs

Central nervous system (CNS).

(i) STOT-repeated exposure;

Based on available data, the classification criteria are not met

Target Organs

None known.

(j) aspiration hazard;

Category 1

Symptoms / effects, both acute and delayed

Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

11.2. Information on other hazards

Endocrine Disrupting Properties

Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity effects

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Isopentane	Oncorhynchus mykiss: LC50: 3.1 mg/L/96h	EC50: = 2.3 mg/L, 48h (Daphnia magna)	

12.2. Persistence and degradability

Persistence

Persistence is unlikely, based on information available.

Degradation in sewage treatment plant

Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

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12.3. Bioaccumulative potential Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Isopentane	4	No data available

12.4. Mobility in soil The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces. Will likely be mobile in the environment due to its volatility. Disperses rapidly in air.

12.5. Results of PBT and vPvB assessment Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB).

12.6. Endocrine disrupting properties

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

Persistent Organic Pollutant

This product does not contain any known or suspected substance

Ozone Depletion Potential

This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues/Unused Products

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Contaminated Packaging

Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

European Waste Catalogue (EWC)

According to the European Waste Catalog, Waste Codes are not product specific, but application specific.

Other Information

Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Can be landfilled or incinerated, when in compliance with local regulations. Do not let this chemical enter the environment. Do not empty into drains.

Switzerland - Waste Ordinance

Disposal should be in accordance with applicable regional, national and local laws and regulations. Ordinance on the Avoidance and the Disposal of Waste (Waste Ordinance, ADWO) SR 814.600
<https://www.fedlex.admin.ch/eli/cc/2015/891/en>

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

14.1. UN number

UN1265

14.2. UN proper shipping name

PENTANES

14.3. Transport hazard class(es)

3

14.4. Packing group

I

ADR

14.1. UN number

UN1265

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14.2. UN proper shipping name PENTANES
14.3. Transport hazard class(es) 3
14.4. Packing group I

IATA

14.1. UN number UN1265
14.2. UN proper shipping name PENTANES
14.3. Transport hazard class(es) 3
14.4. Packing group I

14.5. Environmental hazards Dangerous for the environment
Product is a marine pollutant according to the criteria set by IMDG/IMO

14.6. Special precautions for user No special precautions required.

14.7. Maritime transport in bulk according to IMO instruments Not applicable, packaged goods

SECTION 15: REGULATORY INFORMATION

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

International Inventories

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Isopentane	78-78-4	201-142-8	-	-	X	X	KE-23537	X	X

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Isopentane	78-78-4	X	ACTIVE	X	-	X	X	X

Legend: X - Listed '-' - Not Listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

Authorisation/Restrictions according to EU REACH Not applicable

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Isopentane	78-78-4	-	-	-

Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Isopentane	78-78-4	Not applicable	Not applicable

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals
Not applicable

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Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

National Regulations

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

WGK Classification

See table for values

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
Isopentane	WGK2	

Component	France - INRS (Tables of occupational diseases)
Isopentane	Tableaux des maladies professionnelles (TMP) - RG 84

Swiss Regulations

Article 4 para. 4 of the Ordinance on the protection of young people in the workplace (SR 822.115) and Article 1 lit. f of the EAER regulation on hazardous work and young people (SR 822.115.2).

Take note on Article 13 Maternity Ordinance (SR 822.111.52) with regards expectant and nursing mothers.

Component	Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81)	Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC)	Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure
Isopentane 78-78-4 (>95)	Prohibited and Restricted Substances	Group I	

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H224 - Extremely flammable liquid and vapor

H304 - May be fatal if swallowed and enters airways

H336 - May cause drowsiness or dizziness

H411 - Toxic to aquatic life with long lasting effects

EUH066 - Repeated exposure may cause skin dryness or cracking

Legend

CAS - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

DNEL - Derived No Effect Level

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer
Predicted No Effect Concentration (PNEC)

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RPE - Respiratory Protective Equipment
LC50 - Lethal Concentration 50%
NOEC - No Observed Effect Concentration
PBT - Persistent, Bioaccumulative, Toxic

LD50 - Lethal Dose 50%
EC50 - Effective Concentration 50%
POW - Partition coefficient Octanol:Water
vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road
IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code
OECD - Organisation for Economic Co-operation and Development
BCF - Bioconcentration factor

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association
MARPOL - International Convention for the Prevention of Pollution from Ships
ATE - Acute Toxicity Estimate
VOC - (volatile organic compound)

Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Training Advice

Chemical incident response training.
Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.
Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.
First aid for chemical exposure, including the use of eye wash and safety showers.
Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.

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This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006 .

For Switzerland - Compiled in accordance with the technical provisions referred to in Annex 2, Number 3, ChemO (SR 813.11 - Ordinance on Protection against Dangerous Substances and Preparations).

Disclaimer

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End of Safety Data Sheet