

according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended

Creation Date 20-Oct-2009 Revision Date 02-Jul-2024 Revision Number 13

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

#### 1.1. Product identifier

Product Description: Chloroform - stabilised

Cat No.: C/4961/17

Synonyms Methane trichloride; Methenyl trichloride; Formyl trichloride

 Index No
 602-006-00-4

 CAS No
 67-66-3

 EC No
 200-663-8

 Molecular Formula
 C H Cl3

REACH registration number 01-2119486657-20

### 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 All other uses

#### 1.3. Details of the supplier of the safety data sheet

Company

UK entity/business name

Fisher Scientific UK

Bishop Meadow Road, Loughborough, Leicestershire LE11 5RG, United Kingdom

**EU entity/business name** Thermo Fisher Scientific

Janssen Pharmaceuticalaan 3a

2440 Geel, Belgium

**E-mail address** begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

Tel: 01509 231166

Chemtrec US: (800) 424-9300 Chemtrec EU: 001-703-527-3887

# **SECTION 2: HAZARDS IDENTIFICATION**

## 2.1. Classification of the substance or mixture

GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

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#### Physical hazards

Based on available data, the classification criteria are not met

#### **Health hazards**

Acute oral toxicity Category 4 (H302) Acute Inhalation Toxicity - Vapors Category 3 (H331) Skin Corrosion/Irritation Category 2 (H315) Serious Eye Damage/Eye Irritation Category 2 (H319) Category 2 (H351) Carcinogenicity Reproductive Toxicity Category 2 (H361d) Specific target organ toxicity - (single exposure) Category 3 (H336) Specific target organ toxicity - (repeated exposure) Category 1 (H372)

#### **Environmental hazards**

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

#### 2.2. Label elements



# Signal Word

## Danger

#### **Hazard Statements**

H302 - Harmful if swallowed

H331 - Toxic if inhaled

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H336 - May cause drowsiness or dizziness

H351 - Suspected of causing cancer

H361d - Suspected of damaging the unborn child

H372 - Causes damage to organs through prolonged or repeated exposure

## **Precautionary Statements**

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

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

P311 - Call a POISON CENTER or doctor/physician

#### Additional EU labelling

For use in industrial installations only

#### 2.3. Other hazards

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

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Overexposure may cause decreased heart rate, decreased blood pressure, heart block, and cardiac failure Toxic to terrestrial vertebrates

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 %	GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567
Chloroform	67-66-3	200-663-8	>99	Acute Tox. 4 (H302) Acute Tox. 3 (H331) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H336) Carc. 2 (H351) Repr. 2 (H361d) STOT RE 1 (H372)
1-Pentene	109-67-1	EEC No. 203-694-5	0.01	Flam. Liq. 1 (H224) Asp. Tox. 1 (H304) Aquatic Chronic 3 (H412)

Component	Specific concentration limits (SCL's)	M-Factor	Component notes
Chloroform	STOT RE 2 : C ≥ 5 %	-	-

#### Note

Amylene is used as a stabilizer, but there is evidence that it may not prevent phosgene generation. Chloroform stabilized with amylene should be tested for phosgene content.

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Full text of Hazard Statements: see section 16

# **SECTION 4: FIRST AID MEASURES**

#### 4.1. Description of first aid measures

**General Advice** Show this safety data sheet to the doctor in attendance. Immediate medical attention is

required.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In

the case of contact with eyes, rinse immediately with plenty of water and seek medical

advice.

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. Immediate medical

attention is required.

**Ingestion** Do NOT induce vomiting. Call a physician or poison control center immediately.

**Inhalation** Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth

method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Immediate medical attention is required.

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**Self-Protection of the First Aider**Use personal protective equipment as required.

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

Difficulty in breathing. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing: Causes central nervous system depression

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

**Notes to Physician**Treat symptomatically. Signs of overdose include stupor and respiratory depression.

Symptoms may be delayed.

# **SECTION 5: FIREFIGHTING MEASURES**

## 5.1. Extinguishing media

### **Suitable Extinguishing Media**

Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

## Extinguishing media which must not be used for safety reasons

No information available.

#### 5.2. Special hazards arising from the substance or mixture

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

#### **Hazardous Combustion Products**

Carbon monoxide (CO), Carbon dioxide (CO2), Phosgene, Hydrogen chloride gas.

## 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

Use personal protective equipment as required. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

## 6.2. Environmental precautions

Should not be released into the environment.

#### 6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

#### 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

# **SECTION 7: HANDLING AND STORAGE**

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## 7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance.

## **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

#### 7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from direct sunlight. Store under an inert atmosphere. Protect from moisture.

Technical Rules for Hazardous Substances (TRGS) 510 Storage Class (LGK) (Germany) Class 6.1D

## 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, Fourth edition. Published 2020. **IRE** - 2021 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

Component	The United Kingdom	European Union	Ireland
Chloroform	TWA: 2 ppm	TWA: 2 ppm 8 hr	TWA: 2 ppm 8 hr.
	TWA: 9.9 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> 8 hr	TWA: 9.8 mg/m <sup>3</sup> 8 hr.
	STEL: 6 ppm	Possibility of significant	STEL: 6 ppm 15 min
	STEL: 29.7 mg/m <sup>3</sup>	uptake through the skin	STEL: 29.4 mg/m <sup>3</sup> 15 min
		_	Skin

#### **Biological limit values**

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

## 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)
Chloroform				DNEL = 0.94mg/kg
67-66-3 (>99)				bw/day

	Component	Acute effects local	Acute effects	Chronic effects local	Chronic effects
		(Inhalation)	systemic (Inhalation)	(Inhalation)	systemic (Inhalation)
	Chloroform 67-66-3 ( >99 )		DNEL = 333mg/m <sup>3</sup>	DNEL = $2.5 \text{mg/m}^3$	DNEL = $2.5 \text{mg/m}^3$
L	07-00-3 (>99)				

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**Predicted No Effect Concentration (PNEC)** 

See values below.

Component	Fresh water	Fresh water	Water Intermittent	Microorganisms in	Soil (Agriculture)
		sediment		sewage treatment	
Chloroform	PNEC = 0.146mg/L	PNEC = 0.45 mg/kg	PNEC = 0.133mg/L	PNEC = 0.048mg/L	PNEC = 0.56mg/kg
67-66-3 (>99)		sediment dw		-	soil dw
1-Pentene	PNEC = $5.9\mu g/L$	PNEC =	PNEC = 59µg/L	PNEC = 0.45mg/L	PNEC =
109-67-1 ( 0.01 )		0.104mg/kg		_	0.023mg/kg soil dw
		sediment dw			

Component	Marine water	Marine water	Marine water	Food chain	Air
		sediment	intermittent		
Chloroform	PNEC = 0.015mg/L	PNEC = 0.09mg/kg			
67-66-3 ( >99 )		sediment dw			
1-Pentene	PNEC = $0.59\mu g/L$	PNEC = 0.01mg/kg	PNEC = 5.9µg/L		
109-67-1 ( 0.01 )		sediment dw			

#### 8.2. Exposure controls

## **Engineering Measures**

Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

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** Goggles (European standard - EN 166)

Hand Protection Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Viton (R)	> 480 minutes	-	Level 6	As tested under EN374-3 Determination of
			EN 374	Resistance to Permeation by Chemicals
Neoprene	< 25 minutes	0.45 mm		
Butyl rubber	< 15 minutes	0.35 mm		

Skin and body protection Long sleeved clothing.

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure 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.

Remove gloves with care avoiding skin contamination.

**Respiratory Protection** When workers are facing concentrations above the exposure limit they must use

appropriate certified respirators.

To protect the wearer, respiratory protective equipment must be the correct fit and be used

and maintained properly

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 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.

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

When RPE is used a face piece Fit Test should be conducted

Prevent product from entering drains. **Environmental exposure controls** 

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

## 9.1. Information on basic physical and chemical properties

**Physical State** Liquid

Colorless **Appearance** Odor aromatic sweet **Odor Threshold** No data available **Melting Point/Range** -63 °C / -81.4 °F **Softening Point** No data available **Boiling Point/Range** 61 °C / 141.8 °F Flammability (liquid) No data available Flammability (solid,gas) Not applicable

Liquid

**Explosion Limits** No data available

**Flash Point** No information available Method - No information available

**Autoignition Temperature** No data available **Decomposition Temperature** No data available рΗ No information available **Viscosity** 0.56 mPa s at 20 °C Water Solubility 8 g/L (20°C)

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

log Pow Component Chloroform 2 1-Pentene 2.66

**Vapor Pressure** 213 mbar @ 20 °C

**Density / Specific Gravity** 1.480

**Bulk Density** Not applicable Liquid **Vapor Density** No data available (Air = 1.0)

Particle characteristics Not applicable (liquid)

9.2. Other information

Molecular Formula C H CI3 Molecular Weight 119.38 VOC Content(%) 100

# **SECTION 10: STABILITY AND REACTIVITY**

10.1. Reactivity None known, based on information available

10.2. Chemical stability

Stable under normal conditions. UNSTABLE (REACTIVE) UPON DEPLETION OF

INHIBITOR. Light sensitive.

10.3. Possibility of hazardous reactions

**Hazardous Polymerization** Hazardous polymerization does not occur.

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Hazardous Reactions None under normal processing.

10.4. Conditions to avoid

Incompatible products. Heat, flames and sparks. Excess heat. Exposure to light. Protect

from moisture.

10.5. Incompatible materials

Strong oxidizing agents. Alkali metals. Aluminium. Acetone.

#### 10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO2). Phosgene. Hydrogen chloride gas.

## **SECTION 11: TOXICOLOGICAL INFORMATION**

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

#### **Product Information**

(a) acute toxicity;

Oral Category 4

**Dermal** Based on available data, the classification criteria are not met

Inhalation Category 3

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Chloroform	LD50 = 908 mg/kg (rat) LD50 = 695 mg/kg (Rat) LD50 = 450 mg/kg (Rat)	LD50 > 20 g/kg(Rabbit)	LC50 = 10.5 mg/L ( Rat ) 4 h
1-Pentene	>2000 mg/kg (Rat)	>2000 mg/kg (Rabbit)	LC50 = 10000 ppm (Rat) 4 h

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Category 2

(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; Category 2

The table below indicates whether each agency has listed any ingredient as a carcinogen

L	Component	EU	UK	Germany	IARC
	Chloroform				Group 2B

(g) reproductive toxicity; Category 2

**Reproductive Effects** Experiments have shown reproductive toxicity effects on laboratory animals.

**Developmental Effects** Developmental effects have occurred in experimental animals.

**Teratogenicity** Study result . negative.

(h) STOT-single exposure; Category 3

Results / Target organs Central nervous system (CNS).

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(i) STOT-repeated exposure; Category 1

LOAEL = 15 mg/kg bw/day Study result

 $NOAEC = 25 \text{ mg/m}^3$ 

Route of exposure Inhalation **Target Organs** Liver, Kidney.

(j) aspiration hazard; Based on available data, the classification criteria are not met

**Other Adverse Effects** Tumorigenic effects have been reported in experimental animals.

delayed

Symptoms / effects,both acute and Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness,

cessation of breathing. Causes central nervous system depression.

#### 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** 

Do not empty into drains. The product contains following substances which are hazardous for the environment. Contains a substance which is:. Harmful to aquatic organisms.

Component Freshwater Fish		Water Flea	Freshwater Algae
Chloroform	LC50: = 300 mg/L, 96h static (Poecilia reticulata) LC50: = 18 mg/L, 96h flow-through (Lepomis macrochirus)	EC50 = 28.9 mg/L/48h	EC50 = 560 mg/L/48h
	LC50: = 18 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: = 71 mg/L, 96h flow-through (Pimephales promelas)		

Component	Microtox	M-Factor
Chloroform	Photobacterium phosphoreum: EC50 = 520 mg/L/5	
	min	
	Photobacterium phosphoreum: EC50 = 670	
	mg/L/15 min	
	Photobacterium phosphoreum: EC50 = 670	
	mg/L/30min	

12.2. Persistence and degradability Product is biodegradable

**Persistence** Persistence is unlikely, based on information available.

Degradation in sewage Contains substances known to be hazardous to the environment or not degradable in waste

treatment plant water treatment plants.

#### 12.3. Bioaccumulative potential Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Chloroform	2	1.4 - 13 dimensionless
1-Pentene	2.66	No data available

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**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 Ozone Depletion Potential This product does not contain any known or suspected substance 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.

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. Do not empty into drains.

# **SECTION 14: TRANSPORT INFORMATION**

### IMDG/IMO

14.1. UN numberUN188814.2. UN proper shipping nameChloroform

14.3. Transport hazard class(es) 6.1 14.4. Packing group III

ADR

**14.1. UN number 14.2. UN proper shipping name**UN1888
Chloroform

14.3. Transport hazard class(es) 6.1 14.4. Packing group III

<u>IATA</u>

14.1. UN number UN1888
14.2. UN proper shipping name Chloroform

14.3. Transport hazard class(es) 6.1 14.4. Packing group III

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14.5. Environmental hazards No hazards identified

14.6. Special precautions for user No special precautions required.

14.7. Maritime transport in bulk Not applicable, packaged goods

according to IMO instruments

# **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
Chloroform	67-66-3	200-663-8	-	-	X	X	X	X	X
1-Pentene	109-67-1	203-694-5	-	-	X	X	KE-28027	X	Х

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Chloroform	67-66-3	X	ACTIVE	X	Ī	X	Χ	X
1-Pentene	109-67-1	Х	ACTIVE	Χ	•	Χ	Χ	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

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)
Chloroform	67-66-3	-	Use restricted. See item 32. (see http://eur-lex.europa.eu/Le xUriServ/LexUriServ.do?ur i=CELEX:32006R1907:EN: NOT for restriction details)	
1-Pentene	109-67-1	-	-	-

#### **REACH links**

https://echa.europa.eu/substances-restricted-under-reach

#### Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) -	Seveso III Directive (2012/18/EC) -
		Qualifying Quantities for Major Accident	Qualifying Quantities for Safety Report
		Notification	Requirements
Chloroform	67-66-3	Not applicable	Not applicable
1-Pentene	109-67-1	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

Component	ANNEX I - PART 1	ANNEX I - PART 2	ANNEX I - PART 3
-	List of chemicals subject to	List of chemicals qualifying for	List of chemicals subject to the

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	export notification procedure (referred to in Article 8)	PIC notification (referred to in Article 11)	PIC procedure (referred to in Articles 13 and 14)
Chloroform 67-66-3 ( >99 )	b — ban (for the category or categories concerned)	-	-
	b — ban (for the category or categories concerned)		
	i(2) — industrial chemical for public		

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32012R0649&qid=1604065742303.

# 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

Take note of Directive 94/33/EC on the protection of young people at work

Take note of Dir 92/85/EC on the protection of pregnant and breastfeeding women at work

## **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
Chloroform	WGK 3	Class I: 20 mg/m³ (Massenkonzentration)
1-Pentene	WGK2	

Component	France - INRS (Tables of occupational diseases)
Chloroform	Tableaux des maladies professionnelles (TMP) - RG 12

	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
	Chloroform 67-66-3 ( >99 )	Prohibited and Restricted Substances		Annex I - industrial chemical
⊢	,			
	1-Pentene	Prohibited and Restricted		
	109-67-1 ( 0.01 )	Substances		

#### 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

H302 - Harmful if swallowed

H332 - Harmful if inhaled

H315 - Causes skin irritation

\_\_\_\_\_

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H319 - Causes serious eve irritation

H351 - Suspected of causing cancer

H361d - Suspected of damaging the unborn child

H336 - May cause drowsiness or dizziness

H372 - Causes damage to organs through prolonged or repeated exposure

H224 - Extremely flammable liquid and vapor

H304 - May be fatal if swallowed and enters airways

H331 - Toxic if inhaled

H412 - Harmful to aquatic life with long lasting effects

### Legend

**CAS** - Chemical Abstracts Service

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

EINECS/ELINCS - European Inventory of Existing Commercial Chemical DSL/NDSL - Canadian Domestic Substances List/Non-Domestic 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 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

RPE - Respiratory Protective Equipment LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration PBT - Persistent. Bioaccumulative. Toxic

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

Predicted No Effect Concentration (PNEC)

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

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 hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hvaiene.

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.

Chemical incident response training.

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.

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**Revision Summary** SDS sections updated, 7.

# This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.

#### **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

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# **End of Safety Data Sheet**