

ALFAAC36432

## Chloroform, stab. with amylene

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

**产品说明:**  
**Product Description:** Chloroform, stab. with amylene  
 Chloroform, stab. with amylene

**Cat No. :** C36432  
**Synonyms** Methane trichloride; Methenyl trichloride; Formyl trichloride  
**CAS No** 67-66-3  
**Molecular Formula** C H Cl<sub>3</sub>

**Supplier** Avocado Research Chemicals Ltd.  
 (Part of Thermo Fisher Scientific)  
 Shore Road, Heysham  
 Lancashire, LA3 2XY,  
 United Kingdom  
 Office Tel: +44 (0) 1524 850506  
 Office Fax: +44 (0) 1524 850608

**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

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

**Recommended Use** Laboratory chemicals.  
**Uses advised against**

### SECTION 2. HAZARD IDENTIFICATION

**Physical State**  
Liquid

**Appearance**  
Colorless

**Odor**  
aromatic sweet

#### Emergency Overview

Toxic if inhaled. Causes skin irritation. Causes serious eye irritation. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure. Harmful if swallowed. May cause drowsiness and dizziness.

#### Classification of the substance or mixture

Acute Oral Toxicity	Category 4
Acute Inhalation Toxicity - Vapors	Category 3
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Carcinogenicity	Category 2
Reproductive Toxicity	Category 2
Specific target organ toxicity - (single exposure)	Category 3
Specific target organ toxicity - (repeated exposure)	Category 1

#### Label Elements

**Signal Word****Danger****Hazard Statements**

H331 - Toxic if inhaled  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H351 - Suspected of causing cancer  
H372 - Causes damage to organs through prolonged or repeated exposure  
H302 - Harmful if swallowed  
H336 - May cause drowsiness or dizziness  
H361 - Suspected of damaging fertility or the unborn child

**Precautionary Statements****Prevention**

P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P260 - Do not breathe dust/fume/gas/mist/vapors/spray  
P264 - Wash face, hands and any exposed skin thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear eye protection/ face protection

**Response**

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell  
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  
P308 + P313 - IF exposed or concerned: Get medical advice/attention  
P330 - Rinse mouth  
P332 + P313 - If skin irritation occurs: Get medical advice/attention  
P362 + P364 - Take off contaminated clothing and wash it before reuse

**Storage**

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed  
P405 - Store locked up

**Disposal**

P501 - Dispose of contents/ container to an approved waste disposal plant

**Physical and Chemical Hazards**

None identified.

**Health Hazards**

Toxic if inhaled. Harmful if inhaled. Causes skin irritation. Causes serious eye irritation. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure. Harmful if swallowed. May cause drowsiness or dizziness.

**Environmental hazards**

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants. Will likely be mobile in the environment due to its volatility. The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces.

**Other Hazards**

Cardiac and respiratory depression 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**

Component	CAS No	Weight %
Chloroform	67-66-3	>99

**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.

## SECTION 4. 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.

### 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.

### Ingestion

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

### Most important symptoms and effects

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

### Self-Protection of the First Aider

Use personal protective equipment as required.

### Notes to Physician

Treat symptomatically. Signs of overdose include stupor and respiratory depression. Symptoms may be delayed.

## SECTION 5. FIRE-FIGHTING MEASURES

### 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.

### Specific Hazards Arising from the Chemical

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

### Protective Equipment and Precautions 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

### Personal Precautions

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

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Evacuate personnel to safe areas.

**Environmental Precautions**

Should not be released into the environment.

**Methods for Containment and Clean Up**

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

Refer to protective measures listed in Sections 8 and 13.

**SECTION 7. HANDLING AND STORAGE****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.

**Storage**

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

**Specific Use(s)**

Use in laboratories

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control Parameters**

Component	China	Taiwan	Thailand	Hong Kong
Chloroform	TWA: 20 mg/m <sup>3</sup> STEL: 40 mg/m <sup>3</sup>	-	Ceiling: 50 ppm	TWA: 10 ppm TWA: 49 mg/m <sup>3</sup>

Component	ACGIH TLV	OSHA PEL	NIOSH	The United Kingdom	European Union
Chloroform	TWA: 10 ppm	(Vacated) TWA: 2 ppm (Vacated) TWA: 9.78 mg/m <sup>3</sup> Ceiling: 50 ppm Ceiling: 240 mg/m <sup>3</sup>	IDLH: 500 ppm STEL: 2 ppm STEL: 9.78 mg/m <sup>3</sup>	TWA: 2 ppm TWA: 9.9 mg/m <sup>3</sup> STEL: 6 ppm STEL: 29.7 mg/m <sup>3</sup>	TWA: 2 ppm 8 hr TWA: 10 mg/m <sup>3</sup> 8 hr Possibility of significant uptake through the skin

Legend

NIOSH: NIOSH - National Institute for Occupational Safety and Health

**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

**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**

**SAFETY DATA SHEET****Chloroform, stab. with amylene****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 EN 374	As tested under EN374-3 Determination of Resistance to Permeation by Chemicals
Neoprene	< 25 minutes	0.45 mm		
Butyl rubber	< 15 minutes	0.35 mm		

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.

**Skin and body protection** Long sleeved clothing**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.  
**Recommended half mask:-** Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141  
When RPE is used a face piece Fit Test should be conducted**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.**Environmental exposure controls** Prevent product from entering drains.**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Colorless	
<b>Physical State</b>	Liquid	
<b>Odor</b>	aromatic sweet	
<b>Odor Threshold</b>	No data available	
<b>pH</b>	No information available	
<b>Melting Point/Range</b>	-63 °C / -81.4 °F	
<b>Softening Point</b>	No data available	
<b>Boiling Point/Range</b>	61 °C / 141.8 °F	
<b>Flash Point</b>	No information available	<b>Method -</b> No information available
<b>Evaporation Rate</b>	No data available	
<b>Flammability (solid,gas)</b>	Not applicable	Liquid
<b>Explosion Limits</b>	No data available	
<b>Vapor Pressure</b>	213 mbar @ 20 °C	
<b>Vapor Density</b>	No data available	(Air = 1.0)
<b>Specific Gravity / Density</b>	1.480	
<b>Bulk Density</b>	Not applicable	Liquid
<b>Water Solubility</b>	8 g/L (20°C)	
<b>Solubility in other solvents</b>	No information available	

**Partition Coefficient (n-octanol/water)**

<b>Component</b>	<b>log Pow</b>
Chloroform	2
<b>Autoignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	0.56 mPa s at 20 °C
<b>Explosive Properties</b>	No information available
<b>Oxidizing Properties</b>	No information available

<b>Molecular Formula</b>	C H Cl <sub>3</sub>
<b>Molecular Weight</b>	119.38
<b>VOC Content(%)</b>	100

**SECTION 10. STABILITY AND REACTIVITY**

<b>Stability</b>	Stable under normal conditions. UNSTABLE (REACTIVE) UPON DEPLETION OF INHIBITOR. Light sensitive.
<b>Hazardous Reactions</b>	None under normal processing.
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Conditions to Avoid</b>	Incompatible products. Heat, flames and sparks. Excess heat. Exposure to light. Protect from moisture.
<b>Materials to avoid</b>	Strong oxidizing agents. Alkali metals. Aluminium. Acetone.

**Hazardous Decomposition Products** Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Phosgene. Hydrogen chloride gas.

**SECTION 11. TOXICOLOGICAL INFORMATION****Product Information****(a) acute toxicity;**

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

**(b) skin corrosion/irritation;** Category 2

**(c) serious eye damage/irritation;** Category 2

**(d) respiratory or skin sensitization;**

<b>Respiratory</b>	Based on available data, the classification criteria are not met
<b>Skin</b>	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

Component	EU	UK	Germany	IARC
Chloroform				Group 2B

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<b>(g) reproductive toxicity; Reproductive Effects Developmental Effects Teratogenicity</b>	Category 2 Experiments have shown reproductive toxicity effects on laboratory animals. Developmental effects have occurred in experimental animals. Study result . negative.
<b>(h) STOT-single exposure;  Results / Target organs</b>	Category 3  Central nervous system (CNS)
<b>(i) STOT-repeated exposure;  Study result  Route of exposure Target Organs</b>	Category 1  LOAEL = 15 mg/kg bw/day NOAEC = 25 mg/m <sup>3</sup> Inhalation Liver, Kidney.
<b>(j) aspiration hazard;  Other Adverse Effects</b>	Based on available data, the classification criteria are not met  Tumorigenic effects have been reported in experimental animals.
<b>Symptoms / effects,both acute and delayed</b>	Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing: Causes central nervous system depression

## SECTION 12. ECOLOGICAL INFORMATION

**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	Microtox
Chloroform	LC50: = 300 mg/L, 96h static (Poecilia reticulata) LC50: = 18 mg/L, 96h flow-through (Lepomis macrochirus) LC50: = 18 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: = 71 mg/L, 96h flow-through (Pimephales promelas)	EC50 = 28.9 mg/L/48h	EC50 = 560 mg/L/48h	Photobacterium phosphoreum: EC50 = 520 mg/L/5 min Photobacterium phosphoreum: EC50 = 670 mg/L/15 min Photobacterium phosphoreum: EC50 = 670 mg/L/30min

**Persistence and Degradability**  
**Persistence** Product is biodegradable  
**Degradation in sewage treatment plant** Persistence is unlikely, based on information available.  
 Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

**Bioaccumulative Potential** Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Chloroform	2	1.4 - 13 dimensionless

**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

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors  
**Persistent Organic Pollutant** This product does not contain any known or suspected substance

**SAFETY DATA SHEET**

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**Ozone Depletion Potential** This product does not contain any known or suspected substance**SECTION 13. DISPOSAL CONSIDERATIONS****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.**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****Road and Rail Transport****UN-No** UN1888  
**Proper Shipping Name** Chloroform  
**Hazard Class** 6.1  
**Packing Group** III**IMDG/IMO****UN-No** UN1888  
**Proper Shipping Name** Chloroform  
**Hazard Class** 6.1  
**Packing Group** III**IATA****UN-No** UN1888  
**Proper Shipping Name** Chloroform  
**Hazard Class** 6.1  
**Packing Group** III**Special Precautions for User** No special precautions required**SECTION 15. REGULATORY INFORMATION****International Inventories**

X = listed, China (IECSC), Europe (EINECS/ELINCS/NLP), U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), Korea (KECL).

Component	The Inventory of Hazardous Chemicals (2015 Edition)	List of dangerous goods GB 12268 - 2012	TCSC	IECSC	EINECS	TSCA	DSL	PICCS	ENCS	ISHL	AICS	KECL
Chloroform	X	X	X	X	200-663-8	X	X	X	X	X	X	X

**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.**National Regulations**



**SAFETY DATA SHEET**

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Component	Toxic Chemical Substances Control Act
Chloroform 67-66-3 ( >99 )	Class I (50 wt%) TRQ = 50 kg

**SECTION 16. OTHER INFORMATION**

**Prepared By** Health, Safety and Environmental Department  
**Creation Date** 20-Oct-2009  
**Revision Date** 13-May-2024  
**Revision Summary** New emergency telephone response service provider.

**Training Advice**

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.

Chemical incident response training.

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

**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

**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

**PNEC** - Predicted No Effect Concentration

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**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

**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

**End of Safety Data Sheet**