

Camlab Limited – Material Safety Data Sheet

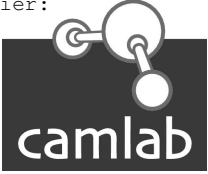
1. Identification

Product Code CC/0168-DH

Product Name CHLOROFORM A.R.

Molecular Formula CHCl_3 =119.38

CAS Number 67-66-3

Supplier:  **CAMLAB LIMITED**
Norman Way Industrial Estate
Over
Cambridge
England
CB4 5WE

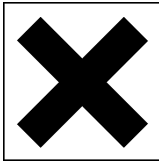
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(Have this document to hand)

2. Composition

Component	CAS No	EEC No	Conc w/w	Classification & Risk Phrases	Exp (See 8.1)
Chloroform	67-66-3	200-6638	> 99.5%	Xn : R22,R38,R40,R48/20/22 :Carc.Cat 3	WEL

3. Hazards Identification



Harmful if swallowed. Irritating to skin. Limited evidence of carcinogenic effect.
Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed. Carcinogen category: 3

4. First Aid Measures

Eyes Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. OBTAIN MEDICAL ATTENTION.

Skin Thoroughly wash off skin with soap and water. Remove contaminated clothing immediately and wash before re-use. Unless contact has been slight OBTAIN MEDICAL ATTENTION

Inhalation Remove from exposure. Keep warm and at rest. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.

Ingestion If conscious give plenty of water to drink. Do not induce vomiting. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.

5. Fire Fighting Measures

Hazards Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus. May evolve toxic fumes if involved in a fire.

Extinguishing Media Consider what other flammable materials are present and act accordingly. Use water spray to keep fire exposed containers cool.

Unsuitable Media Do not use water jet.

6. Accidental Release Measures

Personal Protection	Avoid breathing vapour. Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so. Beware : vapour is heavier than air and will tend to accumulate at low spots.
Environmental	Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.
Major Spillage	Contain and absorb on inert material. Transfer absorbent to salvage container for removal. Wash area down with detergent and copious amounts of water.
Minor Spillage	Contain and absorb on inert material. Transfer absorbent to container for removal. Allow solvent to evaporate in remote area, then dispose of absorbent as solid chemical waste. Wash area down with detergent and copious amounts of water.

7. Storage & Handling

Handling Precautions	Avoid contact with skin and eyes. Do not breath vapours. Do not allow to contaminate clothing. Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.
Storage Conditions	Well ventilated, cool, dry storage . Protect from direct sunlight. Protect against moisture to prevent decomposition and corrosion.

8.1 Workplace Exposure Limits

Component	CAS No	Workplace Exposure Limits				Maximum Exposure Limits			
		Long Term		Short Term		Long Term		Short Term	
		ppm	mg m ⁻³	ppm	mg m ⁻³	ppm	mg m ⁻³	ppm	mg m ⁻³
Chloroform	67-66-3	2.000	9.900	-	-	-	-	-	-

Special Hazards Can be absorbed through skin.

8.2 Personal Protection

Respiratory	Use L.E.V. or natural ventilation to maintain vapour concentrations below exposure limits. If not, use a well maintained chemical cartridge organic vapour respirator, or use self contained breathing apparatus.
Hands	Use solvent resistant gloves.
Eyes	Use chemical splash proof glasses or goggles.
Skin	Avoid contact with skin. If skin contact or contamination of clothing is likely, protective clothing must be worn.

9. Physical & Chemical Properties

Appearance	Clear colourless liquid.
Odour	Pleasant sweet odour.
pH	Not available
Boiling point	62.0 °C
Melting point	64.0- °C
Flash point	Not available
Upper Flammable Limit	Not available
Lower Flammable Limit	Not available
Auto Ignition	Not available
Explosive properties	No.
Oxidising Properties	No.
Vapour Pressure	159 mmHg @ 20,C
Relative Density	1.4850 °C
Water Solubility	0.82%

10. Stability & Reactivity

Chemical Stability	Stable under normal conditions
Conditions to Avoid	Hot surfaces and naked flames.
Materials to Avoid	May react violently with sodium, magnesium and other alkali and alkaline earth metals. Prolonged contact with aluminium and light alloys may cause gas generation and pressure build up.
Hazardous Decomposition Products	Contact with red hot surfaces, sparks or naked flames may generate toxic acid fumes of phosgene and hydrogen chloride.

11. Toxicological Information

Eyes	Both the vapour and liquid will, irritate the eyes and can cause conjunctivitis. More irritating to the eyes than most common solvents.
Skin	Repeated or prolonged contact may defat the skin producing irritation and dermatitis. Unlikely to be absorbed across the skin in harmful amounts.
LD50 Skin	Not available
Ingest	Causes immediate irritation of the mouth, throat and gastro-intestinal tract. Ingestion may cause liver and kidney damage.
LD50 Ingest	Oral Rat 908 mg/kg
Inhalation	High concentrations of vapour will effects the central nervous system resulting in Large amounts may cause sensitive individuals to cough. Prolonged exposure to vapour concentrations above the occupational exposure limits may result in unconsciousness and can cause cardiac sensitisation which may prove suddenly fatal. Liver and kidney damage may also occur.
Carcinogenicity	Carcinogen - category 3. Has been found to be carcinogenic to rats and mice. It is suspected as a long term carcinogen in man but evidence is inconclusive.
Mutagenicity	Not considered to be a mutagen.
Reproductive Effects	Chloroform is teratogenic to rats and mice, and highly foetotoxic in rat inhalation studies. Has been implicated in similar disorders in humans. Pregnant and nursing mothers should avoid contact.
Other Information	Acts as an anaesthetic. First symptoms of lightheadedness occur within a few minutes at 1000ppm.

12. Ecological

Unlikely to bio-accumulate. High concentrations are toxic to aquatic life.

13. Disposal Considerations


Disposal Methods	Dispose of in a licensed incinerator for organic solvents. Do not dispose of as domestic waste.
Contaminated Packaging	Use a licensed waste disposer.

14. Transport Information

Proper Shipping Name	Chloroform
UN Number	1888
UN Classification	6.1 Toxic
Subsidiary Risk	None
Flash Point	Not available
Packing Group	III
Transport Category	2
Marine pollutant	No
ADR Hazard ID	60



15. Regulatory Information

Labelling Classification	Harmful.
Label Symbols	Xn 
Risk & safety Phrases	Harmful if swallowed. Irritating to skin. Limited evidence of carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed. Keep out of reach of children. Wear suitable protective clothing and gloves. Carcinogen category: 3
EEC Number	200-6638

16. Other Information

Document Information	<p>This document has been prepared in accordance with directive 88/379/EEC.</p> <p>The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment.</p> <p>Revision Date: 10/06/05. Data reviewed and PDF file generated: 19/07/07. Copyright 2007 Camlab Limited.</p>
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