



# IBI SCIENTIFIC

9861 Kapp Court ■ Peosta, IA 52068  
**Tele:** (563) 690-0484 ■ 1-800-253-4942  
**Fax:** (563) 690-0490 ■ **E-Mail:** [info@ibisci.com](mailto:info@ibisci.com)  
**Web:** [www.ibisci.com](http://www.ibisci.com)

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Rev. 3

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

**Product Name:** Chloroform  
**Product Code:** IB05040  
**Recommend Use:** For further manufacturing use only  
Not for human or animal drug use  
**Synonyms:** FORMYL TRICHLORIDE \* METHANE TRICHLORIDE \* METHANE  
**Company:** IBI SCIENTIFIC  
9861 Kapp Court  
Peosta, IA 52068  
**Emergency Tele. Number:** 3E Company (Acct# 9027) 1-800-451-8346 / (001) 760-602-8703  
**Company Tele. Number:** 1-800-253-4942 / (001) 563-690-0484  
**E-Mail Address:** [info@ibisci.com](mailto:info@ibisci.com)

## 2. HAZARDOUS IDENTIFICATION

### GHS – Classification

**Classification:** Acute Toxicity Oral 4 Specific Target Organ Toxicity (repeated) 2 Skin Irritant 2  
**Signal Word:** Warning



**Hazard Statements:** H302–Harmful if swallowed \* H315–Causes skin irritation \* H319–Causes serious eye irritation \* H351–Suspected of causing cancer \* H373–May cause 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 victim to fresh air and keep at rest in a position 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.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<b>Chemical Name:</b>	Chloroform
<b>EC No.:</b>	EEC No. 200-663-8
<b>REACH Reg. No.:</b>	Not Available
<b>CAS No.:</b>	67-66-3
<b>Weight %:</b>	95 – 100
<b>Classification:</b>	Xn; R22-48/20/22, Xi; Rn38, Carc.Cat. 3; R40

### 4. FIRST AID MEASURES

<b>Eye Contact:</b>	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
<b>Skin Contact:</b>	Wash off immediately with soap and plenty of water, removing all contaminated clothes and shoes.
<b>Inhalation:</b>	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
<b>Ingestion:</b>	Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person.
<b>Notes to Physician:</b>	Treat symptomatically.

### 5. FIRE FIGHTING MEASURES

<b>Flammable Properties:</b>	Not flammable
<b>Flash Point:</b>	Not determined
<b>Suitable Extinguishing Media:</b>	Dry chemical, CO <sub>2</sub> , water spray, or regular foam
<b>Hazardous Combustion Products:</b>	Hydrogen Chloride gas, Phosgene gas, Carbon oxides
<b>Explosion Data</b>	
Sensitivity to Mechanical Impact:	Not sensitive
Sensitivity to Static Discharge:	Not sensitive
<b>Protective Equip. &amp; Precautions for Firefighters:</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equiv.) and full protective gear.

### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions:</b>	Avoid contact with skin, eyes, and clothing. Use personal protective equipment. Ensure adequate ventilation.
<b>Methods for Containment:</b>	Prevent further leakage or spillage, if safe to do so.
<b>Methods for Cleaning Up:</b>	Pick up and transfer to properly labeled containers.

### 7. HANDLING AND STORAGE

<b>Handling:</b>	Handle in accordance with good industrial hygiene and safety practice. Protect from light.
<b>Storage:</b>	Keep container tightly closed in a dry and well ventilated place. Protect from light.
<b>Incompatible Products:</b>	Bases, Aluminum.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Chemical Name:</b>	Chloroform - #67-66-3
<b>ACGIH TLV:</b>	TWA: 10ppm
<b>OSHA PEL:</b>	(vacated) TWA: 2ppm * (vacated) TWA: 9.78mg/m <sup>3</sup> * Ceiling: 240mg/m <sup>3</sup> * Ceiling: 50ppm
<b>NIOSH IDLH:</b>	IDLH: 500ppm * STEL: 2ppm * STEL: 9.78mg/m <sup>3</sup>
<b>Engineering Measures:</b>	Showers, Eyewash Stations, Ventilation Systems

**Personal Protective Equipment**

Eye/Face Protection:	Safety glasses with side-shields.
Skin & Body Protection:	Wear protective gloves/clothing.
Respiratory Protection:	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
<b>Hygiene Measures:</b>	Handle in accordance with good industrial hygiene and safety practice.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Clear, colorless liquid
<b>Odor:</b>	No information available
<b>Odor Threshold:</b>	No information available
<b>Decomposition Temp. °C:</b>	No information available
<b>Freezing Point:</b>	No information available
<b>Initial Boiling Point:</b>	No information available
<b>Physical State:</b>	Liquid
<b>pH:</b>	No data available
<b>Flash Point:</b>	Not determined
<b>Autoignition Temp. °C:</b>	No data available
<b>Boiling Point/Range:</b>	59.4 - 61.5°C
<b>Melting Point/Range:</b>	-63°C
<b>Flammability Limits (Air):</b>	<u>Upper</u> -No data available * <u>Lower</u> -No data available
<b>Explosive Properties:</b>	No information available
<b>Oxidizing Properties:</b>	No information available
<b>Evaporation Rate:</b>	5.79
<b>MMHG @ 37.8°C:</b>	No data available
<b>Vapor Density:</b>	No data available
<b>Specific Gravity:</b>	1.48
<b>Density:</b>	4.1
<b>Solubility:</b>	Soluble
<b>Water Solubility:</b>	Very soluble in water
<b>Partition Coefficient (n-octanol/water):</b>	No data available
<b>Viscosity:</b>	No information available

**10. STABILITY AND REACTIVITY**

<b>Stability:</b>	Stable under recommended storage conditions
<b>Incompatible Products:</b>	Bases, Aluminum
<b>Conditions to Avoid:</b>	Protect from light and moisture
<b>Hazardous Decomposition Products:</b>	Hydrogen chloride, Phosgene gas, Carbon oxides
<b>Hazardous Polymerization:</b>	Hazardous polymerization does not occur.

**11. TOXICOLOGICAL INFORMATION****Acute Toxicity**

Product Information:	Toxic by inhalation, in contact with skin, or if swallowed. Irritating to eye, skin, and respiratory system.
Chemical Name:	Chloroform - #67-66-3
LD50 Oral:	695mg/kg (Rat)
LD50 Dermal:	3980mg/kg (Rabbit)
LC50 Inhalation:	47702mg/kg (Rat) 4h

**Chronic Toxicity**

Chronic Toxicity: Suspected carcinogen  
 Chemical Name: Chloroform - #67-66-3  
 ACGIH: A3  
 IARC: Group 2B  
 NTP: Reasonably anticipated  
 OSHA: X  
**Target Organ Effects:** Nerves, Liver, Heart

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity:** Harmful to aquatic organisms  
 Chemical Name: Chloroform - #67-66-3  
 Toxicity to Algae: EC50 = 560mg/L (48h)  
 Toxicity to Fish: LC50 = 18mg/L Lepomis macrochirus (96h)  
 LC50 = 18mg/L Oncorhynchus mykiss (96h)  
 LC50 = 300mg/L Poecilia reticulata (96h)  
 LC50 = 70.7mg/L Pimephales promelas (96h)  
 Microtox: EC50 = 520mg/L (5min)  
 EC50 = 670mg/L (15min)  
 EC50 = 670mg/L (30min)  
 Daphnia Magna (Water Flea): EC50 = 28.9mg/L (48h)  
 Log Pow: 2 @ 25°C

**13. DISPOSAL CONSIDERATIONS**

**Water Disposal Method:** Dispose of material in accordance with all federal, state, and local regulations.  
**Contaminated Packaging:** Dispose of in accordance with all federal, state, and local regulations.

**14. TRANSPORT INFORMATION**

**IATA**

UN# UN1888  
 Proper Shipping Name CHLOROFORM  
 Hazardous Class 6.1  
 Packing Group III

**US DOT**

UN# UN1888  
 Proper Shipping Name CHLOROFORM  
 Hazardous Class 6.1  
 Packing Group III

**15. TOXICOLOGICAL INFORMATION**

**REACH Title VII Restrictions** No information available  
 Chemical Name: Chloroform – #67-66-3  
 Dangerous Substances: >=>=0.1% by weight  
 Organic Solvents: Class 1  
 Harmful Substances Whose Names are to be indicated on the Label: X  
 Pollution Release and Transfer Registry (Class II): Not applicable  
 Pollution Release and Transfer Registry (Class I): 95  
 Poison and Deleterious Substances Control Law: Deleterious.?  
 ISHA – Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying: Not applicable  
 ISHA – Harmful Substances Requiring Permission: Not applicable

MATERIAL SAFETY DATA SHEET

IB05040 - CHLOROFORM

Toxic Chemical Classification Listing (TCCL):  
 Toxic Release Inventory (TRI) – Group I:  
 Toxic Release Inventory (TRI) – Group II:

97-1-281, 85% or more in mixtures  
 Not applicable  
 >=0.1%  
 No information available

**International Inventories**

TSCA: Complies  
 DSL: Complies  
 EINECS/ELINCS: Complies  
 ENCS: Complies  
 IECSC: Complies  
 KECL Complies  
 PICCS Complies  
 AICS Complies

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical/chemicals which are subject to the reporting requirements of the Act & Title 40 of the Code of Federal Regulations, part 372.

Chemical Name: Chloroform - #67-66-3  
 Weight (%): 95 – 100  
 SARA 313 – Threshold (%): 0.1

**SARA 311/312 Hazard Categories**

Acute Health Hazard Yes  
 Chronic Health Hazard Yes  
 Fire Hazard No  
 Sudden Release of Pressure Hazard No  
 Reactive Hazard No

**Clean Water Act**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical Name: Chloroform - #67-66-3  
 CWA-Reportable Quantities: 10lb  
 CWA-Toxic Pollutants: X  
 CWA-Priority Pollutants: X  
 CWA-Hazardous Substances: X

**Clean Air Act**

Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61). This product contains the following substances which are listed hazardous air pollutants (HAPs) under Section 112 of the Clean Air Act.

Chemical Name: Chloroform - #67-66-3  
 Weight (%): 95 - 100  
 HAPs Data: Present  
 VOC Chemicals: Group I  
 Class 1 Ozone Depletors: -  
 Class 2 Ozone Depletors: -

**CERCLA**

Chemical Name: Chloroform - #67-66-3  
 Hazardous Substance RQs: 10lbs  
 Extremely Hazardous Substance RQs: 10lbs

**U.S. State Regulations**

**California Proposition 65**

This product contains the following Proposition 65 chemicals.

Chemical Name: Chloroform - #67-66-3  
 California Prop. 65: Carcinogen

**State**

Massachusetts	X
New Jersey	X
Pennsylvania	X
Illinois	X
Rhode Island	X

**International Regulations**

**Mexico**

Chemical Name:	Chloroform - #67-66-3
Carcinogen Status:	A3
Exposure Limits:	Mexico: TWA = 50mg/m <sup>3</sup> Mexico: TWA = 10ppm Mexico: STEL = 225mg/m <sup>3</sup> Mexico: STEL = 50ppm

**Canada**

**WHMIS Hazard Class**

D1B – Toxic materials  
D2A – Very toxic materials



Chemical Name:	Chloroform - #67-66-3
NPRI:	X

**16. OTHER INFORMATION**

**Issuing Date:** 08-Jan-1998

**Revision Date:** 05-Oct-2011

**Revision Note:** Update to GHS Standard

**Recommended Restrictions:** No information available

**Disclaimer:** The information provided on this MSDS 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 guide for safe handling, use, processing, storage, transportation, disposal, and release; and is not to be considered as 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 material or in any process, unless specified in the test.

**End of MSDS**