

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 25.03.2013

Revision: 25.03.2013

1 Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name: Methyl Iodide (Iodomethane)**
- **CAS Number:**
74-88-4
- **EC number:**
200-819-5
- **Index number:**
602-005-00-9
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use SU3** Industrial uses: Uses of substances as such or in preparations at industrial sites
- **Application of the substance / the preparation** Intermediate for organic synthesis
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Iofina Chemical
1025 Mary Laidley Drive
Covington, KY 41017
Phone: 859-356-8000
- **Further information obtainable from:** Product Safety Department
- **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585



2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS06 skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 health hazard

Carc. 2 H351 Suspected of causing cancer.



GHS07

Acute Tox. 4 H312 Harmful in contact with skin.

Skin Irrit. 2 H315 Causes skin irritation.

STOT SE 3 H335 May cause respiratory irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
Not applicable.

(Contd. on page 2)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 25.03.2013

Revision: 25.03.2013

Trade name: Methyl Iodide (Iodomethane)

(Contd. of page 1)



T; Toxic

R23/25: Toxic by inhalation and if swallowed.



Xn; Harmful

R21-40: Harmful in contact with skin. Limited evidence of a carcinogenic effect.



Xi; Irritant

R37/38: Irritating to respiratory system and skin.

Carc. Cat. 3

- **Information concerning particular hazards for human and environment:**

Not applicable.

Vapours of the product are heavier than air and may accumulate on the ground, in mines, drains or cellars with higher concentration.

- **2.2 Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS06 GHS08

- **Signal word** Danger

- **Hazard-determining components of labelling:**

methyl iodide

- **Hazard statements**

H301+H331 Toxic if swallowed or if inhaled.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H351 Suspected of causing cancer.

H335 May cause respiratory irritation.

- **Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

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

P281 Use personal protective equipment as required.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

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

P321 Specific treatment (see on this label).

P311 Call a POISON CENTER or doctor/physician.

P322 Specific measures (see on this label).

(Contd. on page 3)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 25.03.2013

Revision: 25.03.2013

Trade name: Methyl Iodide (Iodomethane)

(Contd. of page 2)

- P362 Take off contaminated clothing and wash before reuse.
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P312 Call a POISON CENTER or doctor/physician if you feel unwell.
 P363 Wash contaminated clothing before reuse.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P332+P313 If skin irritation occurs: Get medical advice/attention.
 P330 Rinse mouth.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P405 Store locked up.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Hazard description:**

- **WHMIS-symbols:**

- D1A - Very toxic material causing immediate and serious toxic effects
 D2B - Toxic material causing other toxic effects



- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	3	Health = *3
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

- **HMIS Long Term Health Hazard Substances**

Substance is not listed.

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **3.1 Substances**
- **CAS No. Description**
74-88-4 methyl iodide
- **Identification number(s)**
- **EC number:** 200-819-5

(Contd. on page 4)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 25.03.2013

Revision: 25.03.2013

Trade name: Methyl Iodide (Iodomethane)

· **Index number:** 602-005-00-9

(Contd. of page 3)

4 First aid measures

· 4.1 Description of first aid measures

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Remove breathing equipment only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· **After eye contact:**

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:** Do not induce vomiting; call for medical help immediately.

· **4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.

· **5.3 Advice for firefighters**

· **Protective equipment:**

Mouth respiratory protective device.

Wear self-contained respiratory protective device.

Wear fully protective suit.

· **Additional information**

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Cool endangered receptacles with water spray.

6 Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Use respiratory protective device against the effects of fumes/dust/aerosol.

(Contd. on page 5)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 25.03.2013

Revision: 25.03.2013

Trade name: Methyl Iodide (Iodomethane)

(Contd. of page 4)

Wear protective clothing.

· **6.2 Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Send for recovery or disposal in suitable receptacles.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

· **7.1 Precautions for safe handling**

Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

Store in cool, dry place in tightly closed receptacles.

Keep away from heat and direct sunlight.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

· **Information about fire - and explosion protection:**

The product is not flammable.

Keep respiratory protective device available.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

Due to photo-sensitivity, store product in brown-glass or stainless steel receptacles.

· **Information about storage in one common storage facility:**

Store away from oxidizing agents.

Store away from foodstuffs.

· **Further information about storage conditions:**

Protect from exposure to the light.

Store in the dark.

Keep container tightly sealed.

· **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

(Contd. on page 6)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 25.03.2013

Revision: 25.03.2013

Trade name: Methyl iodide (Iodomethane)

(Contd. of page 5)

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

74-88-4 methyl iodide

PEL (USA)	28 mg/m ³ , 5 ppm Skin
REL (USA)	10 mg/m ³ , 2 ppm Skin; See Pocket Guide App. A
TLV (USA)	12 mg/m ³ , 2 ppm Skin
EL (Canada)	2 ppm Skin
EV (Canada)	12 mg/m ³ , 2 ppm

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 7)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 25.03.2013

Revision: 25.03.2013

Trade name: Methyl Iodide (Iodomethane)

(Contd. of page 6)

· Eye protection:



Safety glasses

9 Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Colour:	Colourless
· Odour:	Characteristic
· Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/Melting range:	-64,4 °C
Boiling point/Boiling range:	42 °C

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature:

Decomposition temperature: Not determined.

· Self-igniting: Not determined.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· Vapour pressure at 20 °C: 438 hPa

· Density at 20 °C:	2,28 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

· Solubility in / Miscibility with water at 20 °C: 13,6 g/l

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

(Contd. on page 8)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 25.03.2013

Revision: 25.03.2013

Trade name: Methyl iodide (Iodomethane)

(Contd. of page 7)

Organic solvents:	0,0 %
· 9.2 Other information	No further relevant information available.

10 Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** Stable at environment temperature.
- **10.3 Possibility of hazardous reactions**
Photoreactive.
Reacts with oxygen.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Iodine compounds

11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values relevant for classification:**

Inhalative	LC50/4 h	(daphnia)
------------	----------	-----------

74-88-4 methyl iodide

Oral	LD50	76 mg/kg (rat)
Dermal	LD50	800 mg/kg (guinea pig)
Inhalative	LC50/4 h	1,3 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):**
Carc. 2

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

(Contd. on page 9)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 25.03.2013

Revision: 25.03.2013

Trade name: Methyl Iodide (Iodomethane)

(Contd. of page 8)

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

· **14.1 UN-Number**

· **DOT, ADR, IMDG**

UN2644

· **IATA**

N/A

· **14.2 UN proper shipping name**

· **DOT**

METHYL IODIDE (Toxic-Inhalation Hazard Zone B)

· **ADR**

2644 METHYL IODIDE

· **IMDG**

METHYL IODIDE

· **IATA**

FORBIDDEN

· **14.3 Transport hazard class(es)**

· **DOT**



· **Class**

6.1

· **Label**

6.1

· **ADR**



· **Class**

6.1 (T1) Toxic substances.

(Contd. on page 10)

Safety Data Sheet


according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 25.03.2013

Revision: 25.03.2013

Trade name: Methyl Iodide (Iodomethane)

(Contd. of page 9)

· Label	6.1
· IMDG	
	
· Class	6.1 Toxic substances.
· Label	6.1
· IATA	
· Class	N/A
· Label	FORBIDDEN
· 14.4 Packing group	
· DOT, ADR, IMDG	I
· IATA	N/A
· 14.5 Environmental hazards:	
· Marine pollutant:	No
· 14.6 Special precautions for user	Warning: Toxic substances.
· Danger code (Kemler):	66
· EMS Number:	F-A,S-A
· Segregation groups	Liquid halogenated hydrocarbons
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	0
· Transport category	1
· Tunnel restriction code	C/E
· IATA	FORBIDDEN.
· UN "Model Regulation":	UN2644, METHYL IODIDE, 6.1, I

(Contd. on page 11)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 25.03.2013

Revision: 25.03.2013

Trade name: Methyl Iodide (Iodomethane)

(Contd. of page 10)

15 Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

- **Section 355 (extremely hazardous substances):**

Substance is not listed.

- **Section 313 (Specific toxic chemical listings):**

Substance is listed.

- **TSCA (Toxic Substances Control Act):**

Substance is listed.

- **Proposition 65 (California):**

- **Chemicals known to cause cancer:**

74-88-4 | methyl iodide

- **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

- **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

- **Chemicals known to cause developmental toxicity:**

Substance is not listed.

- **Carcinogenic Categories**

- **EPA (Environmental Protection Agency)**

Substance is not listed.

- **IARC (International Agency for Research on Cancer)**

Substance is not listed.

- **TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

- **Canada**

- **Canadian Domestic Substances List (DSL)**

Substance is listed.

- **Canadian Ingredient Disclosure list (limit 0.1%)**

74-88-4 | methyl iodide

- **Canadian Ingredient Disclosure list (limit 1%)**

Substance is not listed.

(Contd. on page 12)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 25.03.2013

Revision: 25.03.2013

Trade name: Methyl Iodide (Iodomethane)

(Contd. of page 11)

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent